### Household Expenditure Survey

The Singapore Department of Statistics has successfully completed the eighth Household Expenditure Survey (HES) in early October 2003. About 9,000 households were covered in the latest 2002/03 HES.

The HES collects detailed information on the latest consumption expenditure of persons and households. Such information is used to update the weighting pattern and the basket of goods and services for the compilation of the Consumer Price Index (CPI). Additional information on the demographic and socio-economic characteristics of households, as well as the ownership of consumer durables, investments and assets among households are also collected. HES thus provides a good source of data for relevant studies on trends and patterns of household income and expenditure for different groups of households.

The HES is conducted by personal visits. Fieldwork for the HES spreads over a period of twelve months to include all festive and seasonal expenditure. Institutions and foreigner households are excluded as their expenditure patterns differ greatly from the local family-based households.

The first HES was conducted in 1956/57 and covered only 1,200 wage-earner households living in urban areas in Singapore. In the next HES which was carried out in 1972/73, the scope was further expanded to include the whole of Singapore. Since then, the HES has been conducted island-wide once in every five years to obtain relevant data for comparative studies over time.

Several initiatives have been taken over the years to reduce survey costs, minimise respondent burden, and improve the response rate and timeliness of data release. With effect from the HES conducted in 1992/93, the first stage of data collection on the availability of consumer durables in households was conducted jointly with the mid-year Labour Force Survey. The recording period for expenditure was reduced to two weeks from one month.

In the 1997/98 HES, the Optical Mark Reader was introduced to capture data on the availability of consumer durables in households. An Intelligent Classification and Coding System was developed for the 2002/03 HES to improve the efficiency of data capture and coding.

The scope of data items collected in the HES has also been expanded. Additional information on the commercial/residential properties owned, shares investment and insurance policies, membership of country clubs and credit cards were collected for the first time in the 1997/98 HES. New items included in the 2002/03 HES were secondary sources of business and self-employment income, income from subletting, medical insurance premium and cross-border shopping.

As usual, the response rate for the HES 2002/03 has been consistently high. Data processing (editing, coding, data entry and validation) is currently in progress. Results will be available in the second quarter of 2004.

## Consumer Durables in Households, 1992–2002

By Ng Mei Khee Household Statistics & Prices Division Singapore Department of Statistics

#### Introduction

Households have greater access to a wide range of consumer durables as a result of higher household income, varied lifestyle needs and declining prices of most of the consumer durables. This article analyses the trend in ownership rates of selected consumer durables in households during 1992–2002.

## **Consumer Durables Commonly Found in Households**

Televisions, refrigerators and telephone lines continued to be the most common amenities, with almost all households having at least one such item. Washing machines were also found in more than nine in ten households in 2002.

#### **Audio Visual Products**

With the introduction of more compact and superior quality audio/video compact disc players, the ownership rate of audio/video CD players jumped from 20 per cent in 1992 to 76 per cent in 2002. The increasing popularity of such disc players can also be attributed to their declining prices, making them much more affordable than a decade ago. In contrast, video cassette recorders (VCRs) have become less popular among households (Chart 1). Between 1992 and 2002, the proportion of households with a VCR fell from a high 75 per cent to 58 per cent.

Cable television had also gained greater acceptance during the last five years. The proportion of households with subscription to cable television surged from 14 per cent in 1998 to 32 per cent in 2002.

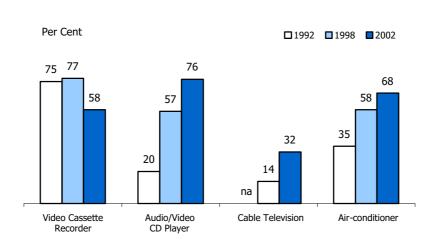


CHART 1 AUDIO VISUAL PRODUCTS AND AIR-CONDITIONERS

#### **Air-Conditioners**

As a result of increasing affluence and rising standard of living, more households are enjoying the cool comfort of air-conditioned homes. While only 35 per cent of households installed air-conditioners in 1992, the proportion almost doubled to 68 per cent a decade later.

#### Handphones and Pagers

The majority of 85 per cent of households had at least one handphone in 2002, compared to a mere 6 per cent in 1992 (Chart 2). The convenience of handphones, coupled with competitive pricing and additional value-added services, has helped to boost the ownership rate of handphones among household members.

