

Information Paper  
on  
Economic Statistics

**Unit Business Cost Index  
of the Manufacturing Sector:  
Rebasing to Year 2000**

Singapore Department of Statistics  
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# **UNIT BUSINESS COST INDEX OF THE MANUFACTURING SECTOR: REBASING TO YEAR 2000**

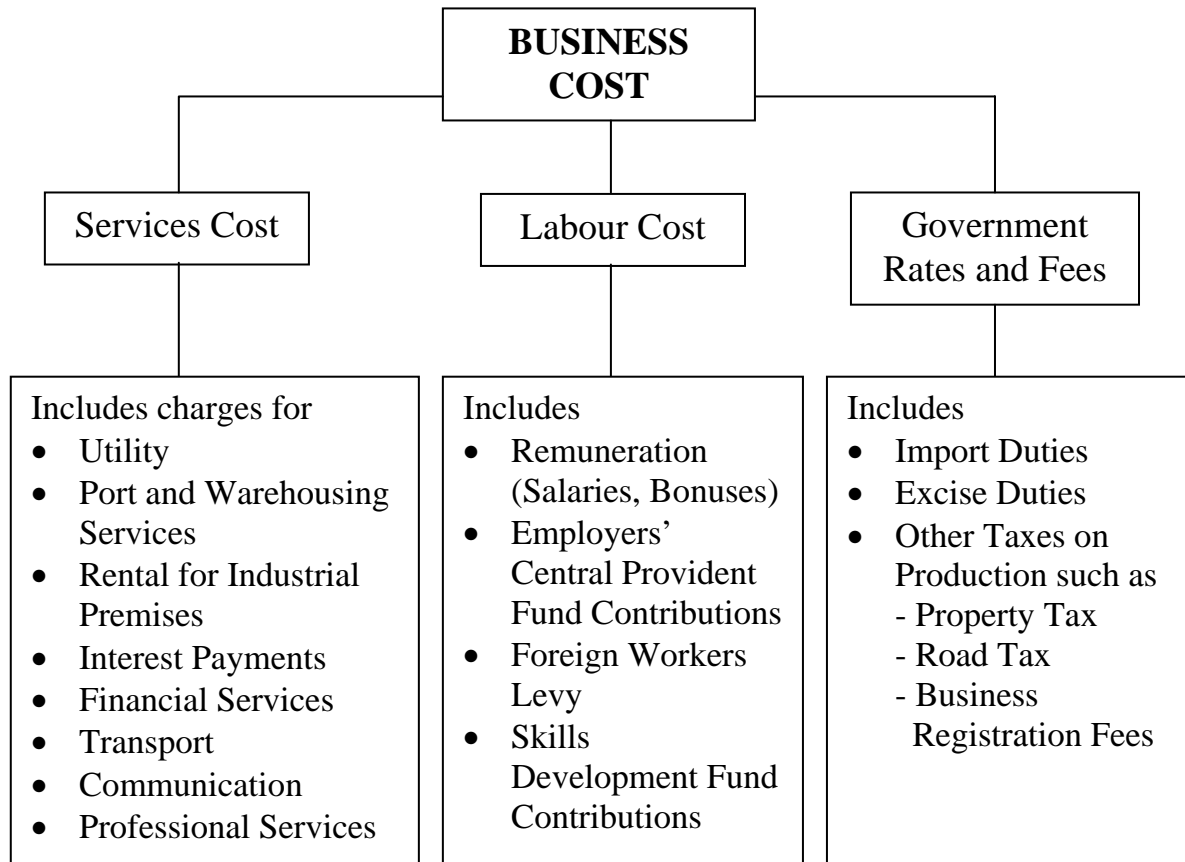
## **I INTRODUCTION**

1. The Unit Business Cost Index (UBCI) for the manufacturing sector measures changes in the relative cost of producing one unit of manufacturing output after accounting for labour productivity changes. Introduced in 1986, the UBCI has become an important statistical indicator of Singapore's competitiveness.
2. The Singapore Department of Statistics (DOS) has completed the rebasing of the UBCI from reference year 1993 to reference year 2000. The weights for the UBCI have been updated based on Singapore's 2000 benchmark input-output (I-O) tables. The new weights reflect the changes to the input cost structure, and ensure the continued relevance of the UBCI.
3. This paper presents the concept and methodology underlying the rebasing of the UBCI. Section II gives a broad overview of business cost while section III shows the methodology in constructing the UBCI. Section IV compares the weighting patterns for years 1993 and 2000. Section V presents an analytical comparison of the growth rates of the 1993-based and the newly rebased UBCI while Section VI examines the trend in the UBCI and its major components.

## **II OVERVIEW OF BUSINESS COST**

4. In measuring business cost, what is relevant is operating and recurrent cost, i.e. the cost of materials, corporate income tax, royalties and other capital expenditure are not included. Business cost comprises three major components: labour cost, services cost, and government rates and fees.
5. Chart 1 shows a flow diagram illustrating the concept of the major components of business cost. A simple breakdown of each component is provided.

**Chart 1**  
**Flow Diagram of Business Cost and its Major Components**



### III METHODOLOGY

6. The UBCI for the manufacturing sector is essentially a Laspeyres price index of the various cost items, whose relative weights are derived from the Singapore input-output tables. Compiled quarterly since 1986, the UBCI was last rebased in 2000 to reference year 1993. The present rebasing of the UBCI to reference year 2000 updates the relative weights of the cost items on the basis of the recently benchmarked (to reference year 2000) input-output tables.

7. The UBCI<sup>1</sup> can be expressed as a weighted average of the indices of its three major components as follows:

$$\begin{aligned}
 UBCI = & w_{svs} * \text{Services Cost Index} \\
 & + w_{ULC} * \text{Unit Labour Cost Index} \\
 & + w_{Gov} * \text{Government Rates and Fees Index} \quad (1)
 \end{aligned}$$

where  $w_z$  = the weight of the  $z^{\text{th}}$  index,  
 $w_{svs} + w_{ULC} + w_{Gov} = 1$ .

<sup>1</sup> Please refer to Annex II for a more detailed derivation and construction of the UBCI.

8. Services cost comprise several cost items. As with the UBCI itself, the compilation of the services cost index starts with the computation of the relative cost of the component items. These are generally referred to as sub-indices. The services cost index is a weighted composite index of all these sub-indices, whose relative weights are derived from the I-O tables. The relative cost of each item or sub-index can be represented as follows:

$$I_n^i = \frac{P_n^i}{P_0^i} \times 100,$$

where  $I_n^i$  = Relative cost of item i in period n,  
 $P_n^i$  = Unit price of item i in period n,  
 $P_0^i$  = Unit price of item i in the base year.

