

Statistics Singapore Newsletter

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The Statistical Agency as Knowledge Centre

"The Yearbook is an excellent symbolic representation of the essence of a national statistical agency: that the Statistical Agency is an important knowledge centre of a country", declared Dr Paul Cheung when he launched the 2002 Year Book Australia.

The Singapore Chief Statistician was guest of honour at the launching which was held at the National Museum of Australia, Canberra, Australia on 25 January 2002 by the Australian Bureau of Statistics (ABS). He is currently the President of the International Association for Official Statistics.

According to Dr Cheung, a Statistical Agency becomes a knowledge centre through a systematic data collection process, careful analysis and documentation. The yearbook is a manifestation of the knowledge base that forms the core of a national statistical agency.

As the knowledge centre of a country, the Statistical Agency engages in activities to refresh this knowledge base and to generate new knowledge. The Statistical Agency also has the responsibility to manage and archive this knowledge base. It is just as important for the Statistical Agency to promote access to this knowledge base by its citizens.

Knowledge Sharing

Dr Cheung highlighted the excellent work that the Australian Bureau of Statistics had done in the key roles of knowledge generation, management and dissemination. The ABS had extended its roles beyond national boundaries, contributing significantly to the development of official statistics in Asia.

Dr Cheung said that the Singapore Department of Statistics shared ABS's vision of encouraging and assisting statistical developments in the region.

Strong Bilateral Ties

Singapore and Australia have jointly organised a number of regional workshops and seminars, covering topics such as measurement of external debts, time series analysis, e-commerce, and measurement of the new economy.

These activities reflect the close bilateral relationship between the Department and ABS at many levels. There are also regular exchanges of views on statistical issues and study visits. The Department has benefited from ABS's assistance on several methodological issues.

Forthcoming Consultative Seminar on Governance of National Statistical Systems

The seminar will be held in Singapore during 28–30 May 2002. It is jointly organised by the Singapore Department of Statistics, United Nations Statistics Division and Statistics Department of the International Monetary Fund.

The objective of the seminar is to discuss a core set of governance issues, such as :

- *Use of information technology*
- *Knowledge management*
- *Integrity, credibility, respondent relations and relevance*
- *Legitimacy and coordination*
- *Organizational models and strategic planning*

Benchmarking of Statistical Surveys : Business Expectations Survey

by
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Introduction

The Singapore Department of Statistics' (DOS) mission is to develop and manage a national statistical information system of quality and integrity to support Singapore's social and economic development. In a continuous effort to improve practices and achieve better results, DOS is constantly benchmarking its performance against international best practices in statistical activities.

Benchmarking of the Business Expectations Survey

DOS' Business Expectations Survey (BES) of the Commerce and Services Sectors¹ is one area in which DOS undertook the benchmarking exercise recently. The intended outcome of the benchmarking is to identify areas of best practice that could be incorporated into the survey processes and the compilation of results.

The BES has been conducted on a quarterly basis since 1976. The aim of this survey is to obtain information on business experience for the past quarter and the outlook for the immediate future.

In 1999 and 2001, DOS participated in the workshops on Business Tendency Surveys organised by the Organisation for Economic Co-operation and Development (OECD), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and Asian Development Bank (ADB). The aim of these workshops is to encourage countries to adopt a core set of standard questions in their BES to make inter-country comparison possible. Through these workshops, OECD introduced a set of methodological guidelines for

What is Benchmarking

Benchmarking is an ongoing process which identifies and introduces better practices into an organisation by comparing one's performance with another external organisation operating in similar fields. The purpose is therefore to identify and introduce areas of improvements so as to achieve greater efficiency and effectiveness. Benchmarking thus provides better insights into how workflow or methods can be developed or improved upon and made more effective.

countries in the Asia Pacific region to adopt in their BES. OECD countries such as Austria, Belgium and Denmark have already adopted these practices.

Areas to be Benchmarked

OECD's methodological guidelines are used as the basis for DOS' statistical benchmarking of the BES, focusing on the following areas :

- ◆ BES questionnaire format and design
- ◆ Method of selecting the BES sample
- ◆ Calculation methodology of BES findings

Questionnaire Format and Design

OECD's recommendation

Questionnaire format and design covers the following areas :

- ◆ Type of variable
(ie qualitative versus quantitative)²
- ◆ Format of questions asked
(ie past, present or future tendency)
- ◆ Reference period covered by variable
- ◆ Core variables to be included

1 The commerce sector comprises wholesale trade, retail trade, hotels and catering trade while the services sector comprises transport and storage, business services, real estate and financial services.

2 Qualitative questions do not require exact figures. Instead, they ask for the respondents' assessment of the current situation or judgement on the direction of changes, eg "up", "unchanged" or "down".

OECD recommends BES' questions to be qualitative especially variables which measure expectations, are difficult or impossible to measure by conventional methods, and are sensitive to economic cycles.

The questions asked may refer to future, present or past tendency. Answers to the questions should generally be in the form of three-fold multiple-choice format.

For example :

- ◆ Questions relating to the assessment of the current situation should be compared with the normal. Respondents will have to assess whether the current situation is "above normal/normal/below normal".
- ◆ Assessment of the present general business situation should be in the form of "good/sufficient/bad".
- ◆ Judgement of the past or the future situation will be in terms of "up/unchanged/down".

The questions should pertain to the next 3–4 months for assessment of the future and the past 3–4 months for assessment of past performance relating to the respondents' own businesses. For questions seeking respondents' general sentiments of the overall business situation, the period should be for the next 6 months.

With respect to the above areas, OECD introduced a list of variables to be included in the BES questionnaire. These are summarised in Table 1.

