Statistics Singapore Newsletter

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Good Governance in National Statistical Systems

Governance of national statistical systems is a major issue in today's fast-changing environment. The continual changes in the modern economy and society require innovations in statistical measurement in the national statistical systems. The success of these systems in meeting changing data needs would depend to a large extent on how they organise the use of information technology, build up the relevant knowledge base, promote organisational effectiveness and adopt competitive strategic planning.

The strategies on good governance were discussed at a high-level international seminar held in Singapore during 28–30 May 2002. The seminar was jointly organised by the Singapore Department of Statistics, United Nations Statistics Division and Statistics Department of the International Monetary Fund. Heads of national statistical offices and heads of statistical activities in central banks attended the seminar.

Characteristics of Good Governance

"Good governance of national statistical systems fosters accountability and transparency. It improves responsiveness, cost effectiveness and efficiency. It enhances professional standards and the objectivity of the statistical data. The data produced are of good quality, reliable and relevant," said Dr Paul Cheung, the Singapore Chief Statistician.

National statistical systems face growing data demands in the increasingly complex social and economic environment. They interact with and are increasingly affected by developments in the market-place. Along with the emergence of new products and services, the ways in which productive and distribution activities are organised have also changed. National statistical systems have to respond aptly to these organisational changes through changes and adaptations in the statistical processes for data collection, processing and dissemination.

Issues on respondent relations, data transparency, integrity and relevance as well as the professionalism, credibility and legitimacy of national statistical systems have thus become important concerns. The management of these operational issues constitutes an integral part of governance of national statistical systems.

Challenges for the National Statistical Systems

The challenge to governance of national statistical systems is how best to meet the new demands and, at the same time, ensure confidence and trust in national official statistics.

"The stakes are high. The timely availability of good and reliable information is the foundation for sound policy formulation and effective decision making. Confidence and trust in official statistics is as crucial as confidence and trust in the banking system," declared Dr Cheung.

Singapore's Current Population Trends

by
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Introduction

Singapore's population has undergone significant changes over the last three decades. From a high fertility and high mortality society in the 1960s, Singapore has transformed and reached a state of low-fertility and low-mortality today.

This paper provides a summary of Singapore's current population profile and traces the changes from 1970 to 2001. It also examines Singapore's fertility and mortality trends, two main factors that influence population structure and growth.

Population Profile

Population Size and Growth

Singapore's total population was 4,131,200 as at June 2001 (Table 1). There were 3.3 million residents and 0.8 million non-residents. Singapore residents, comprising Singapore citizens and Singapore permanent residents, formed 80 per cent of the total population.

The total population in 2001 grew by 2.8 per cent over the previous year. Non-residents contributed significantly to the population growth, with a high growth rate of 7.6 per cent in 2001 and around 9 per cent per annum throughout the period 1970–2000. The annual growth of Singapore residents was slower at 1.7 per cent in 2001 and around 1.6 per cent per annum during 1970–2000.

TABLE 1   POPULATION AND ANNUAL GROWTH

Year	Number[1] ('000)			Average Annual Growth[3] (%)		
	Total Population	Singapore Residents	Non-Residents[2]	Total Population	Singapore Residents	Non-Residents[2]
1970	2,074.5	2,013.6	60.9	2.8	na	na
1980	2,413.9	2,282.1	131.8	1.5	1.3	8.0
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

1   Data from 1990 refer to de jure population.

2   Refers to foreigners staying or working in Singapore for one year or more.

3   Refers to growth during the previous decade. For 1970, total population growth refers to growth during 1957–1970. For 2001, refers to growth over the previous year.

Age Structure

Singapore's resident population has grown older over the years. The median age of the resident population rose from 20 years in 1970 to 35 years in 2001. The age pyramid in Chart 1 shows the population ageing over the last three decades. The post-war baby boomers aged 5–24 years old in 1970 had moved upwards in the pyramid to the age group 35–54 years in 2001.

Reflecting the middle-ageing of the population, there was an increase in the population share of residents aged 35 years and over (Table 2). Elderly persons aged 65 and over increased to account for 7.4 per cent of the resident population in 2001, up from 6.0 per cent in 1990.
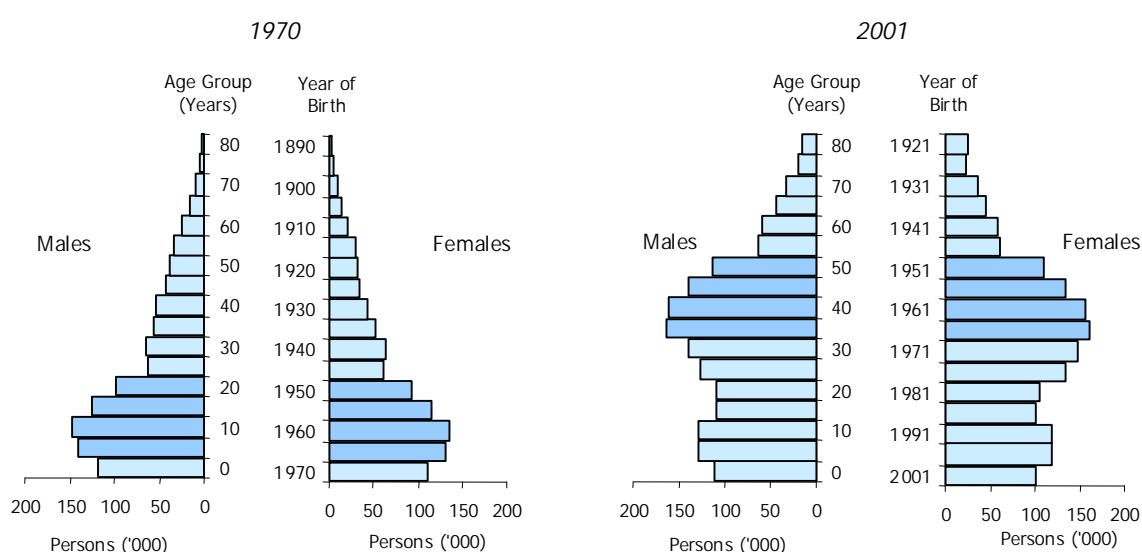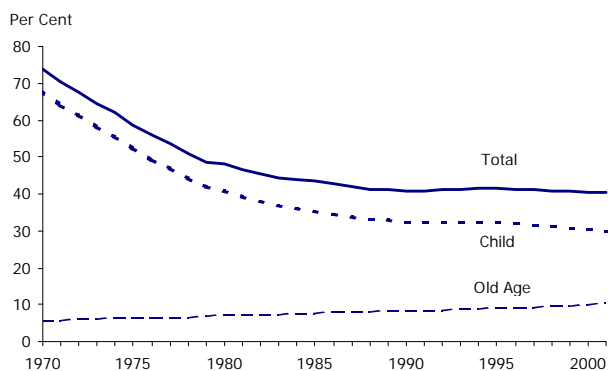
CHART 1   AGE PYRAMID OF RESIDENT POPULATION

TABLE 2   AGE PROFILE OF RESIDENT POPULATION

Age Group (Years)	Number ('000)			Share (%)		
	1990	2001	Change	1990	2001	Change
TOTAL	2,735.9	3,319.1	583.3	100.0	100.0	0.0
Below 15	628.2	708.8	80.6	23.0	21.4	−1.6
15 − 24	462.3	426.1	−36.1	16.9	12.8	−4.1
25 − 34	589.3	550.6	−38.6	21.5	16.6	−4.9
35 − 44	462.1	642.4	180.4	16.9	19.4	2.5
45 − 54	246.5	499.6	253.1	9.0	15.1	6.0
55 − 64	183.1	245.1	61.9	6.7	7.4	0.7
65 − 74	104.9	160.8	55.9	3.8	4.8	1.0
75 − 84	49.9	67.2	17.4	1.8	2.0	0.2
85 & Over	9.6	18.5	8.9	0.4	0.6	0.2

Age Dependency Ratios

As fertility fell and the post-war baby boomers moved to the prime working ages, the child dependency ratio declined to 30 per hundred working-age residents in 2001, down from a high of 68 in 1970 (Chart 2). With increasing elderly persons, the old age dependency ratio rose slowly and steadily from 6 to 10 per hundred working-age residents over the same period.