The services cost index is calculated as follows:

$$\text{Services Cost Index} = \frac{\sum_{i=1}^m w_i I_n^i}{\sum_{i=1}^m w_i},$$

where  $w_i$  = Weight for cost item i,  
 $\sum_{i=1}^m w_i = w_{svs}$ .  
 $m$  = number of cost items

The government rates and fees index is computed in a similar manner. Labour cost is measured by the unit labour cost index (ULCI).

9. As with other indices, the UBCI is chain-linked at the reference year (i.e. 2000) with the index from 2000 onwards computed using the 2000-based weights. The previous 1993-based UBCI and its component data series are spliced or re-scaled using the following relationship:

$${}^n\text{UBCI}_{2000} = \frac{{}^n\text{UBCI}_{1993}}{\text{Average UBCI}_{1993 \text{ for } 2000}} \times \text{Average UBCI}_{2000 \text{ for } 2000}$$

where  ${}^n\text{UBCI}_y$  is the index for period  $n$  (prior to 2000) expressed in base year  $y$ , and average  $\text{UBCI}_y$  is the average of the four quarters in 2000 for the index expressed in base year  $y$ . This approach preserves both the growth rates and the input cost structure for the data series prior to the new reference base year.

10. The 2000-based UBCI is computed using 52 cost items, as compared with 63 cost items in the 1993-based UBCI (A summary of the cost items and their respective weights are set out in Annex I). Reflecting the trends in business operations, existing cost items that are less relevant have been dropped, similar

cost items consolidated (or merged) into a single item and new cost items introduced. For example, “banks” and “finance companies” have been merged into one single item “banking and other financial services” following the liberalisation of finance sector where products and services provided by both banks and finance companies are increasingly similar. In line with the increasing use of information technology in business operations, information technology services is separately identified and introduced as an additional cost item.

11. For each cost item, price indicators are identified, selected and monitored. These include relevant price indices, tariff rates, fees and charges. In cases where direct indicators are not available, potential proxy indicators are identified and assessed for their suitability. For example, the average monthly earnings of accountants and auditors are used as a proxy indicator for the cost of accounting services. Existing price indicators are also assessed for their continuing relevance, with obsolete price indicators dropped and replaced by more relevant indicators. For example, paging services has been dropped as an indicator for the cost item “communications” while broadband services was introduced as a new indicator for that item.

#### **IV CHANGES IN RELATIVE WEIGHTS**

12. The relative weights for the major components of the UBCI for the reference years 1993 and 2000 are shown in Table 1. The relative weights at a more detailed level are tabulated in Annex I.

**Table 1**  
**Relative Weights of the UBCI**  
**Reference Years 1993 and 2000**

<b>Reference Years</b>	<b>Per Cent</b>	
	<b>1993</b>	<b>2000</b>
Services Cost	51.59	54.19
Labour Cost	46.41	44.55
Government Rates & Fees	2.00	1.26

13. The relative share of labour cost in the UBCI declined from 46.4 per cent in 1993 to 44.6 per cent in 2000. The lower share of labour cost is consistent with the shift towards higher value-added and more technology-based industries in the manufacturing sector.

14. The relative share of services cost in the UBCI increased from 51.6 per cent in 1993 to 54.2 per cent in 2000. The relative weights of the various services cost components are shown in Table 2.

**Table 2**  
**Breakdown of Services Cost Weighting Pattern**

	Per Cent	
	1993	2000
<b>Services Cost</b>	<b>51.59</b>	<b>54.19</b>
Trade & Transport	25.15	16.63
Financial Services	5.62	6.22
Communications	1.12	1.15
Utilities	3.67	5.61
Port Operation Services	0.04	0.49
Warehousing	0.47	0.48
Real Estate	3.28	2.95
Business & Other Services	12.25	20.65

\* Figures may not add up due to rounding.

15. Significant changes in relative weights are observed for trade & transport and business & other services. The decline in the relative share of trade & transport cost is largely due to lower distribution cost or “wholesale & retail trade” services whose share dropped 22.2 per cent in 1993 to 12.6 per cent in 2000. This could be attributed to lower trade margins (especially for electronics products) as prices declined even as volumes increased. The rise in the relative share of business & other services cost from 12.3 per cent in 1993 to 20.7 per cent in 2000 reflects the growing trend for manufacturing firms to outsource supporting services such as information technology, administrative, sales, market research and management consultancy.

16. The relatively higher share of utilities cost, from 3.7 per cent in 1993 to 5.6 per cent in 2000, can be attributed to higher electricity cost. The increase in the relative share of port operation services cost from 0.04 per cent in 1993 to 0.49 per cent in 2000 is in line with the faster increase in re-exports trade as manufacturing firms increasingly adopt a regional and global perspective in managing their production and supply chains. The relative shares of interest & financial services, communications, warehousing and real estate costs have remained relatively unchanged between the two reference base years.

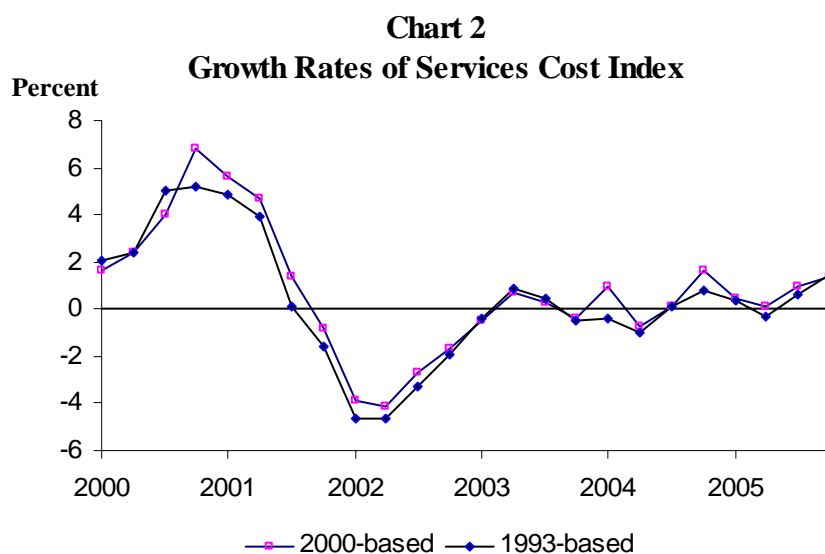
17. The decline in the relative share of government rates and fees in the UBCI from 2.0 per cent in 1993 to 1.3 per cent in 2000 can be attributed to lower import and excise duties.