In tandem with the rising popularity of handphones, the proportion of households with pagers fell noticeably over the last five years. Only a fifth of the households possessed a pager in 2002, compared with some 72 per cent in 1998. This declining trend is expected to continue and pagers would be replaced by mobile phones eventually.

#### Personal Computers and Internet Access

As household members have become more knowledgeable in the use of Information Technology (IT), coupled with a greater variety of affordable personal computers (PCs) in the market, the ownership of PCs has increased steadily over the years. About 65 per cent of households had a PC in 2002, up from 20 per cent ten years ago.

Internet access/subscription among households rose in tandem with the ownership rate of PCs for all households. In 2002, more than one in two households had access to Internet services as compared to about one in five households in 1998.

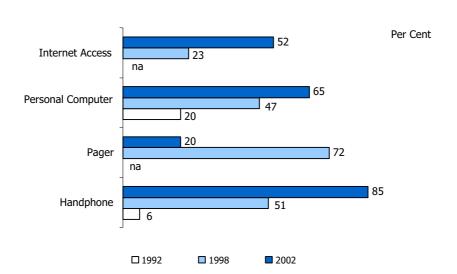


CHART 2 TELECOMMUNICATION AND IT EQUIPMENT

#### Cars and Motorcycles

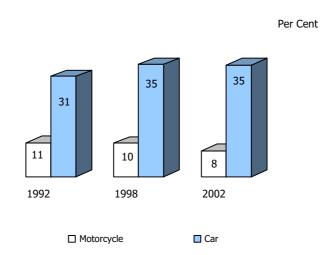
After rising slightly from 31 per cent in 1992, the proportion of households with cars remained fairly stable at 35 per cent over the last five years (Chart 3). This partly reflected the extensive network of public buses and MRT systems, especially for those living in the public housing estates.

The proportion of households with motorcycles or scooters, however, continued to decline. Some 8 per cent of the households possessed a motorcycle in 2002, as compared to 11 per cent a decade ago.

#### **Concluding Remarks**

With greater affluence and emphasis on the quality of life, the ownership rate of most consumer durables has increased significantly over the last decade. This trend is likely to continue. There is increasingly a greater availability of new and better products and services, a more IT-literate population and growing need and aspirations to own or use essential or life-style goods and services like PCs, handphones and Internet access/ subscription.

CHART 3 CARS AND MOTORCYCLES



## **Educational Upgrading through Private Educational Institutions**

By Wu Wei Lin Business Statistics Division Singapore Department of Statistics

#### Introduction

For Singapore to remain competitive, the workforce needs to constantly improve its skills and expertise. One of the ways of self-upgrading is through courses offered by private educational institutions.

This article takes a brief look at the profile and performance of institutions catering to the educational upgrading market. These institutions offer certificate, diploma, bachelor degree, postgraduate degree or professional courses. Data on student enrolment and graduates from these institutions are also presented.

Data are obtained from the Education Services Survey 2002 <sup>1</sup> conducted by the Singapore Department of Statistics.

#### Private Institutions Offering Educational Upgrading

#### **General Profile**

The rise in demand for educational upgrading has led to the establishment of more private educational institutions recently. In the last ten years, some 70 new institutions offering certificate, diploma, bachelor degree, postgraduate degree or professional courses have been set up to cater to this demand. This represented nearly half of the total number of 148 institutions offering similar types of courses in 2002 (Table 1).

During the past ten years, the annual number of graduates from local tertiary institutions almost doubled. The number of graduates from local polytechnics increased from 8,100 in 1992 to 16,600 in 2002. There were 10,200 graduates from the local universities in 2002, up from 6,600 in 1992.

Against this backdrop, it is inevitable that the job market has become more competitive. More see the need to upgrade themselves, thus resulting in the growing importance of the educational upgrading market.

However, educational upgrading is not entirely a new area, with some very well-established institutions like Nanyang Academy of Fine Arts and the Singapore Institute of Commerce having been in operation for more than 50 years.

TABLE 1 PRIVATE EDUCATIONAL INSTITUTIONS BY LENGTH OF OPERATION, 2002

Length of Operation	Number	Per Cent
Total	148	100.0
Less than 5 Years	38	25.7
5 – 9 Years	33	22.3
10 – 19 Years	41	27.7
20 – 29 Years	18	12.2
30 – 39 Years	12	8.1
40 – 49 Years	2	1.4
50 Years & Above	4	2.7

<sup>1</sup> Based on preliminary findings.