TABLE 3   MARITAL STATUS OF RESIDENT POPULATION
AGED 15 YEARS AND OVER

Per Cent

	Total		Males		Females	
	1990	2001	1990	2001	1990	2001
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
Single	35.9	30.7	40.4	33.8	31.4	27.8
Married	56.6	61.1	56.1	62.7	57.1	59.5
Widowed	6.1	5.9	2.5	1.9	9.8	9.6
Divorced/Separated	1.3	2.3	1.0	1.6	1.7	3.1

Sources :   Census of Population, 1990
Labour Force Survey, 2001

CHART 2   AGE DEPENDENCY RATIOS
OF RESIDENT POPULATION

Note :   For 1971–1979, data refer to total population.

Proportion Single

In 2001, a relatively high proportion of males and females in their thirties were not married (Chart 3).   At age 30–34 years, 31 per cent of males and 20 per cent of females were still single. Between 1990 and 2001, the proportion single increased among the older age groups. At age 40–44 years, some 14–15 per cent of the males and females were still not married in 2001, higher than the 11–12 per cent in 1990.

Marital Status

The ageing population structure influences the marital status distribution of the population. In 2001, 61 per cent of the residents were married, compared with 57 per cent in 1990 (Table 3). This was due largely to the changes in age structure with more older married persons. The share of singles in the overall population decreased from 36 per cent in 1990 to 31 per cent in 2001. As females tended to outlive the males, more females than males were widowed.

CHART 3   PROPORTION SINGLE
AMONG RESIDENT POPULATION
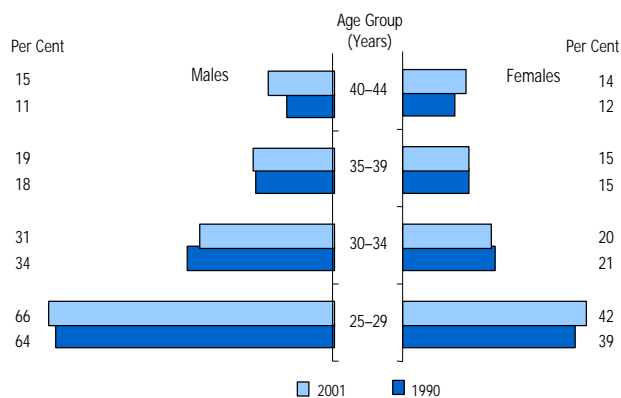
Births and Fertility Rates

Fertility is a major determinant of population growth. In 2001, total live-births fell to 41,500, the lowest since 1986's 38,400 (Chart 4). The total fertility rate was at a historic low of 1.41 children per woman in 2001, lower than 1986's 1.43. Since 1977, the fertility rate had been below the replacement level of 2.1.

CHART 4   TOTAL LIVE-BIRTHS AND
                    TOTAL FERTILITY RATES
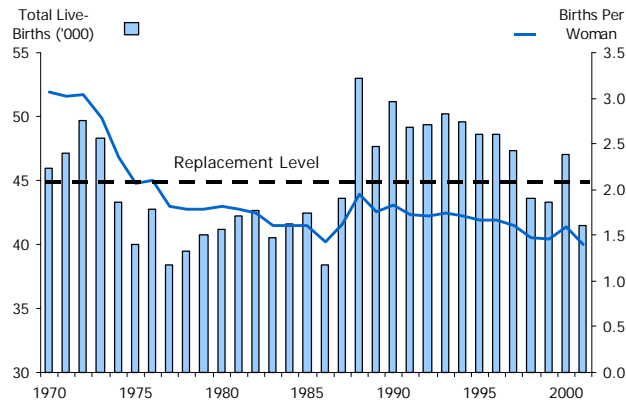
Note :   Prior to 1980, rate refers to total live-births and total population.

Ethnic Differentials in Fertility

Total fertility rates for all three ethnic groups had declined (Table 4). In 2001, the rate for the Chinese remained the lowest at 1.2 children per woman, less than half that of the Malays at 2.5.

TABLE 4   TOTAL FERTILITY RATE BY ETHNIC GROUP

				Per Woman
Year	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	2.45	1.50

Age at Childbearing

Table 5 shows that there had been a delay in childbearing over the years. The median age of mothers who gave birth to their babies in 2001 was 31 years old, two years older than the mothers in 1990. For first-time mothers, the median age at childbearing has increased from 28 years to 29 years over the same period.

TABLE 5   MEDIAN AGE OF MOTHER
                    AT FIRST, SECOND AND THIRD BIRTHS

				Years
Year	All	First	Second	Third
1990	29.3	27.5	29.8	32.1
2000	30.6	28.4	31.3	33.1
2001	30.7	28.6	31.3	33.2

Births by Birth Order

With the delay in childbearing, there was a decline in the share of higher parity births. In 2001, fourth and higher order births constituted only 7 per cent of total births, a sharp fall from 33 per cent in 1970 (Chart 5). Third order births had also declined gradually since the 1990s to reach 16 per cent in 2001.

CHART 5   PROPORTION OF BIRTHS BY BIRTH ORDER
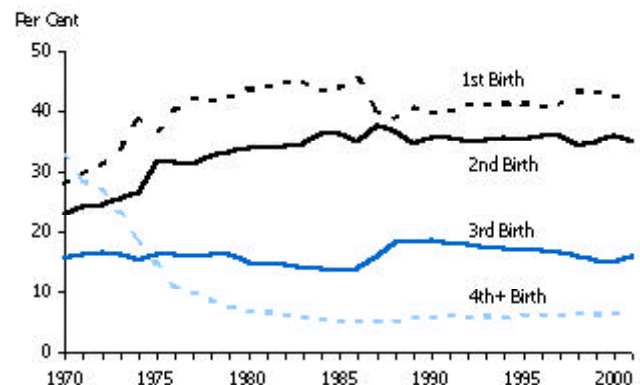
Family Size

Consequently, the average family size has become smaller. Ever-married resident females had an average of 2.5 children in 2001, as compared with 2.8 in 1990 (Table 6). Graduate ever-married resident women had the smallest family size with 1.3 children in 2001.

TABLE 6   MEAN NUMBER OF CHILDREN BORN BY HIGHEST QUALIFICATION ATTAINED OF EVER-MARRIED RESIDENT FEMALES

Year	Total	Below Secondary	Secondary	Post Secondary	University
1990[1]	2.82	3.34	1.58	1.53	1.36
2000[1]	2.54	3.29	1.91	1.55	1.27
2001[2]	2.46	3.12	1.85	1.50	1.29

1   Census of Population
2   Labour Force Survey, 2001

Deaths and Life Expectancy

Mortality is another key factor that influences population growth and structure. Over the years, Singapore's crude death rate was low and slowly declining. This reflected the growing middle-aged population and increasing life expectancy of the elderly population. The crude death rate declined from 5.2 deaths per thousand population in 1970 to 4.4 in 2001 (Chart 6).

CHART 6   TOTAL DEATHS AND CRUDE DEATH RATES
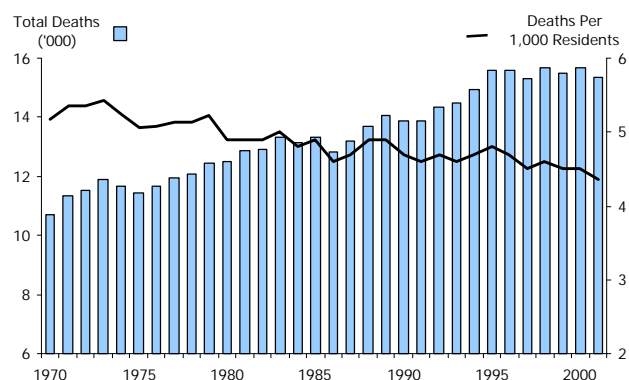
Note :   Prior to 1980, rate refers to total deaths and total population.

Infant Mortality Rate and Life Expectancy

The health status of Singapore's population has improved over the years. This was evident in the fall in infant mortality rate and the rise in life expectancy.

In 2001, the infant mortality rate reached a historic low of 2.2 infant deaths per thousand resident live births, down from 6.6 in 1990 (Table 7). Life expectancy at birth and at age 65 years had increased from 75.3 to 78.4 years and 15.7 to 17.2 years respectively over the same period. Although females had higher life expectancies at birth than males, the gender gap had declined from 4.5 years in 1990 to 4.0 years in 2001.