## V CHANGES IN GROWTH RATES

18. The differences in the year-on-year growth rates of the 2000-based and 1993-based UBCI and two of its major components, i.e. services cost index, and government rates and fees index, are examined in this Section. Labour cost, which is measured by unit labour cost index (ULCI) is unaffected by the rebasing of the UBCI. Since the chain-linking of the UBCI preserves the growth rates of the 1993-based UBCI, it is necessary only to consider changes in the growth rates from 2000 onwards.

### Services Cost Index

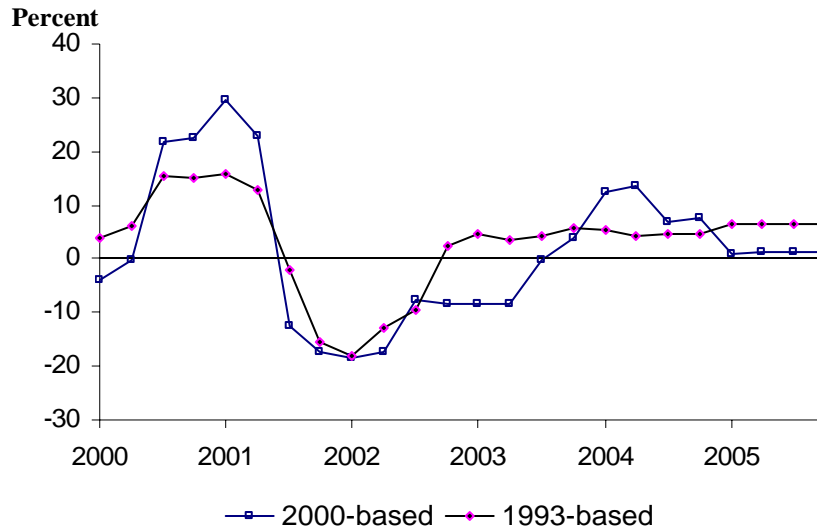
19. The year-on-year growth rates for the 1993-based and 2000-based services cost indices exhibit similar trends (Chart 2). However, the 2000-based index has generally grown faster than the 1993-based index. This could be attributed to the increase in the higher relative weights of utilities and services purchased from the business and other services sector, both of which have been on a rising trend.



### Government Rates and Fees Index

20. The year-on-year growth rates for government rates and fees for both the 1993-based and 2000-based are shown in Chart 3. With the relative share of import duties lower in the 2000-based index, the increase in import duties have a smaller impact on the 2000-based index vis-à-vis the 1993-based index. The higher relative share of property tax in the 2000-based index, however, means that the removal of property tax rebates in 2004 has a larger impact on the 2000-based index.

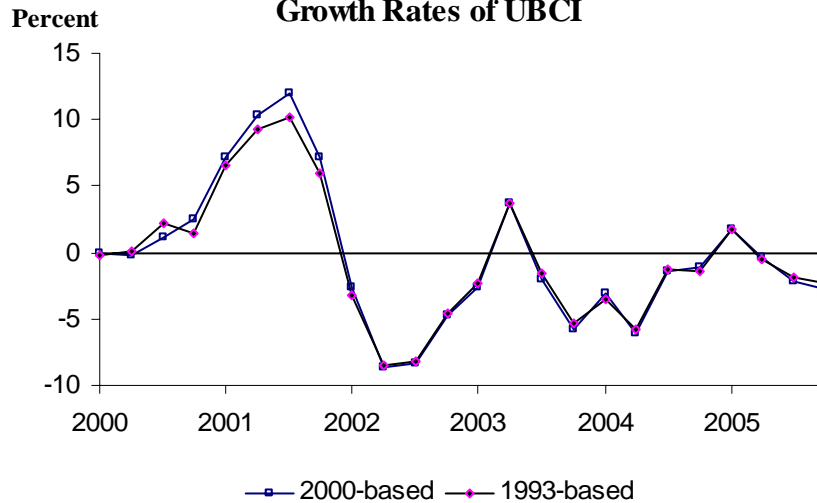
**Chart 3**  
**Growth Rates of Government Rates & Fees Index**



Unit Business Cost Index

21. The year-on-year growth rates for the 1993-based and 2000-based UBCI are fairly close (Chart 4). This can be attributed to the relatively large share (almost half) in labour costs which is unaffected by the rebasing as well as by offsetting changes in services cost and government rates and fees.

**Chart 4**  
**Growth Rates of UBCI**



## **VI TRENDS IN THE UNIT BUSINESS COST INDEX**

22. An examination of the historical trend shows that business cost in the manufacturing sector increased gradually since 1980 and peaked in 1984, prior to the 1985/86 economic recession. The series of cost cutting measures put in place during the recession resulted in a sharp decline in business cost, as shown by the 12.4 per cent decline in the UBCI in 1986 to an all time low in 1987. The reduction of the CPF contribution rate from 25 per cent to 10 per cent resulted in a sharp fall of ULCI (chart 5). Services cost were also lowered due to lower interest rates as well as measures taken to reduce warehousing and port service charges services. Like UBCI and ULCI, the service cost index also bottomed out in 1987. In addition, government rates and fees index also witnessed a sharp decline due to lower rentals for industrial property.

23. By 1987, the Singapore economy recovered due to strong external demand as well as the initiatives put in place to stimulate growth. CPF rates were partially restored to 20 per cent and wage freezes were lifted while incentives that rolled out to reduce the burden of service cost were scaled back gradually. Hence ULCI experienced a steeper rise than Service cost in the aftermath of the recession as shown in Chart 5. Government rate and fees index also increased due to rising property prices as investment in both retail and commercial real estates grew in the 1990s and peaked by the onset of the Asian Financial crisis in 1997/98.

