

Rebasing of the Singapore National Accounts to Reference Year 2000

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The Singapore Department of Statistics (DOS) has recently completed the rebasing of Singapore's national accounts from base year 1995 to 2000. The rebasing exercise revalues constant price or real gross domestic product (GDP) at the prices prevailing in the new base year. At the same time, it serves to reconcile the different estimates of GDP and provides the occasion for methodological and conceptual reviews and improvements.

This article outlines the major improvements to the Singapore System of National Accounts (SSNA). One notable enhancement is the adoption of the recommendation in the United Nations System of National Accounts (SNA) to capitalise software, ie to treat expenditure on software as investment (gross fixed capital formation, GFCF) instead of intermediate consumption. The impact of the rebasing on key macroeconomic aggregates is also presented.

Rebasing and Reconciliation

Constant price GDP estimates are essentially volume indices, which measure changes in the

volume of economic activity while maintaining relative prices constant. Consistent with international practice, DOS has been rebasing our national accounts once every five years. The updating of the base year improves our estimates of economic growth and enhances their relevance.

Apart from the revaluation of national accounts estimates, the reconciliation of GDP estimates compiled using three independent approaches (output, expenditure and income) in the new base year 2000 is integral to the rebasing exercise. The reconciliation, which is carried out on the basis of the recently updated 2000 input-output (I-O) tables, serves to cross-validate and ensures the coherence of the three separate measures of GDP derived from diverse and independent data sources. As such, no statistical discrepancy is recorded among the different approaches of GDP estimates for 2000. The reconciliation, methodological and data improvements have also resulted generally in lower statistical discrepancies for most years.

Changes and Improvements

(A) *Change in Conceptual Treatment*

Capitalisation of Software Expenditure

DOS has adopted the SNA's recommendation to capitalise software expenditure in the national accounts. The capitalisation of software expenditure will result in the addition of computer software as an asset class in GFCF. Software expenditure is estimated to account for about 2 per cent of GFCF and about 0.5 per cent of GDP (Table 1). Its capitalisation, however, has a small impact on GDP growth, resulting in revisions of less than 0.1 percentage point to the estimated annual GDP growth rates in recent years.

TABLE 1 SHARE OF SOFTWARE INVESTMENT TO GDP AND GFCF AT CURRENT PRICES

| Year | Per Cent | |
|------|----------|------|
| | GDP | GFCF |
| 2000 | 0.6 | 2.1 |
| 2001 | 0.6 | 2.0 |
| 2002 | 0.5 | 2.0 |
| 2003 | 0.5 | 2.0 |
| 2004 | 0.5 | 2.0 |

Note : Based on GDP data as at 3Q 2005.

(B) *Change in Methodology*

Wholesale and Retail Trade

The estimation of the performance and growth of the wholesale and retail trade industry has been based on trade-related proxy indicators. While these indirect indicators provide reasonable

estimates, they could not provide a basis for the dis-aggregation of the industry into wholesale trade and retail trade. With the view of facilitating the dis-aggregation in accordance with the Singapore Standard Industrial Classification (SSIC), DOS has developed the wholesale trade index (WTI), compiling it at current prices since 1997 and at constant prices since 2004. The WTI, together with the retail sales index (RSI), provide direct assessments of the performance and growth of the wholesale and retail trade.

The adoption of the WTI and RSI as the basis for our estimation, in place of the present proxy indicators based on trade statistics, has resulted in an upward revision in both the nominal value-added and real growth estimates of the wholesale and retail trade industry. In addition, the reconciliation on the basis of the 2000 I-O tables has resulted in a further upward revision in the nominal value-added estimate of the industry in the reference year. Taken together, the nominal value-added estimate of the wholesale and retail trade has been revised upwards by \$516 million and \$1.0 billion in 2000 and 2004 respectively.

(C) *Improvement in Data Sources*

Census of Construction

The Building and Construction Authority (BCA) conducted a Census of the Construction Industry for reference year 2000 to provide benchmark estimates of construction value-added for the updating of I-O tables and rebasing of the national accounts. The incorporation of the census results has resulted in a downward revision of the construction industry's value-added by about \$900 million in 2000. Correspondingly, the share of construction in Gross Value-Added (GVA) has declined from 6.3 per cent (before rebasing) to 5.7 per cent (after rebasing) in 2000.

(D) Revision of Data Sources

Ownership of Dwellings¹

The SNA treats owner-occupiers as household unincorporated enterprises that produce housing services for their own consumption, including their value-added in GDP. The output of these owner-occupied residential buildings is imputed from their annual assessed values based on data provided by the Housing and Development Board (HDB) and Inland Revenue Authority of Singapore (IRAS) Property Tax Division.

In 2004, IRAS conducted a re-assessment of the annual values of HDB flats to ensure that the assessed values are more in line with the market. The output of owner-occupied dwellings has been revised accordingly to reflect more accurately the value-added from the housing services provided. This resulted in an upward revision of the GVA of ownership of dwellings by \$1.4 billion, to \$6.7 billion in 2000. Correspondingly, its share in GVA has increased from 3.4 per cent to 4.3 per cent in the same year.

(E) Updating of Classification

Private Consumption Expenditure (PCE)

The previous classification of private consumption expenditure (PCE) by purpose, which was based on the earlier 1968 SNA, has been updated to bring it in line with the 1993 SNA's recommended Classification of Individual Consumption by Purpose (COICOP). The updated classification (Table 2) provides for the classification of more purposes (eg by its separate identification of the fast-growing communications segment), and re-classifies some PCE components.

Being broadly consistent with the classifications adopted by the OECD countries, the updating of the PCE classification will enhance the international comparability of the PCE components in our national accounts. The updating of the PCE classification, however, has no impact on the level and growth rate of overall PCE estimates.

TABLE 2 COMPARISON OF THE PREVIOUS AND EXISTING CLASSIFICATION OF PCE

| Previous Classification | | Existing Classification | |
|-------------------------|---------------------------------|-------------------------|--|
| 1 | Food & Beverages | 1 | Food & Non-Alcoholic Beverages |
| | | 2 | Alcoholic Beverages & Tobacco |
| 2 | Clothing & Footwear | 3 | Clothing & Footwear |
| 3 | Rent & Utilities | 4 | Housing & Utilities |
| 4 | Furniture & Household Equipment | 5 | Furnishings, Household Equipment & Maintenance |
| 5 | Medical Services | 6 | Health |
| 6 | Transport & Communication | 7 | Transport |
| | | 8 | Communication |
| 7 | Recreation & Education | 9 | Recreation & Culture |
| | | 10 | Education |
| 8 | Other Goods & Services | 11 | Restaurants & Hotels |
| | | 12 | Miscellaneous Goods & Services |

¹ Previously known as "owner-occupied dwellings". As the data series also includes residential buildings which are let out by individuals (eg those who owned more than one dwelling), the term "ownership of dwellings" reflects more appropriately the inclusion of both the imputed and rented component.