There were slightly more private educational institutions operating within the Central Business District (CBD) than those outside (Table 2). Those situated in the CBD, comprising 56 per cent, included Singapore Institute of Commerce, Hartford Management Centre and Altron Education Group. The CBD could be the preferred business location for these institutions to cater to the convenience of their students, many of whom might be office workers.

TABLE 2 PRIVATE EDUCATIONAL INSTITUTIONS BY LOCATION, 2002

Location	Number
Inside CBD	83
In Shopping Malls	41
Outside Shopping Malls	42
Outside CBD	65
In Shopping Malls	12
Outside Shopping Malls	53

Institutions located outside the CBD were found mainly outside shopping malls. This was unlike those in the CBD where the number in shopping malls and outside shopping malls was quite evenly spread out.

#### **Business Size and Performance**

Private institutions offering certificate, diploma, bachelor degree, postgraduate degree or professional courses operated on a larger scale than an average firm in the whole private education services industry<sup>2</sup>. On average, the former employed 31 workers per institution and collected some \$2.7 million in operating receipts in year 2002 (Table 3).

In comparison, an average firm in the overall private education services industry engaged 7.6 workers and received average earnings of \$514,000 in year 2001.

TABLE 3 PERFORMANCE OF PRIVATE EDUCATIONAL INSTITUTIONS AND OVERALL PRIVATE EDUCATION SERVICES INDUSTRY, 2001/2002

	Average Employment	Average Operating Receipts	Profitability Ratio	Proportion of Profitable Firms	Earnings- Expenditure Ratio
	(No.)	(\$'000)	(%)	(%)	(%)
Private Institutions, 2002	31.1	2,678.4	11.7	62.9	12.5
< 10 Workers (Small)	4.5	517.3	8.8	61.0	9.4
10-99 Workers (Medium)	26.7	2,392.1	8.4	59.2	8.6
$\geq$ 100 Workers (Large)	218.1	17,340.3	15.3	100.0	17.1
Overall Private Education Industry, 2001	7.6	513.8	14.4	72.0	15.9

Note: Data exclude non-profit organisations.

For private institutions, data are based on only those which were able to provide data on financial performance.

<sup>2</sup> The overall private education services industry encompasses profit-making firms providing training or education services of any sort, regardless of whether certificate, diploma, bachelor degree, postgraduate degree or professional courses were offered. Thus, the industry comprises all types of commercial schools, music schools, dancing schools, language schools, driving schools, etc.

Private institutions' profitability ratio<sup>3</sup> of 12 per cent and earnings-expenditure ratio<sup>4</sup> of 13 per cent in 2002 were slightly below those of the overall private education services industry in 2001. Large private institutions (with 100 or more workers) recorded the highest profitability ratio and were also the most cost-effective group as compared to their small (less than 10 workers) and medium-sized (with 10–99 workers) counterparts.

All large private institutions posted positive profits in 2002. In contrast, about two-fifths of small and medium institutions recorded negative profits during the same period.

#### Student Enrolment and Graduates

The 148 private institutions offering certificate, diploma, bachelor degree, postgraduate degree or professional courses had a total student enrolment of 114,500 in year 2002. In the same year, some 40,600 students graduated from courses offered by these institutions. More details on the profile of students and graduates are presented below.

## Student Enrolment in Private Educational Institutions

#### By Field of Study and Type of Course

The three most popular fields of study among students enrolled in the private educational institutions in 2002 were Business & Administration<sup>5</sup>, Information Technology and Fine & Applied Arts<sup>6</sup> (Table 4). Students in these fields made up a significant 81 per cent of the total enrolment in that year.

TABLE 4 STUDENT ENROLMENT BY FIELD OF STUDY, 2002

Field of Study	
Total (No.)	114,452
Per Cent Distribution :	100.0
Architecture & Building Business & Administration Education Engineering Sciences	1.4 52.8 3.3 2.1
Fine & Applied Arts Health Sciences Humanities & Social Sciences Information Technology	12.1 1.7 5.2 15.7
Law Mass Communication & Information Science Natural/Physical/Chemical/Math Sciences Services Other Fields	0.5 1.9 0.7 1.9 0.7

Business & Administration remained the most sought-after field at almost all levels of education (Chart 1). The popularity of this subject area could be due to its versatility. The exception was in certificate courses where the majority of students (45 per cent) chose Fine & Applied Arts. Information Technology was also popular among diploma and degree students, making up about a quarter of the respective enrolment count.