24. In the later half of 1997, the region was hit by the Asian Financial Crisis. Singapore slipped into a recession. Once again, a series of initiatives was introduced to reduce business cost and enhance Singapore's cost competitiveness. These initiatives, which includes reducing CPF contribution rate from 20 per cent to 10 per cent, sharply lowered ULCI by 17 per cent. In addition, cost cutting packages were put in place and plans to privatise selected sectors such as the telecommunication sector in order to make Singapore more competitive. Coupled with lower interest rates and reduced charges for telecommunication services, services cost declined by 4.4 per cent in 1999 (Chart 5). Government rates and fees declined sharply in 1998 and 1999, a result of a 55 per cent property tax rebate and lowered road tax implemented in 1998.

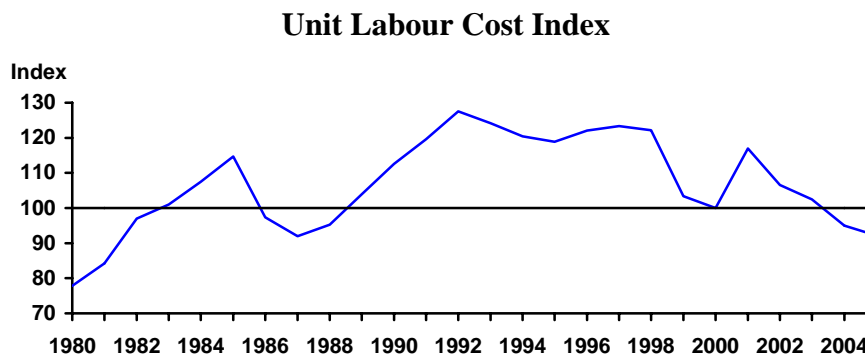
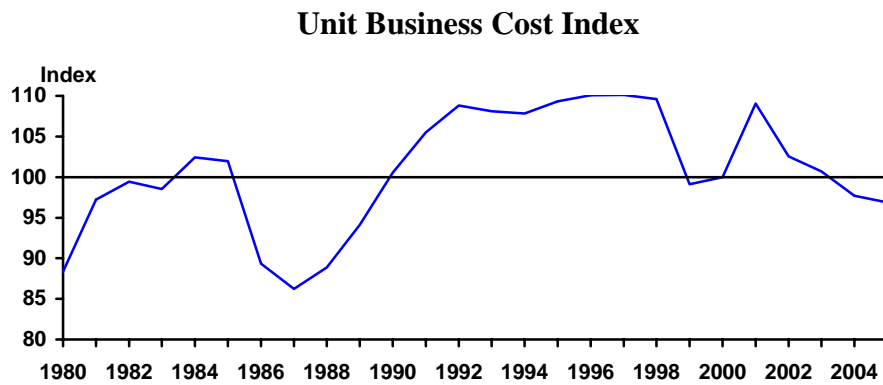
25. UBCI, ULCI and Service cost index has been rising gradually since recovering from the recession in 1998. The UBCI rose sharply by 9.1 per cent in 2001, led by a 17.0 per cent growth in unit labour cost as a result of the partial restoration in employers' contribution to the CPF. High cost of transport, financial services and utilities resulted in a 2.7 per cent increase in services cost.

26. Business cost in the manufacturing sector declined by 6.0 per cent when all three components fell in 2002, partly because of the contraction in the Singapore economy due to slump in external demand (after effect of terrorist attacks and correction in the IT sector in the US economy). ULCI and service cost index declined by 8.9 per cent and 3.1 per cent respectively. Government rates also fell

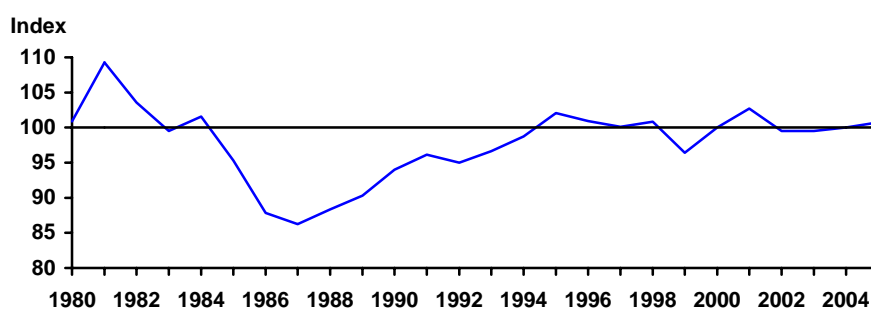
by 13.4 per cent following a reduction in property tax rate from 12 per cent to 10 per cent and a reduction in excise duties of petroleum in late 2001.

27. Business cost continued to fall after 2002, albeit by a slower pace. This was due to a decline of unit labour cost mitigated by rising service cost and government rates and fees. The decline in ULCI was in part due to employer's contribution rates being revised downwards in late 2003 as well as the higher increase in labour productivity relative to wage increases (in line with the guidelines of the National Wage Council); ULCI fell by 7.4 per cent and 3.0 per cent in 2004 and 2005 respectively. Service cost has been gradually rising since 2003 due to rising utility charges. Rising import duties and complete lifting of property tax rebate in 2004 led to an increase of government rates and fees index by 10 per cent.

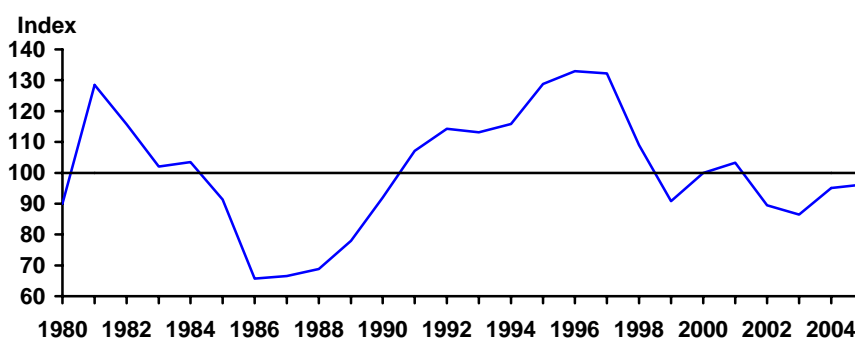
**Chart 5**  
**Trend in UBCI and its Major Components (2000=100)**



### Services Cost Index



### Government Rates and Fees Index



## VII CONCLUSION

28. The successful completion of the rebasing of the UBCI has ensured its continuing relevance as an important indicator of economic competitiveness. The changes in the relative weights of the index are in line with economic changes and developments. The decline in the relative share of labour cost can, for example, be attributed to the shift towards higher value-added and more technology-based manufacturing industries, while the increase in the relative share of services can be attributed to the increasing trend of manufacturing firms to outsource their supporting services.