TABLE 7   INFANT MORTALITY RATE AND LIFE EXPECTANCY

	1990	2000	2001
Infant Mortality Rate (Per 1,000 Resident Live-Births)	6.6	2.5	2.2
Life Expectancy at Birth (Years)	75.3	78.1	78.4
Males	73.1	76.1	76.4
Females	77.6	80.1	80.4
Life Expectancy At Age 65 (Years)	15.7	17.0	17.2
Males	14.5	15.7	16.0
Females	16.9	18.2	18.4

Note :   2001 life expectancies are preliminary figures.

Concluding Remarks

Singapore's current state of the population is similar to that of many developed countries where both fertility and mortality are low. The post-war baby boomers have matured to middle age. The share of the elderly has grown slowly but steadily. Better health conditions would continue to lead to longer life expectancies.

Library Utilisation and Reading Patterns

by
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Introduction

Besides improving a person's literacy skills, reading provides a person with new ideas and knowledge. It broadens a person's mindset and enriches his life. A well-read population and workforce is thus an asset to a country and beneficial to its economic and social development.

An insight to the reading activities of Singapore residents could be gleaned from the loan transactions of National Library book borrowers. In 2001, a total of 27.7 million National Library books were borrowed. This was more than 3 times the number of 9.1 million ten years ago.

This paper looks at the profile of Singapore resident library book borrowers and their borrowing patterns in the year 2000. Data were drawn from the Census of Population 2000 and the administrative records on National Library book loans.

## Propensity to Borrow Library Books

More Borrowers among Children and Females

A total of 873,000 Singapore residents aged 5 years and over borrowed at least one library book between July 1999 and June 2000. They made up 29 per cent of the resident population aged 5 years and over in 2000.

Children were more likely to borrow books from the National Library. In 2000, about 55 per cent of residents aged 10–14 years borrowed a library book. The proportion declined with increasing age, to 4 per cent among elderly persons aged 65 years and over.

Females had a higher propensity to borrow library books than males (Chart 1). There was relatively greater interest in library books among females aged 35–44 years which could be attributed to more married females borrowing books for their young children. The Chinese were more likely to borrow library books while Malays had the lowest tendency to do so.

CHART 1   PROPORTION OF LIBRARY BOOK BORROWERS AMONG RESIDENT POPULATION BY DEMOGRAPHIC CHARACTERISTICS, 2000
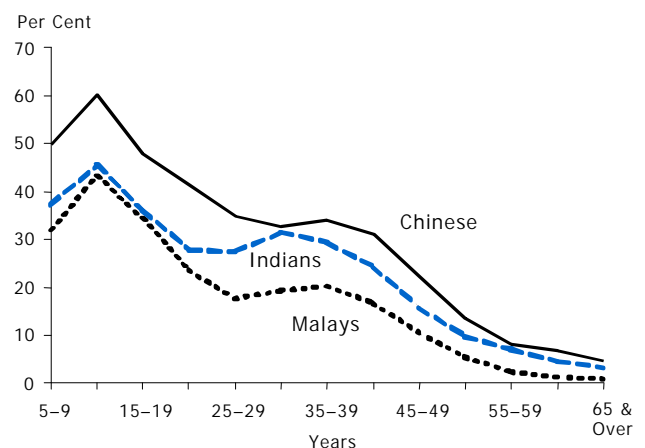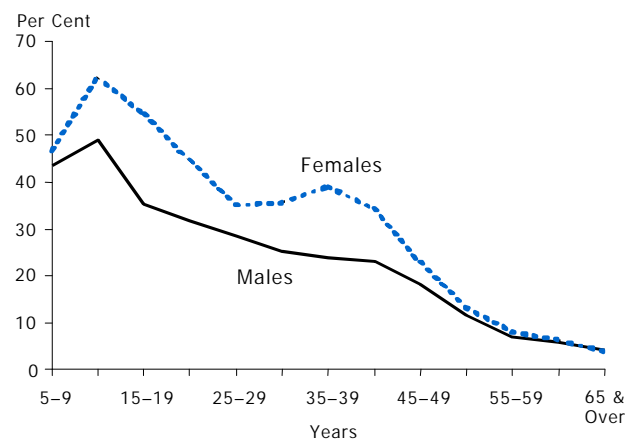
Higher Incidence of Borrowing among Students and Better-Educated

Among residents aged 15 years and over, students had the highest proportion with a library book loan (Table 1). In 2000, almost half of the student population borrowed a library book compared with 26 per cent among working persons and 23 per cent among home makers.

TABLE 1   PROPORTION OF LIBRARY BOOK BORROWERS AGED 15 YEARS AND OVER BY SOCIO-ECONOMIC CHARACTERISTICS, 2000

			Per Cent
	Total	Chinese	Malays	Indians
Students	49.4	51.9	40.9	40.8
Working Persons	25.6	27.5	15.1	22.2
Home Makers	22.8	24.4	16.8	23.2
Among Non-Students				
Below Secondary	9.3	9.8	6.8	8.6
Secondary	24.3	26.3	18.3	19.0
Post Secondary	36.0	38.0	25.9	29.8
University	44.9	46.4	36.4	41.6
Among Working Persons				
Managers & Professionals	34.6	35.4	27.7	33.2
Associate Professionals	36.4	38.6	24.3	30.0
Clerical & Service Workers	23.0	25.1	16.0	17.5
Production & Related Workers	11.3	12.1	7.9	10.6

The propensity to borrow library books increased with educational qualification. About 45 per cent of resident university graduates had borrowed a library book in 2000 compared with 9.3 per cent among school leavers with below secondary qualification.

Similarly, among those working, a higher proportion of 35–36 per cent of managers, professionals and associate professionals borrowed library books in 2000. In contrast, only 11 per cent of production workers had borrowed a library book.

Book Borrowing Patterns

Average Number of Books Borrowed

Children were enthusiastic library book borrowers. In 2000, children aged 5–9 years borrowed an average of 32 books each while those aged 10–14 years borrowed 20 books each (Table 2). The number of adult books borrowed by those aged 15 years and over was much fewer, amounting to an average of 12–15 books.

TABLE 2   AVERAGE NUMBER OF BOOKS BORROWED BY RESIDENT LIBRARY BOOK BORROWERS, 2000

				Number
Age Level of Books	5–9 Years	10–14 Years	15–19 Years	20 Years & Over
Junior Books	32	20	–	–
Young People Books	–	–	7	4
Adult Books	–	–	12	15

Preference for Non-fiction Books

There was a slight tendency for young children aged 5–9 years to borrow non-fiction books (Table 3). In 2000, 58 per cent of them borrowed predominantly non-fiction books. This was unlike those aged 10–14 years, 39 per cent of whom borrowed predominantly non-fiction books.

TABLE 3   PROPORTION BORROWING PREDOMINANTLY NON-FICTION BOOKS[1] AMONG RESIDENT BOOK BORROWERS AGED 5–14 YEARS, 2000

			Per Cent
	Total	Chinese	Malays	Indians
Age Group (Years)				
5 – 9	57.9	59.3	51.2	55.6
10 – 14	39.2	39.4	40.2	35.0
Sex				
Females	45.5	46.5	41.0	43.6
Males	52.6	53.3	51.2	47.9

1   Where more than half of the books borrowed were non-fiction.

Library book borrowers aged 15 years and over showed a strong preference for non-fiction books (Table 4). This preference increased with age. In 2000, six out of ten book borrowers aged 15–19 years borrowed predominantly non-fiction books compared with eight out of ten book borrowers aged 20 years and over.

TABLE 4   PROPORTION BORROWING PREDOMINANTLY
           NON-FICTION BOOKS AMONG
           RESIDENT BOOK BORROWERS
           AGED 15 YEARS AND OVER, 2000

Per Cent

	Total	Chinese	Malays	Indians
Age Group (Years)				
15 – 19	64.0	64.6	62.4	59.4
20 & Over	79.8	80.4	76.1	76.1
Economic Status				
Student	68.0	68.9	63.8	61.9
Not Working	78.0	78.8	74.6	74.5
Working	79.9	80.4	75.7	76.4
Occupation[1]				
Managers & Professionals	83.7	83.9	81.1	82.4
Associate Professionals	81.5	81.8	80.8	77.1
Clerical & Service Workers	74.9	76.0	69.4	69.7
Production & Related Workers	76.4	76.6	78.7	68.0

1   Among those working aged 15 years and over.

Working adults seemed more inclined towards non-fiction books in contrast to students. Similarly, borrowers in managerial or professional positions had a higher tendency to borrow non-fiction books than those in lower-skilled jobs.