Impact of Rebasing (As At 3rd Quarter 2005)

The revisions arising from the rebasing exercise are not entirely due to the reconciliation of the GDP estimates and the revaluation of the national accounts to the new base year. Revisions arise also from the methodological and conceptual changes introduced as well as the improvements in data coverage and data sources.

TABLE 3 REAL GDP GROWTH

| Year | Per Cent | |
|------|-----------------|----------------|
| | Before Rebasing | After Rebasing |
| 2000 | 9.6 | 10.0 |
| 2001 | -2.0 | -2.2 |
| 2002 | 3.2 | 3.9 |
| 2003 | 1.4 | 2.2 |
| 2004 | 8.4 | 8.8 |

Note : Based on GDP data as at 3Q 2005.

(A) GDP Growth Rates

The revisions in real GDP growth have been relatively moderate, ranging between -0.2 and 0.8 percentage points from 2000 to 2004 (Table 3). Generally, upward revisions in the contributions to growth from manufacturing, construction, wholesale and retail trade, and business services are partially offset by downward revisions in contributions from transport and communications.

(B) Nominal GDP

The revisions in nominal GDP estimates are relatively moderate, ranging between -0.3 and 0.9 per cent from 2000 to 2004 (Table 4), as the upward revisions in nominal value-added estimates for wholesale and retail trade, transport and communications, business services and ownership of dwellings are offset by downward revisions for manufacturing, construction, financial services and other services.

TABLE 4 GDP AT CURRENT MARKET PRICES

| Year | Before Rebasing | After Rebasing | Percentage Change [(b) - (a)] / (a) |
|------------|-----------------|------------------|--|
| | (a) | (b) | |
| \$ Million | | | |
| 2000 | 159,595.9 | 159,840.4 | 0.2 |
| 2001 | 153,771.4 | 153,367.8 | -0.3 |
| 2002 | 158,387.7 | 157,853.7 | -0.3 |
| 2003 | 160,923.6 | 160,642.1 | -0.2 |
| 2004 | 180,554.4 | 182,112.7 | 0.9 |

Note : Based on GDP data as at 3Q 2005.

(C) Composition of GDP Components

Component Share by Industry

In general, the shares of manufacturing and construction in GVA have been revised downwards, while the shares of wholesale and

retail trade, transport and communications, and ownership of dwellings have been revised upwards (Table 5).

TABLE 5 SHARE OF NOMINAL GROSS VALUE-ADDED BY INDUSTRY

| | Per Cent | | | |
|--------------------------------------|-----------------|----------------|-----------------|----------------|
| | 2000 | | 2004 | |
| | Before Rebasing | After Rebasing | Before Rebasing | After Rebasing |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Goods Producing Industries | 34.6 | 33.6 | 33.8 | 32.9 |
| Manufacturing | 26.6 | 26.2 | 27.7 | 27.2 |
| Construction | 6.3 | 5.7 | 4.3 | 3.8 |
| Utilities | 1.5 | 1.6 | 1.7 | 1.7 |
| Other Goods Industries | 0.1 | 0.1 | 0.1 | 0.1 |
| Services Producing Industries | 62.0 | 62.1 | 63.0 | 63.4 |
| Wholesale & Retail Trade | 12.7 | 13.0 | 14.3 | 14.7 |
| Hotels & Restaurants | 2.2 | 2.2 | 2.0 | 1.9 |
| Transport & Communications | 11.7 | 11.7 | 11.0 | 11.5 |
| Financial Services | 11.3 | 10.9 | 11.3 | 11.1 |
| Business Services | 13.7 | 13.9 | 12.7 | 12.7 |
| Other Services Industries | 10.4 | 10.4 | 11.7 | 11.5 |
| Ownership of Dwellings | 3.4 | 4.3 | 3.2 | 3.8 |

Note : Based on GDP data as at 3Q 2005.

Component Share by Expenditure

For expenditure-based GDP, while the share of net exports of goods and services has been revised downwards, the share of PCE has been revised upwards (Table 6). The lower share of net exports could be attributed to the revisions of data on goods for processing, repairs and merchanting as well as the incorporation of new data sources and improvements to existing data sources. The higher share in PCE reflects the revisions in estimates on the ownership of dwellings arising from the re-assessment of the annual values of HDB flats.

Conclusion

The successful completion of this rebasing exercise ensures the continuing coherence and reliability of our GDP estimates and enhances their relevance to the underlying and changing economic conditions. The capitalisation of software expenditure, together with the enhancements in the concepts, methodologies and data sources, has further strengthened our existing statistical framework that underpins the compilation of national accounts and ensures its conformity to international standards and practices.

TABLE 6 FINAL DEMAND AS A PERCENTAGE OF NOMINAL GDP

| | Per Cent | | | |
|------------------------------------|--------------------|---------------------------|--------------------|---------------------------|
| | 2000 | | 2004 | |
| | Before Rebasing | After Rebasing | Before Rebasing | After Rebasing |
| Private Consumption Expenditure | 40.9 | 42.2 | 42.2 | 42.5 |
| Government Consumption Expenditure | 10.9 | 10.8 | 10.6 | 10.5 |
| Gross Fixed Capital Formation | 29.8 | 30.6 | 24.0 | 23.6 |
| Changes in Inventories | 2.7 | 2.7 | -5.7 | -4.0 |
| Net Exports of Goods and Services | 14.9 | 13.6 | 29.7 | 27.3 |
| Statistical Discrepancy | 0.8 | 0.0 | -0.9 | 0.2 |

Note : Based on GDP data as at 3Q 2005.

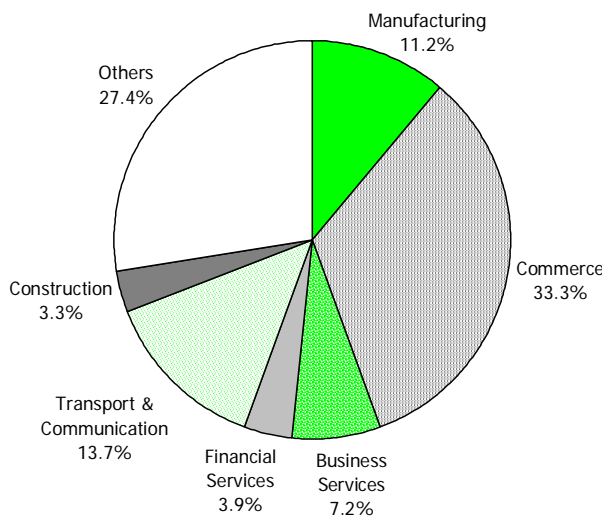
Singapore's Manufacturing Sector 1991–2005*

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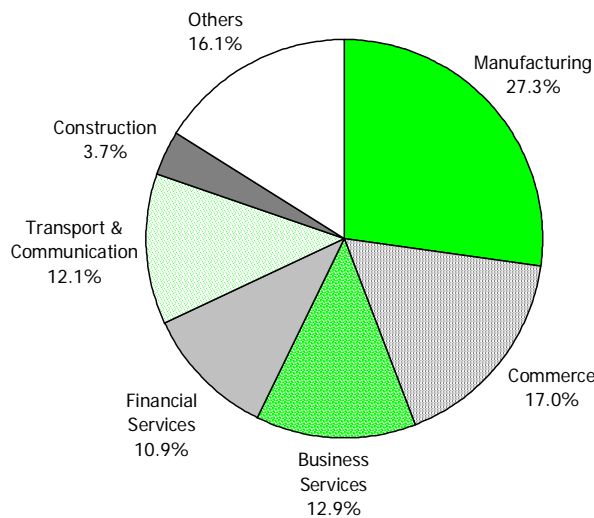
Manufacturing sector is one of the key growth drivers of Singapore's economy, accounting for more than a quarter of Singapore's Gross Domestic Product (GDP) and more than half of our exports. Its share of GDP has grown from 11 per cent in 1960 to 27 per cent in 2005 (Chart 1).