29. The 2000-based UBCI and its components, i.e. the unit labour cost index, the services cost index, and the government rates and fees index are tabulated in Annex III. The complete historical data series of the rebased UBCI and its major components are available in DOS's SingStat Time Series online (STS) system.

Singapore Department of Statistics  
July 2006

## **APPENDIX**

## Unit Business Cost Index of Manufacturing

### Weighting Patterns

	Per Cent	
	1993	2000
<b>UNIT LABOUR COST</b>	<b>46.41</b>	<b>44.55</b>
<b>SERVICES COST</b>	<b>51.59</b>	<b>54.19</b>
<b>Utilities</b>	<b>3.67</b>	<b>5.61</b>
Electricity	3.16	4.55
Gas	0.23	0.44
Water	0.28	0.62
<b>Trade &amp; Transport</b>	<b>25.14</b>	<b>16.63</b>
Wholesale & Retail Trade	22.23	12.58
Food & Beverage Services	0.46	0.67
Passenger Transport by Land	0.57	0.49
Freight Transport by Land	0.67	0.60
Water Transport	0.17	1.53
Air Transport	0.65	0.59
Crane & Container Services	0.09	0.08
Other Transport Services	0.30	0.09
<b>Financial Services</b>	<b>5.62</b>	<b>6.22</b>
Life Insurance	0.05	0.03
General & Other Insurance	0.26	0.20
Banking & Other Finance Services	5.31	5.99
<b>Communications</b>	<b>1.12</b>	<b>1.15</b>
<b>Port Operation Services</b>	<b>0.04</b>	<b>0.49</b>
<b>Warehousing</b>	<b>0.47</b>	<b>0.48</b>
<b>Real Estate</b>	<b>3.28</b>	<b>2.95</b>
<b>Business &amp; Other Services</b>	<b>12.25</b>	<b>20.65</b>
Building Construction	0.58	0.60
Other Construction	0.06	0.11
Legal Services	0.37	0.45
Accounting & Secretarial Services	1.11	0.43
Architectural & Engineering Services	0.74	1.49
Petroleum & Mining Consultants	0.27	0.79
Employment & Labour Contracting	0.37	0.68
Advertising & Exhibitions	0.52	0.84

## Unit Business Cost Index of Manufacturing

### Weighting Patterns

	Per Cent	
	1993	2000
<b>Business &amp; Other Services (cont'd)</b>		
Leasing of Machinery & Equipment	0.35	0.77
Management Consultants	0.24	2.14
Other Business & Technical Services	3.28	3.11
Producers of Government Services	1.23	1.87
Security Services	0.12	0.22
Education	0.07	0.17
Environmental Health Services	0.71	1.09
Broadcasting & Entertainment Services	0.24	0.37
Other Recreational Services	0.68	0.36
Personal & Household Services	0.01	0.01
Repairs of Household Goods	0.33	0.33
Repairs of Road Transport Equipment	0.21	0.72
Non-Profit Bodies	0.16	0.26
Imports of Other Goods & Services	0.59	--
Information Technology	--	3.85
<b>GOVERNMENT RATES AND FEES</b>	<b>2.00</b>	<b>1.26</b>
Import Duties	0.28	0.01
Excise Duties	0.30	0.17
Others	1.42	1.08

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Figures may not add up due to rounding.

**CONSTRUCTION OF THE UBCI**

1. The Unit Business Cost is defined as

$$\begin{aligned} UBC &= \frac{TBC}{VA} \\ &= \frac{TLC + TSC + TGRF}{VA}, \end{aligned} \quad (1)$$

where

- VA = Value added at constant prices,
- TBC = Total business cost,
- TLC = Total labour cost,
- TSC = Total services cost,
- TGRF = Total Government rates and fees.

2. The total services cost and total government rates and fees can be expressed as follows:

$$TSC = \sum_{i=1}^{m_1} P^i Q^i \quad \text{and} \quad TGRF = \sum_{j=1}^{m_2} P^j Q^j \quad (2)$$

where

- $P^i$  = unit price of the  $i^{\text{th}}$  element of TSC,
- $Q^i$  = input quantity of the  $i^{\text{th}}$  element of TSC,
- $P^j$  = unit price of the  $j^{\text{th}}$  element of TGRF,
- $Q^j$  = input quantity of the  $j^{\text{th}}$  element of TGRF,
- $m_1, m_2$  = total no. of elements in TSC and TGRF respectively.

3. From equations (1) and (2), we can express UBC as an index in terms of its value for the base year ( $UBC_0$ ) as follows:

$$\begin{aligned} UBCI &= \frac{UBC}{UBC_0} \times 100 \\ &= \frac{(TLC + TSC + TGRF)/VA}{TBC_0/VA_0} \times 100 \\ &= \frac{VA_0}{TBC_0} \left( \frac{TLC}{VA} + \sum_{i=1}^{m_1} \frac{P^i Q^i}{VA} + \sum_{j=1}^{m_2} \frac{P^j Q^j}{VA} \right) \times 100 \end{aligned}$$

$$= \left[ \frac{TLC_0}{TBC_0} \times \frac{TLC/VA}{TLC_0/VA_0} + \sum_{i=1}^{m_1} \left( \frac{P_0^i Q_0^i}{TBC_0} \times \frac{P^i Q^i VA_0}{P_0^i Q_0^i VA} \right) + \sum_{j=1}^{m_2} \left( \frac{P_0^j Q_0^j}{TBC_0} \times \frac{P^j Q^j VA_0}{P_0^j Q_0^j VA} \right) \right] \times 100 \quad (3)$$

4. Since the Unit Labour Cost is defined as  $ULC = \frac{TLC}{VA}$ , (3) can be expressed as:

$$UBCI = \left[ w_{ULC} \frac{ULC}{ULC_0} + \sum_{i=1}^{m_1} \left( w_i \frac{P^i}{P_0^i} \times \frac{VA_0/Q_0^i}{VA/Q^i} \right) + \sum_{j=1}^{m_2} \left( w_j \frac{P^j}{P_0^j} \times \frac{VA_0/Q_0^j}{VA/Q^j} \right) \right] \times 100 \quad (4)$$

where

$$w_{ULC} = \frac{TLC_0}{TBC_0},$$

$$w_i = \frac{P_0^i Q_0^i}{TBC_0},$$

$$w_j = \frac{P_0^j Q_0^j}{TBC_0},$$

5. Now, suppose that the real value added per unit of each element contributing to total other cost of services and government rates and fees remains constant over the years, which implies that  $\frac{VA_0/Q_0^i}{VA/Q^i} = 1$ , for all  $i$ .