With the growing emphasis on entrepreneurship and techno-entrepreneurship, some institutions have started offering new degree/higher degree Business & Administration programmes specialising in these subject areas.

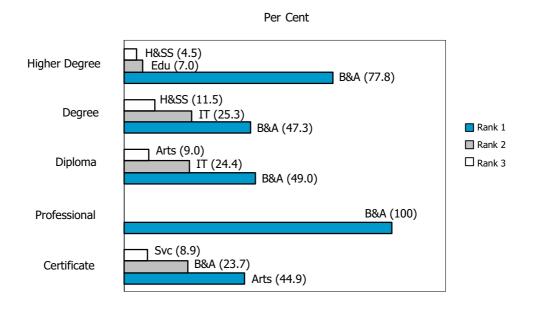
<sup>3</sup> Profitability ratio is used to measure the amount of receipts which is converted to profits.

<sup>4</sup> Earnings-expenditure ratio measures cost effectiveness.

Business & Administration subjects comprise business management, accounting, finance, marketing, secretarial/office skills, etc.

<sup>6</sup> Fine & Applied Arts include design, music and dance courses.

CHART 1 PROPORTION OF STUDENT ENROLMENT IN TOP 3 FIELDS OF STUDY BY TYPE OF COURSES, 2002



Abbreviations Used:

B&A - Business & Administration

Arts - Fine & Applied Arts

H&SS - Humanities & Social Sciences

Edu - Education

IT - Information Technology

Svc - Services

#### Graduates from Private Educational Institutions

In 2002, there was a total of 40,600 graduates with certificate, diploma, bachelor degree, postgraduate degree or professional qualifications from private educational institutions (Table 5).

The graduate count each year generally displayed a growing trend across the different types of courses. In particular, graduates from professional courses almost doubled between 2001 and 2002.

#### By Field of Study and Type of Course

A significant proportion of 56 per cent of the graduates in the year of 2002 was from the field of Business & Administration (Table 6). Graduates from this field constituted the majority in all types of courses as well. Another field of study with a sizeable number of graduates was Information Technology, which comprised 20 per cent of the total graduating in that year.

TABLE 5 GRADUATES FROM PRIVATE INSTITUTIONS OFFERING CERTIFICATE, DIPLOMA, DEGREE, HIGHER DEGREE OR PROFESSIONAL COURSES

					Number
Year	Certificate	Professional	Diploma	Degree	Higher Degree
1998	_	_	_	3,385	888
1999	_	-	_	4,718	2,154
2000	_	_	_	5,352	2,326
2001	_	3,048	13,323	6,641	3,570
2002	7,141	5,900	16,938	7,994	2,594

Not Available.

TABLE 6 GRADUATES IN TOP 5 FIELDS OF STUDY BY TYPE OF COURSES, 2002

- <u></u>					Number
Field of Study	Certificate	Professional	Diploma	Degree	Higher Degree
Total	7,141	5,900	16,938	7,994	2,594
Business & Administration	2,675	5,900	8,092	3,674	2,203
Information Technology	141	_	5,185	2,610	61
Fine & Applied Arts	1,014	_	1,061	195	12
Education	722	_	881	72	76
Humanities & Social Sciences	813	_	158	375	125
Other Fields	1,776	-	1,561	1,068	117

#### **Concluding Remarks**

With increasing job competition, both employers and employees recognise the importance of upgrading to improve occupational skills. The dominant fields of study may change in tandem with prevalent market demands following shifts in economic focus in the future. Nonetheless, educational upgrading on the whole is expected to be an area with growing demand and potential.

# Singapore's Demographic Trends in 2002

By Edmond Lee Eu Fah and Yeo Yen Fang Population Statistics Section Singapore Department of Statistics

#### Introduction

Population size, structure and changes have important implications for production, investment and consumption activities as well as community development. This paper highlights the key trends in population, marriages, fertility and mortality in the year 2002.