CHART 1 MANUFACTURING SECTOR'S SHARE OF GDP
1960 AND 2005

1960 GDP
= \$2.15 billion



2005 GDP
= \$194 billion

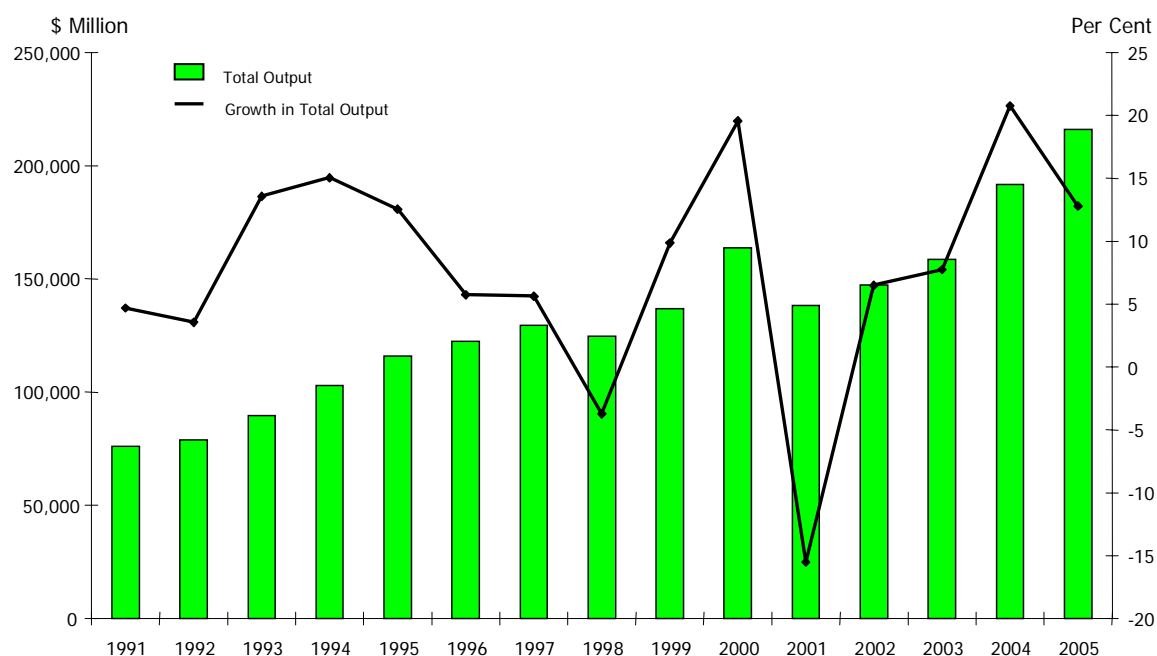


* Figures for the year 2005 are preliminary.

Growth in Manufacturing Output

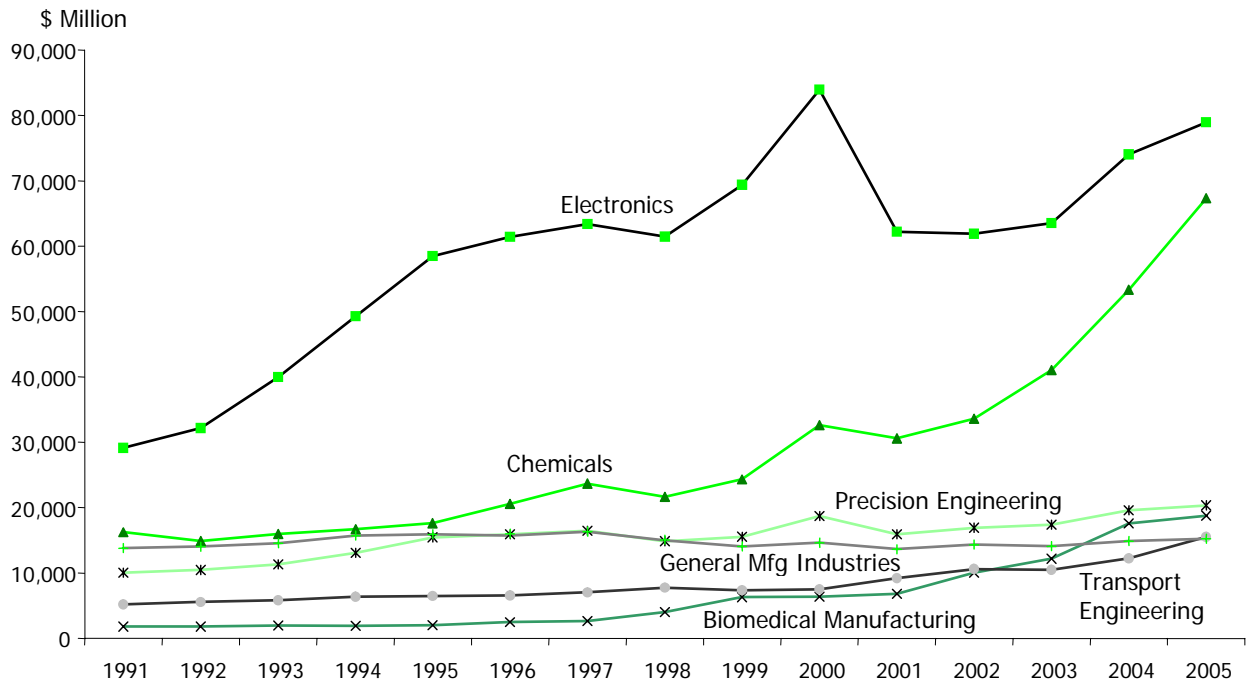
Total output in the manufacturing sector grew by about 7.7 per cent per annum in the past 15 years (Chart 2). The performance of the manufacturing sector showed a rising trend during this period except 1998 and 2001. The contraction of manufacturing output in 1998 was largely due to the shutdown of firms during the economic crisis, whereas the downturn in 2001 was attributed to sluggish global demand, particularly in electronics products.

CHART 2 PERFORMANCE OF THE MANUFACTURING SECTOR
1991–2005



Output of the major manufacturing clusters also demonstrated a general upward trend over the past 15 years (Chart 3). Specifically in 2005, growths were recorded in the clusters of biomedical manufacturing (20 per cent), chemicals (12 per cent), transport engineering (9 per cent), electronics (8 per cent), precision engineering (6 per cent), and general manufacturing industries (1 per cent). Overall, the manufacturing sector registered an increase of 13 per cent in output in 2005.