Predominant Language of Books Borrowed

Table 5 indicates a clear preference for English books among library book borrowers. In 2000, 68 per cent of book borrowers borrowed predominantly English children and adult books. Those who favoured books written in their respective mother tongue accounted for about one-third of Chinese and Malay children and adult book borrowers. Among Indian book borrowers, 15–21 per cent borrowed Tamil children and adult books.

TABLE 5   PREDOMINANT LANGUAGE[1] OF LIBRARY
           BOOKS BORROWED BY RESIDENT BOOK
           BORROWERS AGED 5 YEARS AND OVER, 2000

Per Cent

	Total	Chinese	Malays	Indians
Children Aged 5–14 Years Borrowing Chidren Books				
Total	100.0	100.0	100.0	100.0
English	68.0	67.6	66.5	74.5
Chinese	23.4	29.9	0.3	1.1
Malay	5.4	0.4	30.7	7.1
Tamil	1.0	–	–	15.0
Non-Official Language	2.1	2.1	2.4	2.3
Persons Aged 15 Years & Over Borrowing Adult Books				
Total	100.0	100.0	100.0	100.0
English	68.1	67.8	63.7	75.0
Chinese	26.6	31.2	0.4	0.5
Malay	3.4	0.5	34.8	3.2
Tamil	1.3	–	–	20.8
Non-Official Language	0.5	0.5	1.1	0.5

1   Where more than half of the books borrowed were of corresponding language.

Profile of Library Book Borrowers

Socio-economic Characteristics

Females accounted for 57 per cent of library book borrowers aged 5 years and over in 2000 (Table 6). This was slightly higher than their share of the resident population.

Library book borrowers were younger than the overall resident population. In 2000, the median age of library book borrowers was 26 years, nine years younger than that of the resident population.

Working adults constituted almost three-fifths of the library book borrowers aged 15 years and over in 2000. The National Library remained an attraction for students who accounted for 17 per cent of library book borrowers. In fact, the proportion of student book borrowers was double their share of the resident population.

TABLE 6   SOCIO-ECONOMIC PROFILE OF RESIDENT LIBRARY BOOK BORROWERS
AGED 5 YEARS AND OVER, 2000

	Book Borrower	Resident Population		Book Borrower	Resident Population
% Females	56.7	50.3	Among Non-Students[1]		
			% Below Secondary	17.4	42.6
% Below 15 Years	28.2	16.5	% Secondary	26.2	24.6
% 15 – 29 Years	28.9	22.4	% Post Secondary	33.3	21.1
% 30 – 44 Years	31.0	30.0	% University	23.1	11.7
% 45 Years & Over	11.8	31.1			
Median Age (Years)	*26*	*35*	Among Working Persons[1]		
			% Managers & Professionals	33.0	24.4
% Students[1]	17.1	8.7	% Associate Professionals	27.2	19.1
% Working[1]	60.6	59.4	% Clerical & Service Workers	24.0	26.7
% Home Makers[1]	13.2	15.5	% Production & Related Workers	11.5	26.1

1   Among residents aged 15 years and over.

More than half (56 per cent) of the non-student library book borrowers aged 15 years and over had at least post secondary qualification. In comparison, those with below secondary qualification were less keen on library books. In 2000, only 17 per cent of library book borrowers had below secondary qualification compared with 43 per cent of the resident population.

Among those who were working, managers, professionals and associate professionals accounted for 60 per cent of total library book borrowers. This was much higher than their share of the resident working population.

Concluding Remarks

Given the benefits of reading, it is encouraging that Singapore's children are avid library book borrowers. This is probably due to the fact that children are guided by supportive parents, who realise that proficiency in reading provides an important foundation for learning in and beyond school.

Not all children are equally enthusiastic in borrowing library books. Female children are more avid library book borrowers than males. Also, Chinese children have a higher propensity to borrow library books than the Malays and Indians. Such differences persist through adulthood.

Compared to children, adults have lower propensity to borrow library books. This could possibly be due to adults having the financial means to buy books. Among adults who borrow library books, the preference is for non-fiction books. This suggests that most adult borrowers read for work and self-enrichment.

Library book borrowing activity is associated with some socio-economic factors. The tendency to borrow library books increases with educational qualification. Similarly, managers, professionals and associate professionals have higher propensity to borrow library books than other occupational groups.

Feedback on Revamped
Statistics Singapore Website

In March 2002, the Singapore Department of Statistics implemented a major revamp of the SingStat Website (www.singstat.gov.sg). The new website incorporates a refreshing design, navigation-friendly features and vastly enriched contents.

Since its launch, usage of the revamped website has increased as evident from the website access statistics shown below :

Website Access	Before Revamp (Monthly Average for 2001)	After Revamp (Monthly Average for Apr-Aug 2002)
Total Hits	529,400	6,510,700
Home Page Hits	18,400	31,100
Page Views	161,800	267,500
Unique Visitors	na	14,300

Some 20 feedback were received on the revamped website. Users appreciated the improvement in website contents. Compliments were received for the enhancement of the KeyStats section as a portal to provide quick links to the Department's latest statistical findings as well as statistics compiled by Research and Statistics Units in ministries and statutory boards. The press release archive also proved to be helpful to some users.

The new look of the revamped website was well received. Users commended the attractive yet uncomplicated design and layout. Many found it easier to navigate the restructured webpages. Users welcomed the new search facilities as useful tool to locate quickly the information needed.

Responding to feedback on the slow access speed, we have further optimised the image filesize and the page layout in order to reduce the downloading speed. The response time has improved by 10–15 per cent. The home page is instantaneously accessible using broadband. Using a 56k modem, it takes 20–30 seconds to download (most of the contents are displayed within 20 seconds).

We would like to take this opportunity to thank all users who have provided us with their valuable feedback.

We Need Your Comments and Suggestions

- How often do you visit SingStat website?

- What improvement would you like to see in SingStat website?

- Which section do you find most useful?

- How do you make use of the information found in SingStat website?

Give us your comments and suggestions using the online feedback facility in SingStat Website or email us at info@singstat.gov.sg

National statistical systems

Better governance can enhance data quality

S ound policies and good governance – elements that world leaders at the recent United Nations Conference on Financing for Development, held in Monterrey, Mexico, deemed essential for sustainable development – are highly dependent upon accurate, credible, and timely statistics. But the quality of data is itself contingent upon the quality of governance in national statistical agencies. A high-level consultative seminar held on May 28–30 in Singapore gave national authorities an opportunity to share strategies on good governance and discuss how international agencies can help.

Meeting outside the conference are (left to right) Carol Carson, head of the IMF's Statistics Department; Paul Cheung, Chief Statistician, Singapore Department of Statistics; and Anila Bandaranike, Director, Statistics Department, Central Bank of Sri Lanka.

Under the aegis of the IMF's Statistics Department, the United Nations' Statistics Division, and the Singapore Department of Statistics, national authorities from more than 20 developed and developing countries gathered in Singapore for the Consultative Seminar on Governance of National Statistical Systems.

Over the course of the three-day high-level seminar, country representatives from Africa, Asia, the Caribbean, Europe, and the Middle East exchanged views on the problems they had confronted and the solutions that seemed to work. They also explored knowledge management, information technology, data integrity and relevance, respondent relations, legitimacy and credibility of statistical agencies, interagency coordination, and organizational models and strategic planning. The seminar served, Singapore's Chief Statistician, Paul Cheung, noted, "as an important international forum to discuss the critical governance issues of the organization and management of statistical systems."

There was fundamental agreement that high-quality official statistics are a key component of sound policymaking and effective decision making and thus represent a crucial building block in the economic and social development of any country. Modern statistical systems must function in increasingly complex and fast-changing environments, and national statistical systems must respond innovatively if they hope to capture in their statistics newly emerging products and services. The rapidity with which data are now being created and communicated underscores how important respondent relations and data transparency, integrity, and relevance are and how vital it is for national statistical systems to be seen as professional, credible, and legitimate.