#### **Population Profile**

#### Population Size and Growth

singapore's total population as at end June 2002 was 4,171,300 (Table 1). There were 3,378,300 Singapore residents and 793,000 non-

residents. Singapore residents, comprising Singapore citizens and Singapore permanent residents, formed 81 per cent of the population. The population share of non-residents decreased to 19 per cent in 2002, after almost reaching 20 per cent in 2001.

The total population in 2002 grew by 1.0 per cent over the previous year. This growth rate was one of the lowest in the last decade, due largely to the decline in the non-resident population. The resident population grew by 1.8 per cent in 2002.

TABLE 1 POPULATION SIZE AND SHARE

		Number (`000)			Average Annual Growth <sup>1</sup> (%)		
	Total Population	Singapore Residents	Non- Residents	Total Population	Singapore Residents	Non- Residents	
1990	3,047.1	2,735.9	311.3	2.3	1.7	9.0	
2000	4,017.7	3,263.2	754.5	2.8	1.8	9.3	
2001	4,131.2	3,319.1	812.1	2.8	1.7	7.6	
2002	4,171.3	3,378.3	793.0	1.0	1.8	- 2.4	

<sup>1</sup> Refers to growth during the decade. For 2001 and 2002, refers to growth over the previous year.

#### Age Structure

Singapore's resident population is growing older. Chart 1 shows the population ageing between 1980 and 2002. With the post-war baby boomers moving into the age group 35–54 years, about half of Singapore residents were aged 35 years or older in 2002. The median age of the Singapore resident population was a lower 24 years in 1980 and 30 years in 1990.

The size of the elderly resident population has also increased. In 2002 there were 253,000 residents aged 65 years and over. This was more than double the size in 1980.

As a result of declines in fertility and mortality, elderly residents aged 65 years and over accounted for an increasing proportion of the Singapore resident population (Table 2). There was also a corresponding increase in the old age dependency ratio.

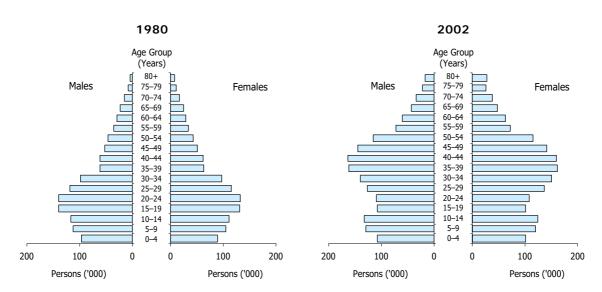


CHART 1 AGE PROFILE OF RESIDENT POPULATION

TABLE 2 AGEING INDICATORS OF THE SINGAPORE RESIDENT POPULATION

	Proportion of Residents Aged 65 Years & Over	Old Age Dependency Ratio (Residents Aged 65+ Per 100 Residents Aged 15–64 Years)	Median Age (Years)
1980	4.9	7.3	24.4
1990	6.0	8.5	29.8
2000	7.3	10.2	34.2
2001	7.4	10.4	34.6
2002	7.5	10.5	34.9

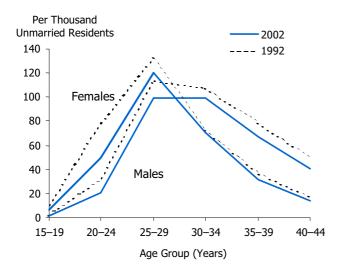
#### **Marriages**

#### Marriage Rates

In 2002, a total of 23,200 marriages was registered in Singapore. This was an increase from 22,300 in 2001.

Marriage rates fell across all age groups between 1992 and 2002 (Chart 2). The largest absolute decline in rates occurred for males in the age group 25–29 years, from 113 per thousand in 1992 to 100 per thousand in 2002. For females, the largest drop in rate was in the 20–24 age group, from 78 to 50 per thousand.

CHART 2 AGE-SEX SPECIFIC MARRIAGE RATES



#### **Marriage Timing**

There is a continuing trend towards marrying at older ages. The median age at first marriage increased slightly for both grooms and brides in 2002 compared with the previous year (Table 3).