CHART 3 OUTPUT OF THE MANUFACTURING CLUSTERS
1991–2005



Sources of Growth in the Manufacturing Clusters

Expansion in the electronics cluster in 2005 was mainly due to increased production of semiconductors, mobile products, computer chips, and printers & related products. There was strong global demand, especially from the United States (US), European Union and Asia Pacific.

Growth of the chemicals cluster was the result of increased output in the petroleum and petrochemicals segments. Improved refining margins prompted more processing of crude petroleum into refined products. Output in the petrochemicals segment was boosted by the enlarged capacities in the production of a wider spectrum of petrochemicals. Furthermore, the specialty chemicals segment had higher output of solvents, coatings, mineral additives and industrial gases.

Output growth in the biomedical manufacturing sector was driven by expansion in the pharmaceuticals segment, where production of different product-mix increased. The medical technology segment also expanded to meet more shipments of medical devices and appliances to the US and European markets.

Increased output in the machinery & systems and the precision modules & components segments contributed to the growth of the precision engineering cluster. Greater demand stimulated the production of machinery such as industrial process control equipment, semiconductor testing equipment, refrigerating machinery, compressors and machine tools. In tandem with the buoyancy in the electronics cluster, new and existing orders from local and export markets boosted production in the precision modules & components segment. There were higher output of metal and plastic precision components, electronic wires, lead frames, die castings, electroplating services and metal stampings.

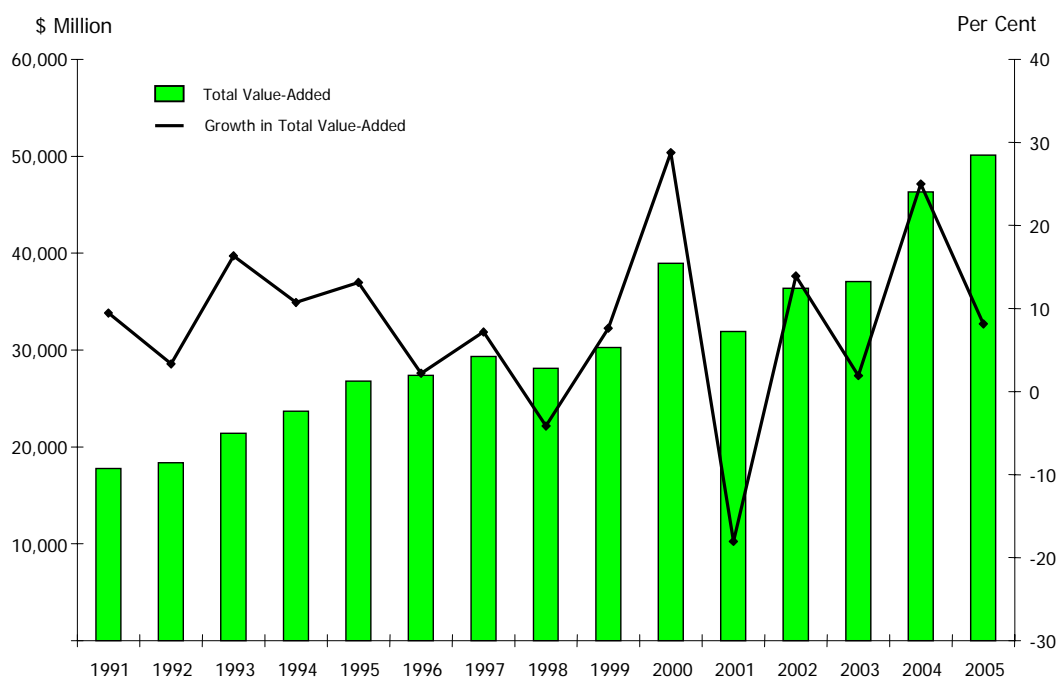
The transport engineering cluster's growth was largely due to increased output in the marine & offshore engineering and aerospace segments. The marine & offshore engineering segment expanded as shipyards completed more ship repairs, ship conversion and ship retrofitting works. The expansion in the aerospace segment was attributed to the increase in the manufacture of aviation parts and commercial aircraft repair works to cater to overseas orders.

Other Indicators of Growth

Value-added

Value-added (VA) of the manufacturing sector registered an overall increasing trend, recording an average annual growth rate of 8.3 per cent during the period from 1991 to 2005 (Chart 4). Total VA stood at \$50 billion in 2005, with the electronics cluster remaining the largest contributor, accounting for almost one-third of total VA in 2005. Other clusters such as the biomedical manufacturing, chemicals, precision engineering, transport engineering clusters and general manufacturing industries contributed to between 9 per cent and 21 per cent of total manufacturing VA.

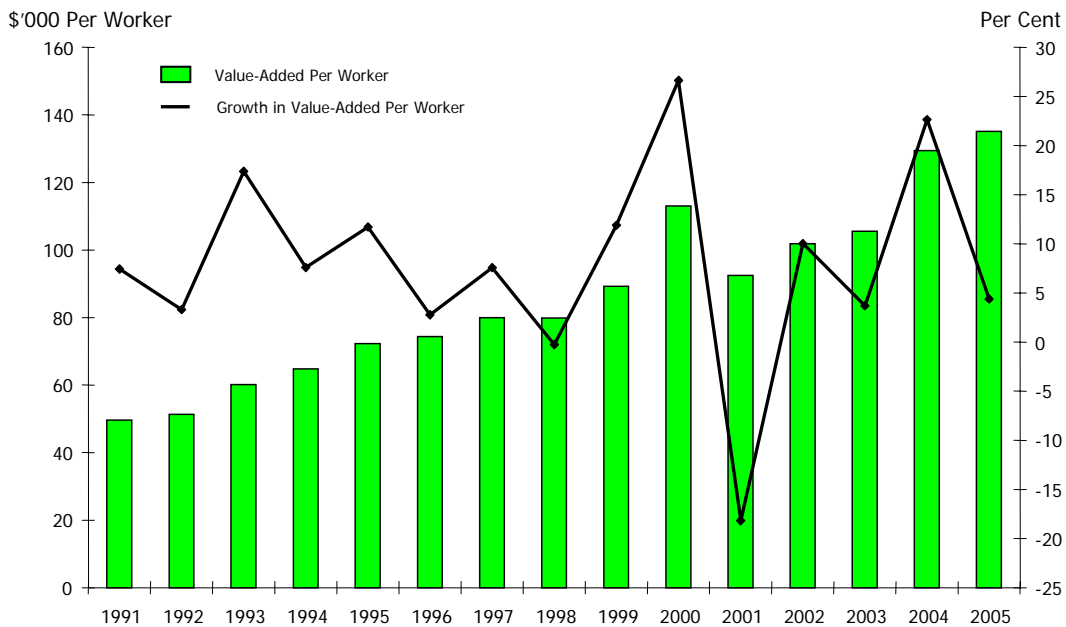
CHART 4 VALUE-ADDED IN THE MANUFACTURING SECTOR
1991-2005



Productivity

Labour productivity in the manufacturing sector indicated a general upward trend between 1991 and 2005, registering an average annual growth rate of 4.4 per cent (Chart 5). In line with the output trends, productivity dipped in years 1998 and 2001, but registered strong growths in years 2000 and 2005. Value-added per worker, which is a proxy for labour productivity, amounted to \$135,100 in 2005.