Why good governance matters

The success of modern national statistical systems is intrinsically linked to how well its managers ensure the integrity and credibility of data, build up the relevant knowledge base, organize the use

of information technology, promote effectiveness, and carry out strategic planning. Ben Kiregyera, Chair of Uganda's Bureau of Statistics, described how his semi-autonomous bureau was able to create "a coordinated and demand-driven national statistical system and demonstrable government commitment to statistical development." A key element of this reform, he said, was to put into place "attractive terms and conditions of service" to attract a high-quality professional staff. In a similar vein, the Director General of the Statistical Institute of Jamaica, Sonia Jackson, recounted how increased demands for improvements in the timeliness and scope of information have led to plans for a "new organization structure" with the status, funding, staffing, and technology to support this expanded mandate.

Seminar participants stressed that good governance of national statistical systems has far-reaching ramifications, fostering accountability and transparency in the government as a whole. Within individual institutions, good governance improves responsiveness and cost-effectiveness, raises professional standards, and strengthens the perception of objectivity and thus raises public trust in the statistical data.

But while there is broad agreement on the importance of good governance, the participants cautioned against looking for a single formula to address governance issues. Managers of national statistical agencies work in a wide variety of political, institutional, and organizational contexts. And centralized and decentralized statistical systems, for example, require different approaches to managing governance.

Participants focused on broad measures that had widespread applicability. They pointed to the importance of countering the erosion of institutional knowledge, promoting a culture of openness and teamwork, collaborating with academic and other knowledge-producing institutions, and maintaining independence on professional matters. National

Heads of national statistical agencies and central bank units from around the world attended the three-day seminar on governance, which also drew senior representatives from international and regional organizations.

statistical systems, they stressed, could also benefit from the implementation of some well-respected tools and good practices, notably the use of release calendars for data reporting and transparent procedures for data revisions, regular reviews of the statistical program and user consultations, careful procedures to protect confidentiality, and formal procedures to prevent or manage crises. A business strategy and a statistical program that takes account of overall government priorities and other external influences provide the framework within which all of these efforts and practices can be integrated.

There was room for improved governance even in a well-established statistical agency. Commenting on his organization's long experience with knowledge management, Dennis Trewin, Chief Statistician of the Australian Bureau of Statistics (ABS), explained that ABS not only derived more efficient processes and more effective use of technology but also, and more important, effected a positive change in the organization's "culture and behavior." This led to greater openness, more consistency, and a higher degree of commitment to the organization's overarching objectives of satisfying the needs of the various users of statistics.

International organizations can help

National statistical organizations must take the lead in improving governance, but many participants indicated there was a role, too, for international organizations. Participation in the UN's Fundamental

Principles of Official Statistics and in the IMF's Special Data Dissemination Standard or General Data Dissemination System had, according to the participants, already helped increase the credibility and the legitimacy of their statistics and statistical agencies.

But there was clearly more scope for expanded technical assistance and greater training in statistical organization and in governance issues – areas viewed as integral to statistical capacity building. Participants noted that regional approaches helped increase the relevance of technical assistance, and greater donor coordination boosted the efficient use of scarce resources. International agencies could also wield considerable influence with senior government officials and in contacts with the media and help raise the profile of statistical issues and priorities.

In closing, Carol Carson, Director of the IMF's Statistics Department, asked participants what they had appreciated most in the seminar. A large number cited the value of sharing firsthand experiences, learning new approaches to common problems, and discovering new tools, especially in the areas of knowledge management and information technology. The seminar's emphasis on credibility and legitimacy reinforced the message that governance matters, and all appreciated the focus on action, since it was clear that there was much that both national statistical agencies and international organizations could do to promote better governance. ■

Sarmad Khawaja
IMF Statistics Department

Seminar on International Standard Economic Classifications

The Singapore Department of Statistics organised a seminar on International Standard Economic Classifications on 19 Jun 2002. The seminar was conducted by Mr Ralf Becker, Chief of the Statistical Classifications Section, United Nations Statistics Division (UNSD). It provided an overview on the UNSD's activities in the development and updating of economic classifications.

Mr Becker highlighted the types of economic classifications approved as guidelines by the United Nations Statistical Commission. These included the subject matter areas of economic activities, products, expenditures and trade. Using activity classifications as illustration, he explained the linkages between reference, derived and related classifications. A demonstration of the UN classifications Registry was also presented.

The seminar was attended by statisticians and statistical officers of the Department. Statistical and research staff of Research and Statistics Units in ministries and statutory boards were also present.

Shared Folder Management
at Singapore Department of Statistics (DOS)

A data and information repository which facilitates sharing or exchange of
information is essential for business operations. This has led DOS to capitalise
on the set-up and use of network shared folders and lay the foundation
for greater sharing of information to support DOS' operational needs.
The final objective is to achieve an efficient and effective
knowledge management framework for DOS.

Introduction

With increasing usage and proliferation of folders
within the various divisions in DOS, a streamlining
exercise was carried out with the intent to construct
a more structured and organised framework for
information repository in the Windows NT
environment.

The primary goals are to facilitate ease of
information access and make available the most
current one-stop view of all access rights for shared
folders in order to achieve better management and
control for the benefit of users and system
personnel.

Scope of Streamlining

The streamlining exercise covered shared folders
and group/user accounts. On the shared folders,
it encompassed removal of redundant folders,
merging and re-organisation of existing folders in
use. A comprehensive inventory check was
performed and up-to-date documentation of shared
folder resources was effected.

What is Network Shared Folders

Network shared folders are common file
areas storing data and information in an
organised manner for concurrent sharing and
dissemination among selected or specific
groups of users.

For the user group and individual accounts, the
inactive accounts were phased out and the process
of request for accounts was further streamlined to
achieve a faster turnaround time in the creation,
update and deletion of user accounts.

Benefits of
Improved Folder Management

Qualitative

The benefits of the exercise can be viewed from
two angles, that is, usage viewpoint and system
operations' viewpoint.

With a well-defined set of guidelines drawn up after the streamlining exercise, users are more aware of the requirements for new creations and the structure to facilitate greater access and sharing, thereby achieving better organisation and management of shared folders.

This will result in easier retrieval of information by staff within and across divisions, leading to more effective and efficient sharing of information for operations and planning of new projects and activities.

At the system end, the two areas that are essential for organised folder management are user-management and system operations' procedure. The establishment of a new User Co-ordinator role serves as the linchpin of control between the user and the system team for the shared folders in each division. The User Co-ordinator is responsible for the proper validation/verification of requests in accordance with the established folder structure.

For the system aspect of work, the System Administrator will then execute the request for the creation, removal, re-name and granting of the appropriate access rights to the folders. This improved procedure helps to maintain a well-structured folder inventory and enables the close monitoring of the utilisation of shared folders, thereby optimizing disk resources and containing operation cost.

Quantitative

With the completion of the streamlining exercise, the volume of shared folders has reduced by about

70 per cent, from about 70,000 to 23,000 across all levels. A total of 180 project/system names have been labelled as major references, covering 990 main and sub-folders. The resulting position of the exercise is presented in Chart 1.

CHART 1   STREAMLINING OF SHARED FOLDERS
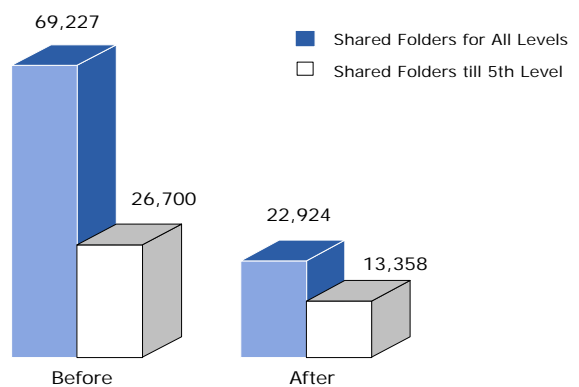
Path to
Better Knowledge Management

The establishment of a clean base of shared folders in DOS will improve lateral sharing and communication of information within and across all divisions significantly. It also forms the building block of an enterprise framework to support continuous improved operations and productive information management and planning.

The efficient and effective organisation and management of shared folders containing important information and data is the first essential step in the journey to knowledge management for the Department of Statistics.