Equation (4) becomes

$$\begin{aligned} UBCI &= \left[ w_{ULC} \frac{ULC}{ULC_0} + \sum_{i=1}^{m_1} w_i \frac{P^i}{P_0^i} + \sum_{j=1}^{m_2} w_j \frac{P^j}{P_0^j} \right] \times 100 \\ &= w_{ULC} ULCI + \sum_{i=1}^{m_1} w_i I^i + \sum_{j=1}^{m_2} w_j I^j \\ &= w_{ULC} \text{ Unit Labour Cost Index} + w_{svs} \text{ Services Cost Index} \\ &\quad + w_{Gov} \text{ Government Rates and Fees Index.} \end{aligned}$$

where

$$I^i = \frac{P^i}{P_0^i} \times 100, \quad I^j = \frac{P^j}{P_0^j} \times 100,$$

$$\text{Services Cost Index} = \sum_{i=1}^{m_1} w_i I_n^i / w_{svs},$$

$$\text{Government Rates and Fees Index} = \sum_{j=1}^{m_2} w_j I_n^j / w_{Gov},$$

$$w_{svs} + w_{ULC} + w_{Gov} = 1.$$

**UNIT BUSINESS COST INDEX OF MANUFACTURING  
(2000=100)**

	Index				Growth Rate (%)			
	Overall	Unit Labour Cost	Services Cost	Government Rates & Fees	Overall	Unit Labour Cost	Services Cost	Government Rates & Fees
Weights (%)	100.00	44.55	54.19	1.26	-	-	-	-
1980	88.4	77.9	100.9	90.0	-	-	-	-
1981	97.2	84.2	109.3	128.5	10.0	8.2	8.3	42.7
1982	99.4	97.0	103.6	115.7	2.3	15.1	-5.2	-9.9
1983	98.5	101.0	99.5	102.0	-0.9	4.1	-3.9	-11.8
1984	102.4	107.4	101.6	103.5	4.0	6.4	2.1	1.5
1985	102.0	114.7	95.3	91.3	-0.5	6.8	-6.1	-11.8
1986	89.3	97.4	87.8	65.7	-12.4	-15.1	-7.9	-28.1
1987	86.2	92.0	86.2	66.6	-3.5	-5.5	-1.8	1.4
1988	88.9	95.3	88.4	68.8	3.0	3.5	2.5	3.4
1989	94.1	103.9	90.3	77.9	5.9	9.1	2.2	13.2
1990	100.5	112.6	94.0	91.9	6.8	8.3	4.1	18.0
1991	105.5	119.6	96.2	107.1	4.9	6.3	2.3	16.5
1992	108.8	127.6	95.0	114.2	3.1	6.6	-1.2	6.6
1993	108.1	124.2	96.6	113.1	-0.7	-2.6	1.7	-1.0
1994	107.8	120.4	98.7	115.8	-0.2	-3.0	2.2	2.4
1995	109.3	118.8	102.0	128.8	1.4	-1.3	3.4	11.2
1996	110.1	122.1	100.9	133.0	0.7	2.8	-1.1	3.2
1997	110.1	123.3	100.1	132.3	0.0	1.0	-0.8	-0.6
1998	109.6	122.1	100.8	109.0	-0.5	-1.0	0.7	-17.6
1999	99.1	103.3	96.4	90.9	-9.6	-15.4	-4.4	-16.6
2000	100.0	100.0	100.0	100.0	0.9	-3.2	3.7	10.1
2001	109.1	117.0	102.7	103.2	9.1	17.0	2.7	3.2
2002	102.5	106.6	99.5	89.5	-6.0	-8.9	-3.1	-13.3
2003	100.7	102.5	99.5	86.5	-1.8	-3.8	0.0	-3.4
2004	97.7	95.0	100.0	95.1	-3.0	-7.4	0.5	10.0
2005	96.9	92.2	100.7	96.2	-0.9	-3.0	0.7	1.2
1980 I	87.2	82.4	95.7	77.5	-	-	-	-
1980 II	85.2	70.1	101.8	85.2	-	-	-	-
1980 III	86.4	73.0	100.9	93.8	-	-	-	-
1980 IV	94.6	85.8	105.1	103.5	-	-	-	-
1981 I	99.0	89.2	110.1	111.8	13.4	8.2	15.0	44.2
1981 II	91.5	73.0	107.4	132.4	7.5	4.1	5.5	55.4
1981 III	95.7	78.6	109.9	142.6	10.8	7.6	8.9	52.0
1981 IV	102.7	96.2	109.8	127.0	8.5	12.1	4.5	22.7
1982 I	100.4	98.2	104.3	117.1	1.5	10.2	-5.2	4.7
1982 II	95.3	87.4	103.8	116.0	4.2	19.7	-3.3	-12.4
1982 III	97.3	91.8	104.0	115.6	1.7	16.8	-5.3	-19.0
1982 IV	104.6	110.6	102.1	114.1	1.9	14.9	-7.0	-10.1
1983 I	103.1	109.4	101.1	103.4	2.7	11.4	-3.1	-11.7
1983 II	95.4	94.4	99.2	101.4	0.1	8.0	-4.4	-12.6
1983 III	94.4	92.8	98.7	100.4	-3.0	1.1	-5.1	-13.2
1983 IV	101.1	107.3	99.0	102.8	-3.4	-2.9	-3.0	-9.9