CHART 5 PRODUCTIVITY IN THE MANUFACTURING SECTOR
1991–2005



Conclusion

Singapore’s manufacturing evolved over the past 40 years from a labour-intensive to a research- and knowledge-based sector. With manufacturing moving up the value chain, complemented by robust supporting industries, the sector is expected to continue its growth trend in the next decade.

Singapore's Corporate Sector 1993–2003

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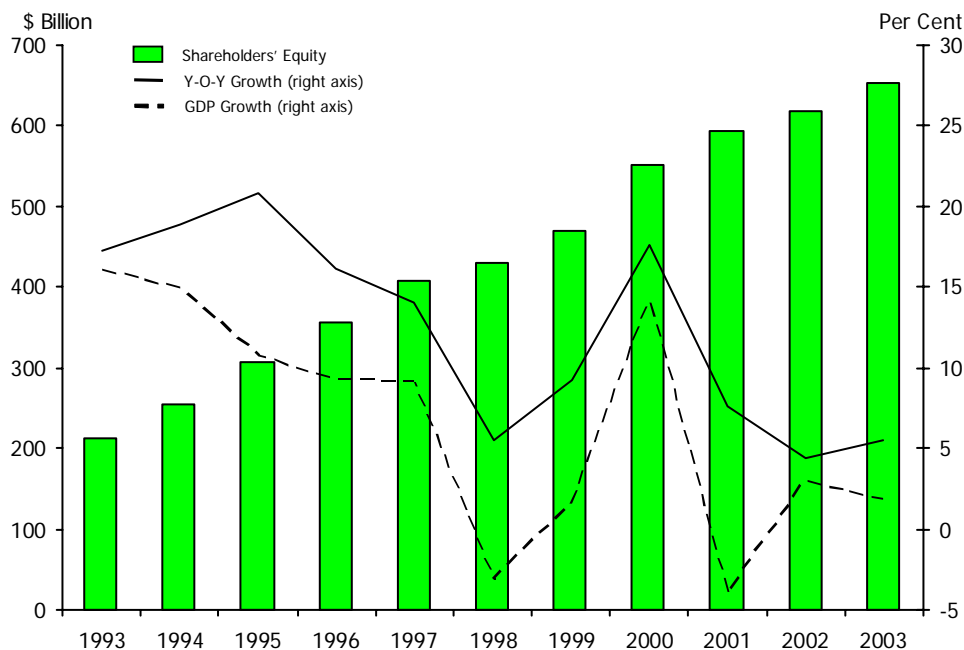
Introduction

This article analyses the trends in sectoral composition of Singapore's corporate sector from 1993–2003. The data presented were compiled from the results of the Survey of Financial Structure and Operations of Companies (FSC)¹ conducted annually by the Singapore Department of Statistics.

Between 1993 and 2003, total shareholders'

equity² tripled from \$214 billion to \$653 billion, representing an average expansion of 12 per cent per annum (Chart 1). Generally, the growth of shareholders' equity was closely linked with overall economic performance. The corporate sector enjoyed double-digit expansion in equity capital from 1993 until the Asian financial crisis in 1998 when the growth in shareholders' equity slowed to 5.5 per cent. Since then, equity capital has registered a more moderate single-digit growth, except in the year 2000.

CHART 1 SHAREHOLDERS' EQUITY
(As At Year-End)



1 FSC survey covers companies incorporated or registered in Singapore, including branches of foreign companies.

2 Shareholders' equity consists of paid-up share capital and the reserves of the company.

Shareholders' Equity

The share of shareholders' equity attributed to financial services (which includes investment holding companies), the largest sector, rose from 44 per cent in 1993 to 47 per cent in 2003 (Table 1). This was mainly due to the increased dominance of investment holding companies.

TABLE 1 SECTORAL DISTRIBUTION OF SHAREHOLDERS' EQUITY, 1993 AND 2003
(As At Year-End)

| Shareholder's Equity | Per Cent | |
|---------------------------------|----------|------|
| | 1993 | 2003 |
| Financial Services | 43.7 | 46.8 |
| Manufacturing | 17.3 | 16.9 |
| Real Estate & Business Services | 17.0 | 12.3 |
| Transport & Communications | 8.9 | 10.9 |
| Commerce | 10.1 | 9.4 |
| Others | 3.0 | 3.7 |

The transport & communications sector's share increased from 8.9 per cent to reach 11 per cent as a result of the rapid expansion experienced by the communications sector over the past decade.

In contrast, real estate & business services experienced a decline in share from 17 per cent in 1993 to 12 per cent in 2003, due mainly to the lacklustre growth of real estate companies since the Asian financial crisis. The proportion of equity capital accrued to manufacturing remained relatively unchanged at 17 per cent in 2003 compared with 1993.

Financial Services

Investment holding companies (81 per cent) and banks (14 per cent) accounted for the bulk of shareholders' equity in financial services as at end of 2003 (Table 2). More investment holding companies had emerged over the past decade. As a result, their shareholders' equity increased from \$68 billion in 1993 to \$247 billion in 2003, and their share of equity capital in financial services sector expanded steadily from 73 per cent to 81 per cent. In contrast, the slower pace of growth in banks' share capital (9.0 per cent per annum) compared to that of investment holding companies (14 per cent per annum) led to a dilution in banks' proportion of shareholders' equity from 20 per cent to 14 per cent over the same period.

TABLE 2 SHAREHOLDERS' EQUITY IN FINANCIAL SERVICES BY SUB-SECTOR, 1993-2003
(As At Year-End)

| | \$ Billion | | | | | | |
|------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | 1993 | 1995 | 1997 | 1999 | 2001 | 2002 | 2003 |
| Financial Services | 93.3 (100.0) | 126.3 (100.0) | 176.5 (100.0) | 214.3 (100.0) | 280.3 (100.0) | 282.0 (100.0) | 305.5 (100.0) |
| Investment Holding Companies | 67.9 (72.8) | 92.6 (73.3) | 134.6 (76.3) | 166.1 (77.5) | 221.0 (78.8) | 225.4 (79.9) | 246.8 (80.8) |
| Banks | 18.5 (19.9) | 24.3 (19.2) | 30.3 (17.2) | 32.6 (15.2) | 41.8 (14.9) | 41.2 (14.6) | 44.0 (14.4) |

() : Figures in parenthesis refer to sub-sectoral composition of total shareholders' equity in sector.