... another knowledge management initiative by DOS
Publication Depository System

With effect from August 2002, DOS has unveiled another of its knowledge management initiatives – the Publication Depository System (PDS).

B uilt on the Lotus Notes platform, the PDS has enabled the establishment of an enterprise repository of a vast collection of DOS papers and publications dating back to the early days of 1990s. This has served the objective to provide a central online and up-to-date corporate base of papers and publications for ease of retrieval as well as to facilitate knowledge sharing and informed decision making.

Lotus Notes standard-based messaging has been both our intra-agency and inter-agency communications tool since 1997. Lotus Notes integrates important information sources – emails, calendar, address book, and business applications together to allow users to access via one's desktop. By incrementally building on our messaging infrastructure into a collaborative knowledge management foundation, we could also evolve and begin to transform information into a valuable content management asset.

Secured access is in place to support authorized users and only the system administrator has the right to create, update and delete the papers/ publications from the system.

DOS has been producing and disseminating papers such as Information Papers, Occasional Papers, Country Papers and statistical publications to both the media and public. These papers are currently filed and kept by the respective Division.

With the launch of PDS, it will just be a few clicks away to retrieve the softcopy of the required paper/ publication.

The PDS allows users to view the database by Division, Document Type and Subject of interest. The structured build up of a comprehensive repository facilitates sorts and searches, thereby reducing the time and effort needed for information retrieval.

Let us now take a look on how PDS works. The administrator will upload the papers and publications into the depository system. Key descriptors of the paper/publication such as Title, Division, Type, Author, Release Date, File Reference and Subject will be captured into the system database. The administrator will attach the softcopy version of the paper/publication in PDF and Word (optional) format. PDS users can access the required paper/ publication instantly at his desktop.

Another useful feature of the PDS, is its Forward function which allows users to retrieve the softcopy, attach the document, add comments and email to a third party via the Notes Mail account. This saves effort and time in continuing the follow-up process to accomplish a given task.

Now, with the introduction of PDS, DOS is looking into developing more knowledge management initiatives. We will leverage on the advantages of greater collaboration and sharing to enhance productivity and reduce administrative overheads in our business operations – riding the waves to build a knowledge-rich workplace in our knowledge management journey!

Educational Upgrading
through Private Diploma and Degree Programmes, 2001

Based on the Survey of Organisations Offering Diploma and Degree Courses, a total of 33,200 students in Singapore were enrolled in diploma programmes organised by local organisations in 2001. Another 36,700 students were enrolled in private external degree programmes. These degree programmes are organised by private organisations in collaboration with overseas universities.

Enrolment and Graduates from Diploma Programmes

About half (54 per cent) of the diploma students were pursuing programmes accredited by overseas universities or educational institutions. The other 46 per cent were enrolled in programmes produced by local organisations, many which had been validated and moderated by overseas universities.

Most of the students in private diploma programmes were attracted to courses geared towards business and information technology. In 2001, half (51 per cent) of the students in private diploma programmes were enrolled in business and management courses and another 24 per cent in computer studies (Chart 1).

In 2001, there were 13,300 graduates from private diploma courses. About 57 per cent of the graduates were awarded diplomas in business and management while another 20 per cent received theirs in computer studies (Chart 1).

CHART 1   STUDENT ENROLMENT AND GRADUATES FROM PRIVATE DIPLOMA PROGRAMMES, 2001

Enrolment

Health Sciences 2%
Mass Communication & Information Science 4%
Education 3%
Humanities & Social Sciences 2%
Others 4%
Fine & Applied Arts 10%
Business & Administration 51%
Information Technology 24%

Graduates

Mass Communication & Information Science 6%
Education 3%
Others 7%
Fine & Applied Arts 7%
Information Technology 20%
Business & Administration 57%
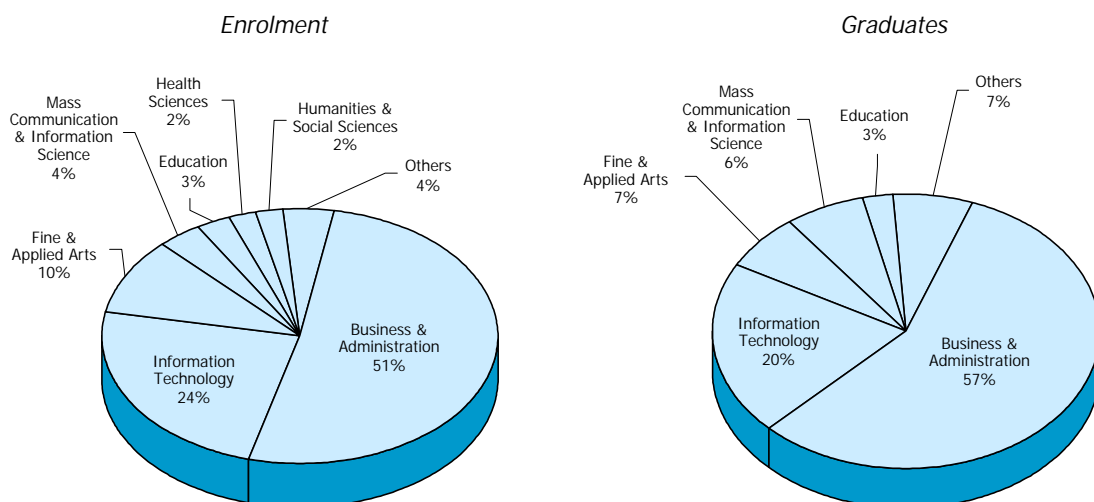
Enrolment and Graduates from Degree Programmes

Enrolment in Degree Programmes

In 2001, the majority (73 per cent) of the students was enrolled in bachelor degree programmes and another 25 per cent in master programmes. Those pursuing doctorate degrees accounted for a mere 1 per cent.

Among the students in external bachelor degree programmes, 45 per cent were enrolled in business and management courses while another 26 per cent pursued computer studies (Chart 2). These two 'office-oriented' courses appealed to the students as most were working adults seeking to upgrade their skills or invest in new career possibilities. With the greater variety of courses available, there was also a significant proportion of students enrolled in the general discipline of humanities and social sciences (11 per cent) and engineering sciences (7 per cent).

Most of the students (83 per cent) in external higher degree programmes in 2001 were concentrated in business and management programmes (Chart 2).

About 53 per cent of the students enrolled in external degree programmes pursued degrees accredited by universities in United Kingdom. Another 40 per cent were enrolled in programmes accredited by Australian universities.

Graduates from Degree Programmes

There were 10,200 graduates from external degree programmes in 2001. Among the graduates, 65 per cent were conferred bachelor degrees by the overseas universities while 32 per cent graduated with master degrees. Only 20 students were conferred doctorate degrees in 2001.

Reflecting the enrolment pattern, most graduates from the external bachelor degree programmes were conferred degrees in business and management (60 per cent) in 2001. Another 19 per cent of the graduates were awarded bachelor degrees in computer studies (Chart 3).

Nine in ten graduates from external higher degree courses in 2001 were conferred either master or doctorate in business and management (Chart 3).