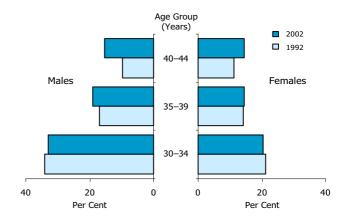
TABLE 3 MEDIAN AGE AT FIRST MARRIAGE

		Ye
	Grooms	Brides
1990	28.0	25.3
2000	28.7	26.2
2001	28.8	26.2
2002	28.9	26.3

#### **Proportion Single**

Corresponding to the decline in marriage rates, proportionately more resident males and females are remaining single. In 2002, some 15 per cent of resident males and females were still not married at age 40–44 years (Chart 3). This was higher than the 10–11 per cent in 1992.

CHART 3 PROPORTION SINGLE AMONG RESIDENT POPULATION



#### **Fertility**

#### **Total Fertility Rates**

The total number of births declined to 40,800 in 2002 from 41,500 in 2001. The total fertility rate (TFR) was 1.4 births per woman aged 15 to 44 years in 2002 (Table 4). Among the main ethnic groups, the Chinese continued to have the lowest TFR at 1.2 in 2002.

TABLE 4 TOTAL FERTILITY RATE BY ETHNIC GROUP

Per Woman Aged 15-44

			770111011719	,ca 15 11
	Total	Chinese	Malays	Indians
1990	1.83	1.65	2.69	1.89
2000	1.60	1.43	2.54	1.58
2001	1.41	1.21	2.44	1.50
2002	1.37	1.18	2.29	1.50

#### Completed Family Size

Females still tend to have two to three children during their marriage. On average, ever-married resident females aged 40–49 years had 2.2 children in 2002 (Table 5).

The family size has remained relatively stable for females with secondary or higher education. For less-educated females, the family size has declined and converged to the same level as the better-educated females.

TABLE 5 MEAN NUMBER OF CHILDREN BORN TO RESIDENT EVER-MARRIED FEMALES AGED 40–49 YEARS

	Total	Below Secondary	Secondary	Post- Secondary	University
1990	2.8	3.0	2.1	2.1	2.0
2000	2.2	2.4	2.1	2.0	1.9
2001	2.2	2.3	2.1	2.0	1.9
2002	2.2	2.2	2.1	2.0	2.0

#### Mortality

#### Mortality Rate

The mortality rate in Singapore continues to be low (Table 6). The crude death rate was 4.4 per 1,000 residents in 2002, a decline from the 4.7 deaths per 1,000 residents in 1990. The infant mortality rate was 2.9 per 1,000 resident live-births in 2002. This was significantly lower than the 6.6 per 1,000 resident live-births in 1990.

#### Life Expectancy

Life expectancy at birth continued to improve in 2002. A new-born Singapore resident could expect to live up to 79 years. Females could expect to live longer than males. A boy born in 2002 could expect to live 77 years, while a girl could expect to live 81 years.

TABLE 6 MORTALITY RATES AND LIFE EXPECTANCY AT BIRTH

	1990	2000	2001	2002
Crude Death Rate (Per 1,000 Residents)	4.7	4.5	4.4	4.4
Infant Mortality Rate (Per 1,000 Resident Live-Births)	6.6	2.5	2.2	2.9
Life Expectancy at Birth (Years)	75.3	78.1	78.4	78.7
Males Females	73.1 77.6	76.1 80.1	76.4 80.3	76.7 80.6

### Twin Births in Singapore

The total number of twins born increased from 374 in 1989 to 389 in 2001\*. We present the trend and type of twin births in Singapore.

The overall twin birth rate increased steadily from 7 per 1,000 maternities to over 9 per maternities between 1989 and 2001.

10 Jate 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001

FIGURE 1 TWIN BIRTHS PER 1,000 MATERNITIES IN SINGAPORE

All ethnic groups showed increases in twin birth rates. Twin births born to Indian fathers showed the largest increase. The Indian rate of twin births increased from 6.9 per 1,000 maternities during 1986–1989 to 9.9 per 1,000 maternities during 1998–2001.