Manufacturing

Shareholders' equity in manufacturing was concentrated in electronics (31 per cent), chemicals (31 per cent) and petroleum (8.8 per cent) in 2003 (Table 3). The electronics sector's share of manufacturing equity capital rose from 28 per cent in 1993 to about 40 per cent in the late 1990s. However, substantial dividends paid by foreign electronics enterprises since 2001 resulted in a moderation of its share to 31 per cent in 2003³.

The steady increase in the share of manufacturing equity attributed to the chemicals (including pharmaceuticals) sector from 14 per

cent in 1993 to 31 per cent in 2003 was largely due to the robust growth of the pharmaceuticals sub-sector. In 2003, shareholders' equity in the pharmaceuticals sub-sector constituted 23 per cent of total manufacturing equity capital, significantly higher than 5.4 per cent a decade earlier. The faster pace of growth for the pharmaceuticals sector (29 per cent per annum) vis-à-vis other major sub-sectors such as electronics (13 per cent per annum) and petroleum (11 per cent per annum) propelled pharmaceuticals to be one of Singapore's key manufacturing sub-sectors. The petroleum sector's share of manufacturing shareholders' equity remained within the range of 5.6 per cent and 8.9 per cent over the last ten years.

TABLE 3 SHAREHOLDERS' EQUITY IN MANUFACTURING BY SUB-SECTOR, 1993–2003
(As At Year-End)

| | \$ Billion | | | | | | |
|------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|--------------------------------|
| | 1993 | 1995 | 1997 | 1999 | 2001 | 2002 | 2003 |
| Manufacturing | 37.0 (100.0) | 50.5 (100.0) | 67.9 (100.0) | 74.4 (100.0) | 97.7 (100.0) | 102.0 (100.0) | 110.6 (100.0) |
| Electronics | 10.5 (28.4) | 16.9 (33.4) | 23.3 (34.2) | 30.0 (40.3) | 37.7 (38.6) | 35.3 (34.6) | 34.4 (31.1) |
| Chemicals | 5.1 (13.8) | 8.1 (16.1) | 13.4 (19.7) | 15.7 (21.2) | 23.9 (24.4) | 28.4 (27.9) | 34.2 (30.9) |
| <i>Pharmaceuticals</i> | <i>2.0</i> <i>(5.4)</i> | <i>4.0</i> <i>(7.8)</i> | <i>7.1</i> <i>(10.5)</i> | <i>10.6</i> <i>(14.2)</i> | <i>16.8</i> <i>(17.2)</i> | <i>20.4</i> <i>(19.9)</i> | <i>25.6</i> <i>(23.1)</i> |
| Petroleum | 3.3 (8.9) | 4.0 (8.0) | 4.2 (6.1) | 5.2 (7.0) | 7.1 (7.3) | 7.4 (7.2) | 9.8 (8.8) |

() : Figures in parenthesis refer to sub-sectoral composition of total shareholders' equity in sector.

³ Revenue reserves, and in turn shareholders' equity, of a company will decline if dividends paid out to investors exceed profits earned during the year.

Commerce

As at end of 2003, about 81 per cent of shareholders' equity within the commerce sector was contributed by wholesale trade (Table 4). The remaining 19 per cent was shared between restaurants & hotels (12 per cent) and retail trade (6.9 per cent). The share of wholesale trade's equity capital increased steadily from 73 per cent in 1993 to 81 per cent in 2003.

Transport, Storage and Communications

In 1993, shareholders' equity in the transport & storage sub-sector was 81 per cent (Table 5). Despite the positive growth registered, its share had been diluted by the faster growing post & communications sub-sector over the years. By 2003, the proportion held by transport & storage companies was reduced to 59 per cent while that of post & communications enterprises increased from 19 per cent in 1993 to 41 per cent in 2003.

TABLE 4 SHAREHOLDERS' EQUITY IN COMMERCE BY SUB-SECTOR, 1993–2003
(As At Year-End)

| | \$ Billion | | | | | | |
|----------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | 1993 | 1995 | 1997 | 1999 | 2001 | 2002 | 2003 |
| Commerce | 21.7 (100.0) | 29.8 (100.0) | 34.7 (100.0) | 38.5 (100.0) | 50.7 (100.0) | 60.8 (100.0) | 61.6 (100.0) |
| Wholesale Trade | 15.8 (72.8) | 21.5 (72.1) | 25.1 (72.2) | 29.4 (76.4) | 39.0 (77.0) | 48.9 (80.5) | 50.1 (81.4) |
| Retail Trade | 1.5 (6.7) | 2.0 (6.6) | 2.1 (6.1) | 2.8 (7.3) | 4.6 (9.2) | 4.2 (6.9) | 4.3 (6.9) |
| Restaurants & Hotels | 4.4 (20.4) | 6.4 (21.3) | 7.5 (21.7) | 6.3 (16.2) | 7.0 (13.8) | 7.7 (12.6) | 7.2 (11.7) |

() : Figures in parenthesis refer to sub-sectoral composition of total shareholders' equity in sector.

TABLE 5 SHAREHOLDERS' EQUITY IN TRANSPORT, STORAGE AND COMMUNICATIONS
BY SUB-SECTOR, 1993–2003
(As At Year-End)

| | \$ Billion | | | | | | |
|--|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | 1993 | 1995 | 1997 | 1999 | 2001 | 2002 | 2003 |
| Transport, Storage & Communications | 19.0 (100.0) | 24.9 (100.0) | 32.3 (100.0) | 43.6 (100.0) | 58.3 (100.0) | 66.0 (100.0) | 71.2 (100.0) |
| Transport & Storage | 15.4 (81.0) | 19.2 (77.3) | 23.5 (72.8) | 31.6 (72.5) | 35.0 (60.0) | 39.9 (60.5) | 41.8 (58.7) |
| Post & Communications | 3.6 (19.0) | 5.6 (22.7) | 8.8 (27.2) | 12.0 (27.5) | 23.3 (40.0) | 26.1 (39.5) | 29.4 (41.3) |

() : Figures in parenthesis refer to sub-sectoral composition of total shareholders' equity in sector.

Real Estate and Business Services

Although real estate constituted the majority of shareholders' equity of real estate & business services sector in 2003, its growth had lagged behind that of business services (Table 6). This resulted in a fall in the proportion of shareholders' equity accruing to real estate from 90 per cent in 1993 to 73 per cent in 2003. In contrast, business services experienced an increase in its share from 9.7 per cent to 28 per cent during the same period. The lacklustre growth of real estate's shareholders' equity was attributed to reduced

profits earned in the weak property market after year 2000.

Conclusion

While the overall composition of Singapore's corporate sector remained relatively unchanged over the past decade, there were significant changes in the composition of its component industries. The emergence of investment holding companies, pharmaceuticals, wholesale trade, communications and business services in the corporate sector reflected the ongoing restructuring of the Singapore's economy.