CHART 2   STUDENT ENROLMENT IN EXTERNAL DEGREE PROGRAMMES BY LEVEL OF EDUCATION, 2001
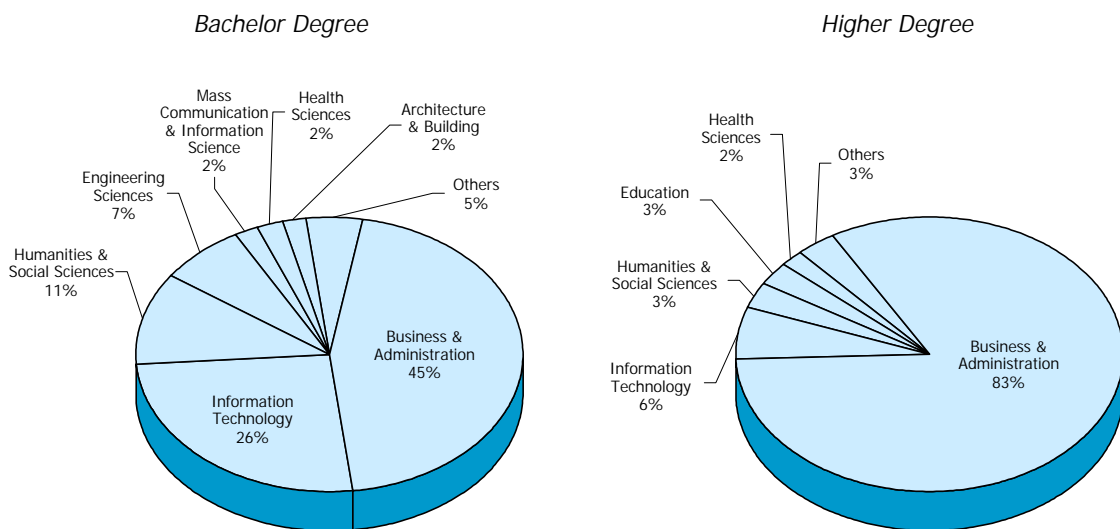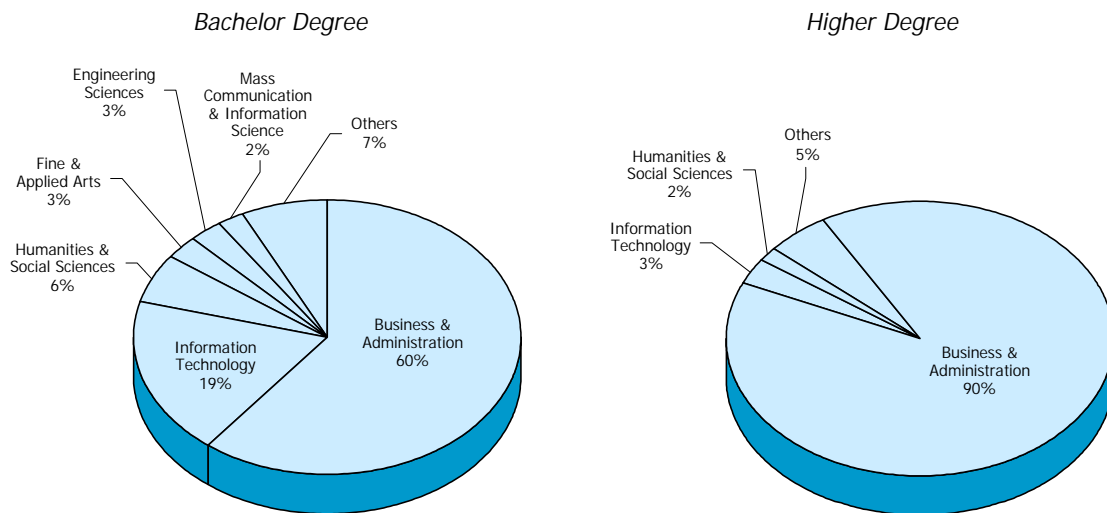

Bachelor Degree

Higher Degree

CHART 3   GRADUATES FROM EXTERNAL DEGREE PROGRAMMES BY LEVEL OF EDUCATION, 2001

Bachelor Degree

Higher Degree

Engineering Sciences 3%

Mass Communication & Information Science 2%

Others 7%

Fine & Applied Arts 3%

Humanities & Social Sciences 6%

Information Technology 19%

Business & Administration 60%

Others 5%

Humanities & Social Sciences 2%

Information Technology 3%

Business & Administration 90%

2000 Business Indicators

The Commerce Sector

Change in 2000 (Year-on-Year)

Value added
...   was S$27 billion   ...   grew by 13 per cent

Value added per worker
...   reached S$77 thousand   ...   rose by 12.4 per cent

Operating surplus
...   totalled S$10.6 billion   ...   increased by 9.4 per cent

Operating surplus to value added
...   was 39.4 per cent   ...   was 3.2 percentage points lower

Remuneration to value added
...   decreased to 42.8 per cent   ...   fell by 4.5 percentage points

The Services Sector

Change in 2000 (Year-on-Year)

Value added
...   amounted to S$48.9 billion   ...   was 11.5 per cent higher

Value added per worker
...   was S$94.4 thousand   ...   grew by 6.3 per cent

Operating surplus
...   totalled S$38 billion   ...   rose by 14 per cent

Operating surplus to value added
...   reached 77.8 per cent   ...   increased by 1.7 percentage points

Remuneration to value added
...   increased to 45.8 per cent   ...   was higher by 1.3 percentage points

Deaths from Non-Natural Causes

Do You Know that 1,036 persons died of non-natural causes last year?

Deaths from non-natural causes, formed only a small proportion of total deaths – 6.7 per cent in 2001 (Table 1). The share of such deaths had fallen slightly over the last three decades, from 7.8 per cent in 1970. Most of the non-natural deaths were due to accidents and suicides.

TABLE 1   TOTAL DEATHS FROM NON-NATURAL CAUSES

Causes of Deaths	1970		2001	
	No.	%	No.	%
TOTAL	10,717	100.0	15,367	100.0
Non-Natural	836	7.8	1,036	6.7
Accidents	568	5.3	437	2.8
Suicides	185	1.7	357	2.3
Others*	83	0.8	242	1.6

*   Includes homicide, poisonings, violence and other external causes.

The rate of deaths from accidents was low at 9.7 per 100,000 residents in 2001. This was almost three times lower than that in 1970 (Chart 1). Younger persons aged below 60 years had a much lower likelihood of dying from accidents than those aged 60 years and over. Over the past three decades, the death rate from accidents had decreased across all ages.

CHART 1   RESIDENT DEATH RATE FROM ACCIDENTS
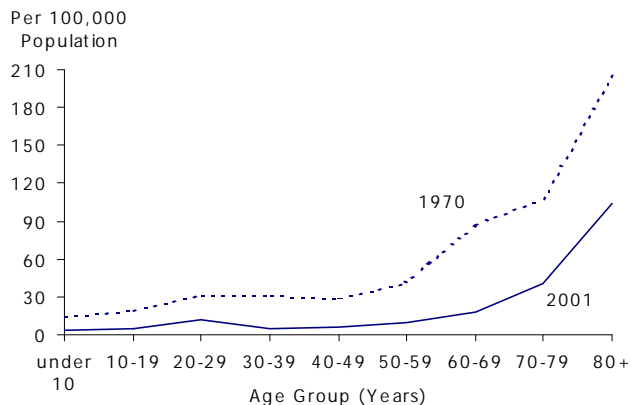
Note :   1970 rates refer to total population.

Among the males who died from accidents in 2001, those aged 20–39 years formed the largest proportion at 49 per cent (Chart 2). The majority (57 per cent) of these were due to motor vehicle traffic accidents. For females, those aged 70 years and over formed the largest group. Accidental falls constituted 74 per cent of their deaths from accidents.

CHART 2   DISTRIBUTION OF DEATHS
FROM ACCIDENTS, 2001
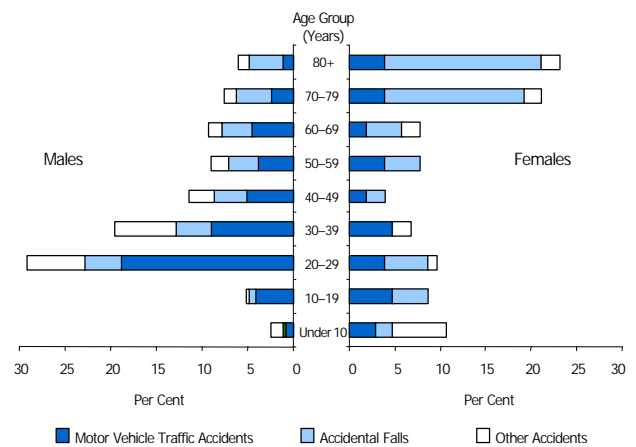
The rate of death from suicides declined across most age groups from 1970 to 2001 (Chart 3). The most significant decline was observed for ages 50 and above.