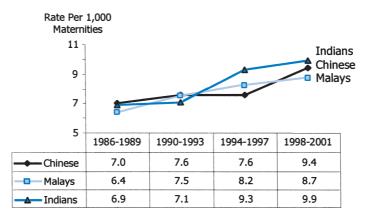
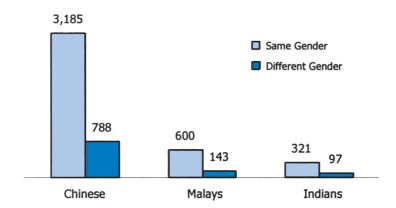


FIGURE 2 TWIN BIRTHS BY FATHER'S ETHNIC GROUP

<sup>\*</sup> Source: Annals of Academy of Medicine Singapore 2003 (in print)

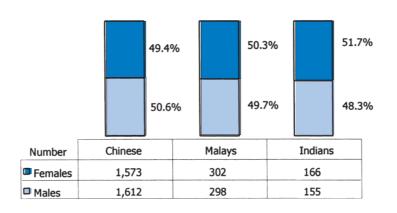
During 1986–2001, there were more twins of the same gender than twins of different gender, irrespective of the ethnic group of either parent. The ratio was 4:1 for Chinese and Malays and 3.3:1 for Indians.

FIGURE 3 TOTAL TWINS BY GENDER AND FATHER'S ETHNIC GROUP, 1986–2001



For twins of the same gender, the proportion of female twins to male twins appeared to be slightly higher for Malays and Indians.

FIGURE 4 SAME-GENDER TWINS BY SEX AND FATHER'S ETHNIC GROUP, 1986–2001



## Enrolment in Postgraduate Diploma and Higher Degree Courses

Do You Know . . . that the number of postgraduate students in local universities increased by about 5 times since 1990?

- higher degree courses¹ rose from 2,400 in 1990 to 14,200 in 2002 (Chart 1). Increasingly, more students were doing postgraduate studies on a full-time basis. From just 600 in 1990, the number of full-time students increased to 7,000 in 2002. This was faster than the increase in part-time enrolment.
- Part-time enrolment in postgraduate studies declined in 2002, as compared to 2001. This was the first year-on-year decline in the last twelve years.
- Full-time students accounted for an increasing share of postgraduate enrolment. In 2002, about half of the postgraduate students were full-time students. In contrast, only one-quarter were enrolled on a full-time basis in 1990.

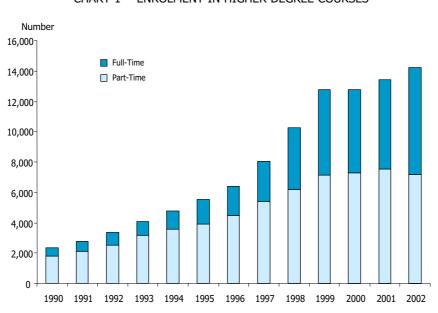


CHART 1 ENROLMENT IN HIGHER DEGREE COURSES

Include postgraduate diploma and higher degree courses offered by National University of Singapore, Nanyang Technological University and Singapore Management University, and higher degree courses offered by National Institute of Education.

## Survival Rates of Enterprises

In Singapore, as in other countries, businesses are continually entering and exiting the economy although at varying rates for different types of industries. This chain of formation and cessation is a common process of business activity. Survival within the first few years of formation is generally a good indication of whether a company will be viable in the long run.

To measure the survival of enterprises, survival rates are used. The survival rate is defined here as the proportion of companies and businesses (registered in a particular reference year) surviving through each successive year.

The survival rates of enterprises for each successive year, for those registered during 1994 to 2002, are shown in Chart 1.

The survival rates of enterprises declined with each passing year. For the first year of formation, enterprises registered between 1994 and 2002 did not

experience much differences in the survival rates which hovered in the high 94 per cent to 96 per cent mark. The differences became more pronounced by the third year of existence, with survival rates ranging from 62 per cent (for enterprises registered in 1998) to 75 per cent (for enterprises registered in 2000). By the fifth year of formation, the survival rate of enterprises ranged between 48 per cent (for those formed in 1998) and 55 per cent (for those formed in 1994).

Enterprises formed in 1998 experienced the lowest survival rates. By the end of the fifth year of formation, less than one-half of enterprises formed in 1998 had survived.

Entrepreneurship is essential to Singapore's growth and further development. It has been observed that enterprises which were set up after the financial crisis, in 2000, were better able to make it to their second birthdays.