TABLE 6 SHAREHOLDERS' EQUITY IN REAL ESTATE AND BUSINESS SERVICES
BY SUB-SECTOR, 1993–2003
(As At Year-End)

| | \$ Billion | | | | | | |
|--|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | 1993 | 1995 | 1997 | 1999 | 2001 | 2002 | 2003 |
| Real Estate & Business Services | 36.3 (100.0) | 55.0 (100.0) | 69.6 (100.0) | 69.8 (100.0) | 80.8 (100.0) | 82.3 (100.0) | 80.3 (100.0) |
| Real Estate | 32.8 (90.3) | 49.6 (90.3) | 62.4 (89.5) | 58.8 (84.2) | 60.9 (75.3) | 60.5 (73.5) | 58.2 (72.5) |
| Business Services | 3.5 (9.7) | 5.3 (9.7) | 7.3 (10.5) | 11.0 (15.8) | 20.0 (24.7) | 21.8 (26.5) | 22.1 (27.5) |

() : Figures in parenthesis refer to sub-sectoral composition of total shareholders' equity in sector.

The latest report *Singapore's Corporate Sector, 2003* contains consolidated data from the *Survey of Financial Structure and Operations of Companies* carried out in 2004/05 for reference year 2003. Summary findings and key indicators are accessible from the SingStat website at

<http://www.singstat.gov.sg/keystats/surveys/corporate.html>

Internet users may purchase the publication online at the SingStat DataShop via

<http://www.singstat.gov.sg/pdtsvc/eservices/datashop.html>

Infocomm Usage by Households and Individuals 2000–2005

By
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Introduction

This article provides an overview of the changes in infocomm usage by households and individuals between 2000 and 2005. Data were derived from the annual surveys conducted by the Infocomm Development Authority of Singapore.

Infocomm Usage by Households

Between 2000 and 2005, the proportion of households with access to a computer at home grew by 13 percentage points (Table 1). For households in both public and private housing, this proportion grew by 10 and 15 percentage points respectively over the five-year period.

TABLE 1 HOUSEHOLDS WITH ACCESS TO COMPUTER AT HOME
Per Cent

| | 2000 | 2005 |
|-----------------|-----------|-----------|
| Total | 61 | 74 |
| Public Housing | 58 | 68 |
| Private Housing | 78 | 93 |

Access to Internet at home rose in tandem with access to computer at home. In 2005, almost two in three households had access to Internet at home, compared to one in two households in 2000.

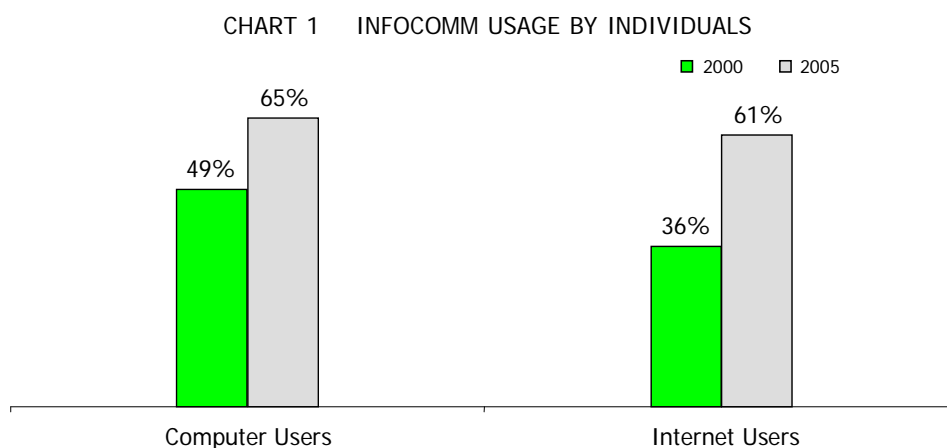
From 2000 to 2005, access to Internet at home for households in public and private housing grew by 13 and 18 percentage points respectively (Table 2).

TABLE 2 HOUSEHOLDS WITH ACCESS TO INTERNET AT HOME

| | Per Cent | |
|-----------------|-----------|-----------|
| | 2000 | 2005 |
| Total | 50 | 66 |
| Public Housing | 46 | 59 |
| Private Housing | 72 | 90 |

Infocomm Usage by Individuals

The proportion of Singapore’s resident population with access to computer increased by 16 percentage points between 2000 and 2005 (Chart 1). Concomitantly, the proportion of Internet users among Singapore’s resident population rose by 25 percentage points over the same period.



Use of the Internet

Sending or receiving emails, and sourcing for information remained the two most popular reasons for accessing the Internet in 2000 and 2005 (Table 3). Activities such as completing or lodging forms online and Internet banking, which appeared among the top five reasons for Internet usage in 2005, underscored the growing popularity of using the Internet to perform online transactions.

TABLE 3 TOP FIVE REASONS FOR INTERNET USAGE IN 2000 AND 2005¹

| 2000 | 2005 |
|-----------------------------|---------------------------------------|
| Sending or receiving emails | Sending or receiving emails |
| Sourcing information | Sourcing information |
| Downloading software | Completing or lodging forms online |
| Watching news webcast | Downloading or requesting information |
| Downloading music | Internet banking |

¹ Based on the proportion of Internet users who had ever used such applications/services.

Conclusion

The pervasiveness of infocomm usage by households and individuals reflects the presence of a more IT-literate Singapore population. Trends in Internet usage also suggest that Singaporeans are becoming more sophisticated Internet users.

2005 in Brief

Singapore's population

... reached a total size of 4.35 million in June 2005.

Average life expectancy at birth

... was 78 years for males and 82 years for females.

Literacy rate

... was 97.4 per cent among males and 92.7 per cent among females.

Home ownership rate

... was 93.0 per cent.

Labour force participation rate

... was 78.2 per cent among males and 56.6 per cent among females.

Per capita Gross National Income

... was S\$44,455.

Official foreign reserves

... increased to S\$194 billion.

Mobile phone subscribers

... reached 978 per 1,000 population.

Residential broadband subscribers

... was 162 per 1,000 resident population.

Crime rate

... increased to 843 per 100,000 population.

Change in 2005 (Year-on-Year)

Unit Labour Cost Index

... was 1.5 per cent lower.

Consumer Price Index

... increased by 0.5 per cent.

Domestic Supply Price Index

... rose by 9.6 per cent.

Retail Sales Index

... was 8.0 per cent higher.

Catering Trade Index

... was 2.8 per cent higher.

Domestic Wholesale Trade Index

... grew by 18.9 per cent.

Foreign Wholesale Trade Index

... rose by 21.4 per cent.

Business Receipts Index

... increased by 11.7 per cent.

Industrial Production Index

... rose by 9.2 per cent.

Formation and Cessation of Companies and Businesses, 2005

Companies

A total of 19,500 companies were formed in 2005, an increase of 14 per cent from 17,150 in the previous year. In 2005, most major industries recorded an increase in company formation, except for administrative & support services. The most significant growth in company formation came from the education, health & social work industry (33 per cent), followed by the real estate, rental & leasing activities industry (27 per cent) and the arts, entertainment, recreation & other service activities industry (24 per cent).

In 2005, 7,700 companies ceased operations. This was 26 per cent higher than in 2004. The increase in company cessation occurred in all major industries, ranging from 7 per cent (transport & storage) to 61 per cent (education, health & social work).