There was a higher tendency for males to die from suicides than the females in 2001. Among males aged below 50 years, those aged 20–39 years had the highest death rate of 13.6 per 100,000 residents from suicides.
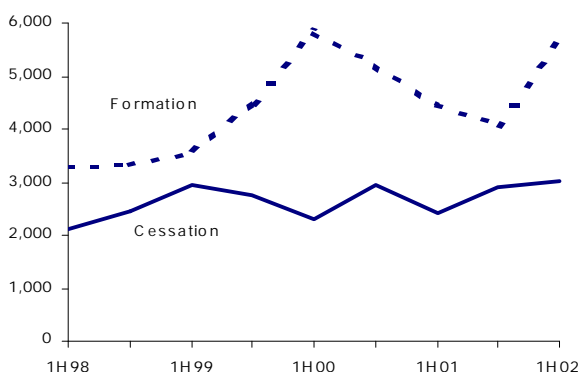
CHART 3   RESIDENT DEATH RATE FROM SUICIDES

Note :   1970 rates refer to total population.
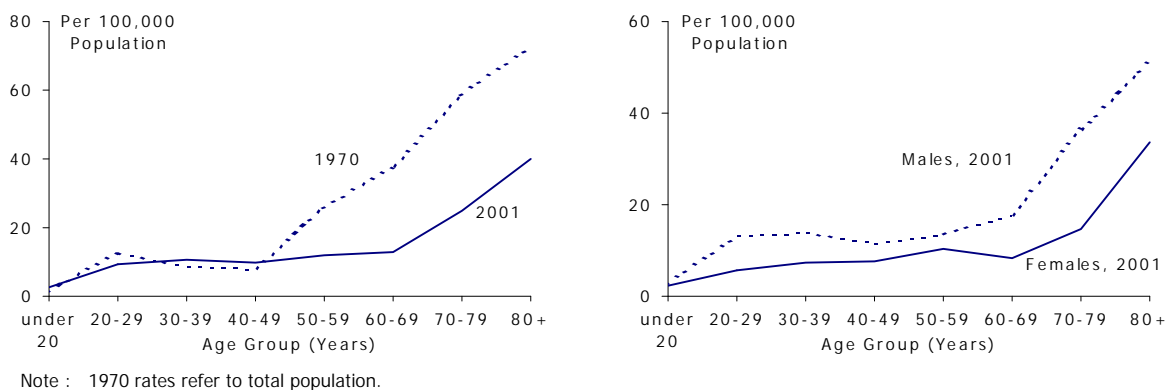
Formation and Cessation of Companies
and Businesses, January–June 2002

Companies

Reflecting improved business conditions, a total of 5,646 new companies was formed in 1H02. This was the first increase since 1H00. Compared with 2H01, company formation expanded significantly by 39 per cent. All major industries recorded increases in formation numbers, with most of them posting double-digit growth rates over 2H01. Commerce industry recorded the highest rise of 51 per cent, followed by financial and business services (42 per cent), transport and communications (39 per cent) and construction (38 per cent).

During 1H02, 3,015 companies ceased operations, an increase of 3.6 per cent over 2H01. The increase in company cessation in financial and business services sector offset the smaller decreases in other sectors.

Businesses

While 1H02 saw a surge in company formation, the number of new businesses formed decreased by 2.1 per cent over 2H01 to 12,410 businesses. Most industries recorded fewer business openings in 1H02, with the largest decrease in manufacturing (23 per cent). Financial and business services industry was the only industry to experience an increase in business formation (9.5 per cent).

The number of business closures fell substantially by 48 per cent, from 10,094 in 2H01 to 5,297 in 1H02. From April 2000, businesses are granted 3-year licences instead of 1-year licences. The large decline in business cessation could probably be attributed to the change in renewal period of business licences. So, those not doing well are likely to adopt a wait-and-see stance rather than cease their operations immediately.

CHART 1   FORMATION AND CESSATION OF COMPANIES,
           1H1998–1H2002

CHART 2   FORMATION AND CESSATION OF BUSINESSES,
           1H1998–1H2002
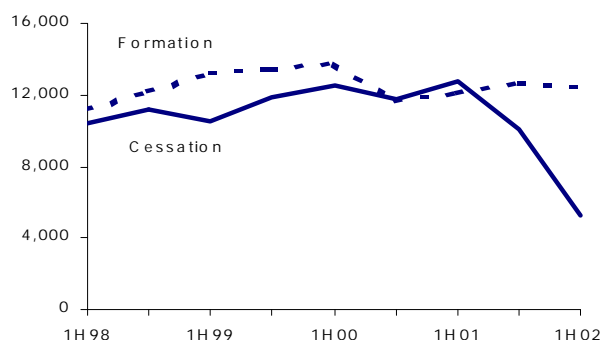
Overseas Visitors

The Singapore Department of Statistics received the following visitors in the past six months. Topics discussed include issues relating to collection and compilation of statistics on trade credits and other cross-border transactions, tourism satellite account, wholesale price indices, survey methods, household surveys, databases on establishments, households and dwellings, data dissemination, knowledge management and international standard economic classifications.

Australia – *Australian Bureau of Statistics*
- Mr Tam Siu-Ming
  First Assistant Statistician
  (Information Management Division)
- Mr Dale Chadwin
  Chief Knowledge Management Officer

China – *State Administration of Foreign Exchange*
Balance of Payments Department
- Mr Zhang Shenghui
  Division Chief
- Mr Chen Zhiwei
  Section Chief
- Mr Zhou Zhongyan
  Economist
- Ms Shi Liya
  Division Chief (Shanghai Branch)
- Ms Zhu Xiaojing
  Division Chief (Qingdao Branch)
- Ms Liu Jianhong
  Section Chief (Shenzhen Branch)
- Ms Huang Jin
  Section Chief (Guangdong Branch)

Macau *– Statistics and Census Services*
- Mr Mak Hang Chan
  Chief (Statistical Studies and Methods)
- Ms Wong Teng Yin
  Chief (Services Statistics)
- Ms Lo Kam Leng
  Division Head
  (Statistics of Industry and Construction)
- Mr Tam Lo Tim
  Division Head
  (Statistics of Distribution and Pricing)

New Zealand – *Statistics New Zealand*
- Mr Robert Templeton
  Chief Methodologist (Survey Methods)

Sweden – *Swedish Karolinska Institute*
Department of Medical Epidemiology
- Mr Per Hall
  Deputy Chairman
- Mr Paul Lichtenstein
  Director of PhD Studies
- Mr Yudi Pawitan
  Professor
- Ms Anastasia Illiadou
  Doctoral Student
- Ms Sara Wedren
  PhD Student

Thailand

Bureau of Trade **–** *Economic Indices Ministry of Commerce*
- Miss Kwanta Wongpradit
  Economist
- Mrs Ubon Chewasuttho
  Economist
- Mrs Thanomjit Lertpiyatas
  Economist
- Miss Patchareeya Tanomchit
  Statistician

University of the Thai Chamber of Commerce
- Miss Jintana Manorothkul
  Researcher
- Miss Wanida Wattanachewanopakorn
  Researcher

United Nations Statistics Division
- Mr Ralf Becker
  Chief (Statistical Classifications Section)

A 21-member delegation from the Suzhou Municipal Government and Suzhou Industrial Park also visited the Department. The delegation was led by Mr Zhao Dasheng, Director, Adapting Singapore's Experience Office, Suzhou Industrial Park Administration Committee. Establishment and household data collection, processing and database management were discussed.

C o n t e n t s

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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Household Expenditure Survey

The Singapore Department of Statistics (DOS) conducts the Household Expenditure Survey (HES) once in every five years. DOS will be conducting its eighth HES from October 2002 to September 2003. The main objective of the HES is to collect detailed information on the latest consumption expenditure of persons and households. This information will be used to revise the weighting pattern and update the basket of goods and services for the compilation of the Consumer Price Index (CPI). The HES is also a good source of data for social and economic policy planning as well as for studies on expenditure trends and patterns arising from changes in life cycle and income growth.

Some 9,000 households in Singapore have been selected to participate in the forthcoming HES. These households are divided into 26 groups and each of them will be required to record the daily and regular expenditure for a period of 14 days. DOS interviewers will visit the households to assist them in their recordings. They will also obtain additional information on the purchases of household durables, house mortgage payment, hospitalization expenses and insurance policies.

A series of publicity programmes will be launched to generate awareness and seek full cooperation from the selected households. This includes press releases, write-ups in the newsletters of the various town councils as well as spot announcements over radio. Publicity letters and information brochures will also be mailed to the selected households before the commencement of the survey to notify them of the impending visit of our interviewers. DOS will present a small token of appreciation to each co-operative household at the completion of the survey.