**UNIT BUSINESS COST INDEX OF MANUFACTURING  
(2000=100)**

	Index				Growth Rate (%)				
	Overall	Unit Labour Cost	Services Cost	Government Rates & Fees	Overall	Unit Labour Cost	Services Cost	Government Rates & Fees	
Weights (%)	100.00	44.55	54.19	1.26	-	-	-	-	
1984	I	102.9	109.2	100.8	105.8	-0.1	-0.2	-0.3	2.3
	II	97.3	95.5	102.0	103.0	2.0	1.2	2.8	1.6
	III	100.5	102.4	102.2	103.0	6.5	10.4	3.5	2.6
	IV	108.9	122.7	101.2	102.2	7.7	14.4	2.2	-0.6
1985	I	107.2	121.5	99.0	99.7	4.2	11.3	-1.8	-5.8
	II	99.4	106.5	96.5	101.3	2.1	11.5	-5.4	-1.7
	III	97.1	105.5	93.9	89.3	-3.3	3.1	-8.1	-13.4
	IV	104.1	125.3	91.8	75.0	-4.5	2.1	-9.3	-26.6
1986	I	99.7	117.5	90.6	68.8	-7.0	-3.3	-8.5	-31.0
	II	85.5	87.7	88.8	67.4	-13.9	-17.7	-8.0	-33.4
	III	83.5	85.5	86.9	63.3	-14.0	-18.9	-7.5	-29.0
	IV	88.5	98.8	85.1	63.1	-14.9	-21.1	-7.3	-15.8
1987	I	88.3	98.0	85.2	64.9	-11.4	-16.5	-5.9	-5.6
	II	83.4	86.3	85.6	67.3	-2.5	-1.6	-3.6	-0.2
	III	83.9	86.4	86.6	67.0	0.5	1.0	-0.3	5.8
	IV	89.3	97.4	87.6	67.0	0.8	-1.5	2.9	6.1
1988	I	90.9	100.4	88.1	68.0	3.0	2.4	3.4	4.9
	II	84.8	86.5	88.0	68.6	1.6	0.3	2.8	1.9
	III	86.6	89.6	88.8	68.8	3.2	3.7	2.6	2.6
	IV	93.1	104.6	88.5	69.9	4.3	7.4	1.1	4.3
1989	I	96.7	111.2	89.6	73.5	6.4	10.7	1.7	8.0
	II	89.7	94.4	89.8	78.6	5.7	9.1	2.0	14.5
	III	91.7	97.9	90.5	79.5	5.8	9.2	1.9	15.6
	IV	98.4	112.2	91.3	80.1	5.6	7.3	3.2	14.6
1990	I	102.8	119.6	93.0	82.9	6.2	7.6	3.8	12.8
	II	96.5	104.8	93.6	83.7	7.6	11.0	4.3	6.5
	III	97.9	105.6	94.1	101.1	6.9	7.9	3.9	27.1
	IV	105.0	120.3	95.3	100.2	6.7	7.2	4.4	25.0
1991	I	108.0	125.4	96.6	102.1	5.1	4.8	3.9	23.2
	II	101.5	110.8	96.0	107.1	5.2	5.7	2.5	28.0
	III	102.5	112.6	96.1	109.9	4.7	6.6	2.2	8.7
	IV	109.9	129.8	95.9	109.4	4.7	7.9	0.6	9.2
1992	I	114.0	139.2	95.6	110.4	5.6	11.0	-1.0	8.1
	II	105.8	120.8	95.2	113.1	4.2	9.0	-0.8	5.6
	III	104.6	118.3	94.6	116.5	2.1	5.1	-1.5	6.0
	IV	110.7	132.0	94.6	117.0	0.7	1.7	-1.3	6.9

**UNIT BUSINESS COST INDEX OF MANUFACTURING  
(2000=100)**

	Index				Growth Rate (%)			
	Overall	Unit Labour Cost	Services Cost	Government Rates & Fees	Overall	Unit Labour Cost	Services Cost	Government Rates & Fees
Weights (%)	100.00	44.55	54.19	1.26	-	-	-	-
1993 I	113.3	137.4	96.4	115.0	-0.6	-1.3	0.9	4.2
II	104.7	115.6	96.6	117.4	-1.1	-4.3	1.5	3.8
III	103.8	113.7	96.7	109.9	-0.8	-4.0	2.2	-5.7
IV	110.5	130.1	96.8	110.0	-0.2	-1.4	2.3	-6.0
1994 I	111.8	132.0	97.7	110.9	-1.4	-4.0	1.3	-3.6
II	103.5	111.0	98.0	110.2	-1.2	-4.0	1.4	-6.1
III	104.2	110.8	99.0	119.0	0.3	-2.6	2.4	8.3
IV	111.9	128.0	100.2	123.3	1.2	-1.6	3.5	12.1
1995 I	115.2	133.4	102.1	126.1	3.0	1.1	4.5	13.7
II	106.9	112.5	102.1	131.1	3.3	1.3	4.3	18.9
III	104.3	106.3	102.1	127.7	0.2	-4.0	3.1	7.3
IV	111.0	123.1	101.8	130.5	-0.8	-3.8	1.6	5.9
1996 I	112.9	127.9	101.7	134.0	-2.0	-4.1	-0.3	6.3
II	107.2	114.5	101.1	134.5	0.3	1.8	-1.0	2.6
III	107.6	116.6	100.5	131.9	3.2	9.7	-1.6	3.3
IV	112.6	129.4	100.3	131.6	1.5	5.1	-1.5	0.9
1997 I	116.9	139.9	100.2	133.6	3.5	9.4	-1.5	-0.3
II	106.5	115.2	99.5	132.6	-0.7	0.6	-1.6	-1.4
III	105.3	111.9	99.9	131.7	-2.1	-4.0	-0.7	-0.1
IV	111.7	126.3	100.9	131.2	-0.8	-2.4	0.6	-0.4
1998 I	116.6	135.4	103.1	128.2	-0.2	-3.2	2.9	-4.0
II	108.3	117.5	101.4	124.3	1.7	1.9	1.9	-6.2
III	105.4	113.3	100.4	92.4	0.1	1.3	0.5	-29.9
IV	108.0	122.4	98.4	91.0	-3.4	-3.1	-2.5	-30.6
1999 I	103.6	114.6	96.3	90.5	-11.2	-15.4	-6.6	-29.4
II	95.9	95.6	96.3	90.0	-11.4	-18.6	-5.0	-27.6
III	94.5	91.9	96.3	91.0	-10.4	-18.9	-4.0	-1.5
IV	102.5	111.2	96.8	92.0	-5.0	-9.1	-1.7	1.0
2000 I	103.6	111.0	97.8	87.0	0.0	-3.1	1.6	-3.9
II	95.7	92.4	98.6	89.8	-0.2	-3.4	2.4	-0.2
III	95.6	89.6	100.2	110.6	1.2	-2.6	4.1	21.6
IV	105.1	107.0	103.3	112.6	2.5	-3.8	6.8	22.4
2001 I	111.0	120.3	103.3	112.8	7.2	8.3	5.6	29.7
II	105.6	108.3	103.3	110.3	10.3	17.1	4.7	22.8
III	107.0	113.9	101.6	97.0	12.0	27.2	1.4	-12.3
IV	112.6	125.4	102.5	92.9	7.2	17.3	-0.8	-17.5