Businesses

In 2005, the number of new businesses formed dropped by 6.3 per cent to 23,480. Real estate & leasing, financial & insurance, and professional & technical services were among the industries that reported significant declines of between 18 and 26 per cent. In contrast, industries engaged in manufacturing, construction, and arts & entertainment, as well as the hotel & restaurants recorded increases in business formation compared to 2004.

The number of business cessations stood at 56,230 in 2005 compared to 17,460 in 2004. The significant increase was mainly due to batch cancellation notices issued by the Accounting and Corporate Regulatory Authority (ACRA) to businesses which had failed to renew their business licences after the expiry dates.

CHART 1 FORMATION AND CESSATION OF COMPANIES

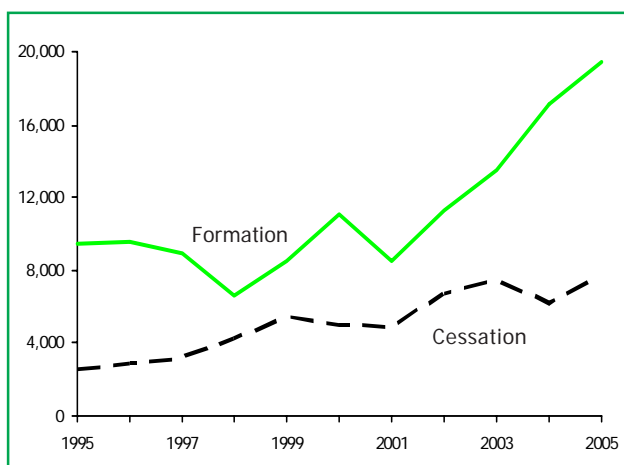
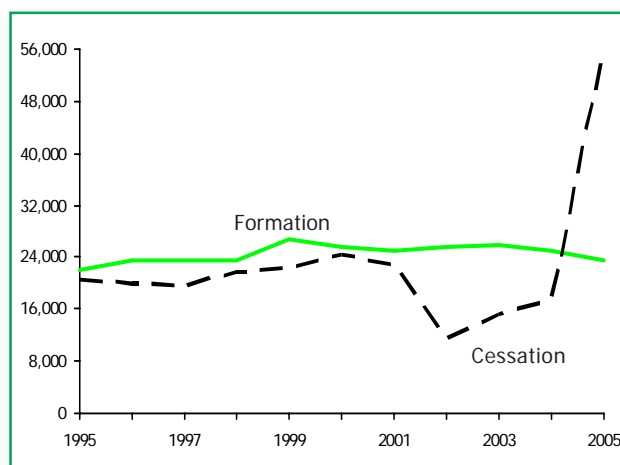


CHART 2 FORMATION AND CESSATION OF BUSINESSES



Latest Releases

from the Occasional Paper and Information Paper Series

From time to time, the Singapore Department of Statistics releases information on the latest statistical findings and updates on methodological improvements to statistical collections through articles published in the Occasional Paper and Information Paper Series.

Papers in the Occasional Paper Series provide an informal means for the speedy dissemination of statistical trends and observations. These papers are intended to stimulate discussion and research on important social and economic issues.

Papers in the Information Paper Series are intended to inform and clarify conceptual and methodological changes and improvements in official statistics. Such methodological changes and improvements are based on the latest developments in the international statistical community.

Summaries of the latest four releases from the Information/Occasional Paper Series are provided below :

Information Paper Series

Rebasing of Singapore's National Accounts to Reference Year 2000 (January 2006)

The Singapore Department of Statistics has completed the rebasing of the Singapore System of National Accounts to reference year 2000. The rebasing exercise presents the opportunity for the Department to reconcile the different estimates of GDP, as well as undertake methodological and conceptual reviews and improvements. This paper presents the major improvements to the underlying concepts, methodologies and data sources underpinning Singapore's national accounts. The impact of the rebasing, methodological and data improvements on key macroeconomic aggregates are also discussed.

Occasional Paper Series

i Housing Mobility between 1995 and 2005 (March 2006)

With ample housing supply, many Singapore resident households have changed their residences during the last decade. This paper examines the housing mobility of Singapore resident households during the period 1995–2005. The study is based on persons who were household heads in 1995 and housing mobility is determined by comparing their type of dwelling in 1995 and 2005. For the purpose of this paper, a classification of housing mobility has been developed.

ii Discrepancies in Bilateral Trade Statistics : The Case of Hong Kong and Singapore (November 2005)

Discrepancies in bilateral trade statistics between countries are the norm rather than the exception. These differences are larger in the presence of re-exports trade. The reasons for them are often interlinked and difficult to isolate. This paper compares bilateral trade statistics reported by Hong Kong, Singapore and their key trading partners, and discusses the reasons for the occurrence of discrepancies in the bilateral trade statistics.

iii Home Ownership and Equity of HDB Households, 2003 (October 2005)

One of the most visible aspects of economic development in Singapore is the rapid progress made in the area of residential housing. In 2003, more than 90 per cent of all Singapore resident households were home owners. For the majority of home owners occupying HDB flats, the equity accumulated in their HDB flats represented the major part of their household wealth. This paper examines the home ownership rate and estimated home equity of households residing in HDB flats. In the analysis, households are categorised into broad income groups according to their per capita household income from all sources.

Softcopies of the above Occasional/Information Papers as well as other titles under the two series are available for downloading free-of-charge from the SingStat website via :

- ◆ *Occasional Paper Series*
– <http://www.singstat.gov.sg/pdtsvc/catalog.html#ops>
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– <http://www.singstat.gov.sg/pdtsvc/catalog.html#ips>

Overseas Visitors

The Singapore Department of Statistics (DOS) received the following visitors in the past seven months. Topics discussed include Singapore's statistical system and organisation structure, use of survey and administrative data sources, International Comparison Programme (ICP) activities, international trade in goods/services and foreign direct investment statistics. Other topics of interest include the Singapore Standard Industrial Classification, conduct of household, business and investment surveys, data collection methods for Population Census 2000 and General Household Survey 2005, and compilation of Gross Domestic Product.

Abu Dhabi

- *Department of Economy & Planning*
- Dr Nasser Saif Al Mansoori
Assistant Under-Secretary

Asian Development Bank

- *Development Indicators & Policy Research Division,
Economics & Research Department*
- Mr Vaskar Saha
Principal Statistician
- Dr Yun-Hwan Kim
Assistant Chief Economist

European Commission

- *ASEAN Statistical Capacity Building Programme
(Appraisal Mission)*
- Mr Renaud Decoster
Independent Consultant
- Mr Brian Wicklin
EU International Expert

China

Officials from statistical agencies in Beijing and Hunan visited DOS.
The agencies include:

- *Beijing Municipal Statistical Bureau*
- *Statistics Bureau of Hunan Province*

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The *Statistics Singapore Newsletter* is issued half-yearly by the Singapore Department of Statistics. It aims to provide readers with news of recent research and survey findings. It also serves as a vehicle to inform readers of the latest statistical activities in the Singapore statistical service.

Contributions and comments from readers are welcomed. Please address all correspondence to :

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