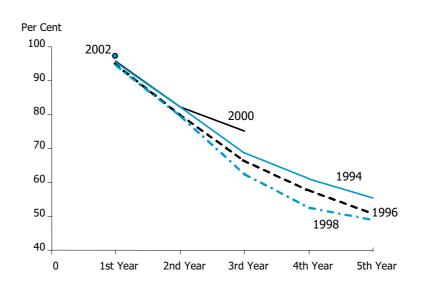


CHART 1 SURVIVAL RATES OF ENTERPRISES REGISTERED BETWEEN 1994 AND 2002

## Formation and Cessation of Companies and Businesses, January–June 2003

#### **Companies**

A total of 6,174 new companies were formed in 1H03, reflecting an increase of 8.5 per cent over the previous period. All major industries recorded increases in formation numbers. The construction industry was the most buoyant, registering the highest rise of 15 per cent, while the lowest increase of 0.6 per cent was recorded by the transport and communications industry.

During 1H03, 2,397 companies ceased operations, a significant decrease of 46 per cent over 2H02. All major industries recorded double-digit declines in cessation rates, with commerce and transport and communications registering the largest drop of nearly 50 per cent in company cessation.

#### Businesses

The number of new businesses formed in 1H03 decreased by 4.8 per cent over 2H02, to 12,311 businesses. All major industries recorded fewer business openings in 1H03. The largest decline in business formation was observed in manufacturing (26 per cent), while transport and communications recorded the lowest decline in business openings (8.2 per cent).

The number of business closures fell by 2.2 per cent over 2H02 to 5,497 in 1H03. Most industries recorded lower cessations. The largest decline was observed for the manufacturing industry (7.3 per cent). In contrast, construction was the only industry recording an increase in cessation of 7.3 per cent.

CHART 1 FORMATION AND CESSATION OF COMPANIES

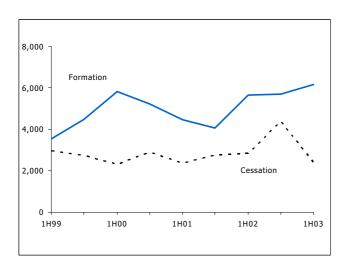
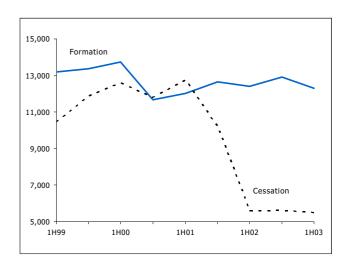


CHART 2 FORMATION AND CESSATION OF BUSINESSES



# Productivity Gains in Statistical Data Processing

The Rightsizing Project has established a firmer foundation for continued operational excellence at the Singapore Department of Statistics. As part of the second and final phase of the Rightsizing Project, the Department re-developed the mainframe applications onto the client-server platform in September 2003.

The major productivity gains achieved in this phase are in the following four areas :

- (i) Streamlined/New Work Processes
- The processes to generate output files and consolidate validation rules are streamlined and resulted in reduced processing time.
- Users can submit batch jobs through a job booking system which retrieves the request faster, with less paper trail, and keeps a record of the batch job status.
- New housing-related time series data have been created directly from the relevant databases.
- "Range" checks on core variables and autogeneration of frequency tables on data items help ease the process of data verification and enhance the robustness of data integrity.
- (ii) Online Data Access and Editing
- Users are provided with friendly online inquiry screens and query tools.
- Users can correct data errors online.
- Users can create simple reports online using reporting tools.

The focus of the second phase project is to improve the flow of updating and verification of the household and dwelling databases as well as to provide facilities for easier data retrieval, updating and statistical tabulations. In order to consolidate the data within the core database, a more efficient database design is used instead of accessing different sources for related information.

- All reports are stored in softcopies, thereby reducing paper usage.
- (iii) Sharing of Common/Standard Routines
- Mainframe validation rules are rationalised and standardised, thereby creating common business rules.
- Concurrent submission of print jobs to network printers and routing to local printers provide flexibility and speed.
- (iv) Improved Processing Time for Batch Jobs
- Better performance timing has been achieved for batch jobs which require more than one day to complete in the existing environment.
- With the streamlining of data processing, significant time has been saved for some core jobs by 30%–80%.

### Release of New Economic Surveys Series

With the increasing importance of the services sector, there is rising demand for more statistical data on this sector. The Singapore Department of Statistics has revamped and improved its publications on services statistics. The following reports in the new Economic Survey Series for the latest survey year have been released:

The Services Sector
Education Services
Professional Services
IT & Related Services
Architectural, Engineering & Technical Services
Wholesale Trade

Health Services
Logistics Services
Post & Telecommunications
Accommodation Services
Food & Beverage Services
Retail Trade

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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.

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