**UNIT BUSINESS COST INDEX OF MANUFACTURING  
(2000=100)**

	Index				Growth Rate (%)				
	Overall	Unit Labour Cost	Services Cost	Government Rates & Fees	Overall	Unit Labour Cost	Services Cost	Government Rates & Fees	
Weight (%)	100.00	44.55	54.19	1.26	-	-	-	-	
2002	I	108.2	119.4	99.3	92.0	-2.6	-0.7	-3.9	-18.5
	II	96.5	93.6	99.0	91.2	-8.6	-13.5	-4.2	-17.3
	III	98.2	97.5	98.9	89.5	-8.3	-14.4	-2.7	-7.7
	IV	107.3	115.8	100.8	85.2	-4.7	-7.7	-1.6	-8.3
2003	I	105.3	113.7	98.8	84.3	-2.7	-4.8	-0.5	-8.3
	II	100.1	101.0	99.7	83.7	3.7	7.9	0.7	-8.2
	III	96.3	92.9	99.2	89.2	-2.0	-4.7	0.3	-0.3
	IV	101.2	102.4	100.4	88.6	-5.7	-11.6	-0.4	4.0
2004	I	102.0	104.9	99.8	94.8	-3.1	-7.7	1.0	12.4
	II	93.9	87.8	99.0	95.0	-6.1	-13.1	-0.8	13.5
	III	94.9	89.5	99.3	95.2	-1.4	-3.7	0.1	6.7
	IV	100.0	97.6	102.1	95.4	-1.1	-4.7	1.7	7.7
2005	I	103.8	108.4	100.2	95.8	1.8	3.3	0.4	1.0
	II	93.6	86.9	99.1	96.1	-0.4	-1.1	0.1	1.1
	III	92.9	83.8	100.2	96.4	-2.1	-6.3	0.9	1.3
	IV	97.2	89.5	103.5	96.7	-2.8	-8.3	1.4	1.3

## **SINGAPORE DEPARTMENT OF STATISTICS INFORMATION DISSEMINATION SERVICES**

### **Statistics Singapore Website**

The Statistics Singapore Website was launched by the Singapore Department of Statistics in January 1995. Internet users can access the website by connecting to:

**<http://www.singstat.gov.sg>**

Key Singapore statistics are available:

- ◆ Latest Data / KeyStats  
which provide key data on Singapore's economy and population.
- ◆ Media Releases  
which cover the Performance of Singapore Economy, the Consumer Price Index, the Wholesale Trade Index, Business Receipts Index for Service Industries, Retail Sales and Catering Trade Indices, Manufacturing Performance, Singapore External Trade, Tourism Sector Performance, Real Estate Information and Employment Situation.
- ◆ Papers and Analyses  
which provide papers on economic and social topics.

An advance release calendar for key Singapore economic indicators is available.

The Website provides a convenient gateway to international statistical websites:

- ◆ Guide to International Statistics  
which covers international databases, classifications and links, and statistical terms and definitions.
- ◆ IMF Dissemination Standards Bulletin Board  
which provides metadata about Singapore's key indicators in the real, fiscal, financial and external sectors, including dissemination practices and information about pre-release access of current indicators.

The latest editions of our Department's publications are available in SingStat website at <http://www.singstat.gov.sg/pdtsvc/catalog.html>.

### **SingStat Express**

SingStat Express is a personalised data delivery service which sends the latest press releases, notices of publication, newsletter, occasional and information papers to subscribers via email. The Monthly Digest of Statistics (softcopy) and more than 50 key indicators and statistical indices are included for subscription at a nominal fee.

Subscription details are available from the Statistics Singapore Website (<http://www.singstat.gov.sg/express/express.html>).

### **Key Singapore Data on Palm OS Devices**

The pdf version of "Singapore in Brief 2006" for Palm OS devices is available for downloading from the Statistics Singapore Website.

## **SINGAPORE DEPARTMENT OF STATISTICS INFORMATION DISSEMINATION SERVICES (continued)**

### **SingStat Time Series (STS) Online System**

The SingStat Time Series (STS) Online System is an internet-accessible time series retrieval system. The STS includes some 5,000 historical data series on Singapore society and economy from several domains, including national accounts, balance of payments, investments, finance, labour, prices, business expectations, trade, manufacturing, tourism, demography, health and education.

Besides the usual monthly, quarterly and annual data, STS includes also seasonally adjusted data series for key economic indicators providing for a better analysis and understanding of current economic trends. The STS also offers:

- Web-based search engine that is easy to use;
- “Bookmark” features that enable users to save and organise links in their personalised portals.

Subscription to STS is opened to local and overseas users. More information on STS are available via Statistics Singapore Website. For enquiries, please contact our Department at Tel : **6332-7119**.

### **SingStat DataShop**

The SingStat DataShop is the virtual shopfront for official statistics on Singapore. Users can purchase softcopies of statistical reports online using credit card. Statistical reports available include:

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| ◆ Monthly Digest of Statistics         | ◆ Singapore’s Corporate Sector           |
| ◆ Singapore Statistical Highlights     | ◆ Singapore’s Investment Abroad          |
| ◆ Yearbook of Statistics               | ◆ Foreign Equity Investment in Singapore |
| ◆ Population Census 2000 Releases      | ◆ Economic Surveys Series                |
| ◆ Household Expenditure Survey         | ◆ Statistical Indices                    |
| ◆ Statistics on Marriages and Divorces |  |

The SingStat Datashop can be accessed via the Statistics Singapore Website.

### **E-survey**

The E-survey enables business organisations to complete and submit their survey forms through the internet. Using secured encryption protocols, the E-survey ensures that the information transmitted through the net is secured and protected. The system features online helps and validation checks to assist respondents in completing their survey forms. With the E-survey, respondents do away with the tedious paper work and manual tasks of mailing or faxing their survey returns to the Department.

#### ***Statistical Enquiries and Feedback***

If you have any statistical enquiries or comment or suggestions on our statistical publications and electronic services, you are welcomed to :

- ◆ E-mail us at **info@singstat.gov.sg**
- ◆ Fax to us at **Tel: (65) 6332-7689**
- ◆ Call us at **Tel: 1800-3238118\* (local callers)**  
**(65) 6332-7738 (overseas callers)**

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