TABLE 1 COMPARISON OF OECD AND DOS' QUALITATIVE VARIABLES

Variables	DOS' BES
1 Business Situation	✓
2 Competition in your Sector of Activity	✓
3 Factors Limiting Business Activity	✓
4 Volume of Orders placed with Suppliers*	✓
5 Level of Stocks*	✓
6 Average Selling Prices/ Average Rate of Service Charged	✓
7 No. of Persons Engaged	✓
8 Financial Situation	✓
9 Access to Credit	x
10 Volume of Demand	x

* For the fourth and fifth variable, DOS' use "purchases of goods and materials" and "stocks of goods and materials".

Variables that are included in DOS' BES are indicated with a tick. This will be discussed further in the next sub-section.

DOS' practice

In DOS' BES questionnaire, majority of the variables included is qualitative. Survey respondents are asked to provide their expectations for the next 3–6 months and business performance during the past three months. The answers required are "up/same/down" or "improve/same/deteriorate" respectively.

Some quantitative items are included in the BES. These are used as inputs to compute other indicators such as the Quarterly Business Receipts Index and the Wholesale Trade Index. By having other surveys tag on to BES, we cut down on the questionnaires sent to firms, thereby reducing firms' reporting burden.

Another secondary use of the quantitative information is to cross-check against the qualitative returns. For instance, if the expected turnover shows an increase, then the business expectations should be "up".

Nevertheless, DOS has taken steps to simplify the BES form by reducing the number of quantitative questions. In addition, DOS is considering moving all quantitative items to other quarterly surveys to re-position BES as a purely qualitative survey. This would help improve BES' response and data timeliness.

With respect to the core variables recommended by OECD, DOS' BES covers 8 out of the 10 variables (see Table 1). Questions on access to credit and volume of demand are not included in DOS' BES. A question on access to credit was previously included but was later removed as most returns showed that this item was not an important factor in firms' business operation.

DOS' BES collects information on operating receipts/turnover (instead of volume of demand). Both variables should show a close correlation.

Method of Sample Selection

OECD's recommendation

OECD recommends any one of these three sampling methodologies to select the sample firms to be covered in the BES :

- 1 *Stratified Random Sampling*
Sample from the population frame is stratified into different strata. A random selection is then conducted within each of the stratum.
- 2 *Restricted Sampling*
The sample is drawn from the part of the population that is readily accessible. This sample consists mainly of larger firms.
- 3 *Purposive Sampling*
A sample of "representative" units is drawn from the population. The sample is usually biased towards larger enterprises.

Stratified random sampling is the most popular method used by OECD countries. The population frame is sourced from statistical registers or administrative registers and the selection of sampling units is either at enterprise or establishment³ level. Most OECD countries select their sampling units at the enterprise level.

DOS' practice

DOS' BES population frame is sourced from DOS' statistical register, the Commercial Establishment Information System (CEIS). The population is stratified by business activity and employment size at the enterprise level. Stratified random sampling is then applied to select the sample. DOS' sampling methodology is in accordance with OECD's recommendations.

³ An enterprise is a multi-activity firm with each unit or branch engaging in one activity in a single location. These units or branches are termed as establishments.

Calculation Methodology of BES Findings

OECD's recommendation

At the end of the survey when the returns are in, the data are compiled and processed to produce meaningful findings which reflect the business situation.

For qualitative questions in three-fold format, OECD recommends that the results be derived by summing up firms' responses separately for "up", "unchanged" or "down" for each question. Each set of answers are then weighted and grossed up to represent the sentiments of the overall population.

The survey findings are usually presented in the form of net balance, which is obtained by taking the difference between the weighted percentages of respondents giving favourable and unfavourable answers. "Unchanged" answers are not taken into account since these are neutral.

Weighting of the data is required to correct for sample bias. Weighting needs to be applied at both enterprise and industry levels.

OECD recommends using employment size as the weighting variable at the enterprise level. However, a different weighting variable may be used depending on the method of sample selection adopted. At the industry level, either value added, output or employment can be used.

DOS' practice

DOS' computation of the BES findings is similar to that recommended by OECD. Results are also presented in the form of weighted net balances.

With respect to weighting, DOS uses operating receipts/turnover as the weighting variable at the enterprise level as this is used as the criterion for sample selection. At industry level, value added is used to weight the results.

Overall Evaluation

The benchmarking exercise of BES revealed that in many aspects, DOS' practice is in concordance with OECD's practices. Only slight variations exist between DOS and OECD's methodologies, particularly with respect to the type of variable. These are summarised and evaluated below :

- ◆ *Type of Variable*
 OECD recommends BES to contain qualitative questions only. However, due to DOS' BES data being used for other indicators, quantitative items are also collected via the BES. DOS has cut down on the number of quantitative items substantially and is also planning to move all quantitative questions to other quarterly surveys.
- ◆ *Inclusion of Core Variables*
 DOS' BES covers most of the 10 core variables recommended by OECD. Where relevant to Singapore's context, DOS will include other core variables to capture a more complete picture of the business situation.
- ◆ *Weighting Methodology*
 Weighting methodology of DOS' BES differs slightly from that recommended by OECD for enterprise level due to the sample design adopted by DOS, where the sampling criterion used is based on turnover.

By comparing DOS' practices of the BES with those recommended by OECD, we are able to assess the similarities and differences, if any, and make the necessary adjustments so as to be in line with international practices.

Conclusion

As recognised from the benchmarking exercise of BES, conducting such an exercise is beneficial in allowing DOS to develop a framework to identify best practices and improvement potential, and to help pinpoint weaknesses and bottlenecks that can hinder the reliability of statistical output. However, the scope of benchmarking is not exhaustive. Issues such as timeliness and costs incurred in conducting surveys need to be considered too. Nevertheless, benchmarking should be introduced as a continuous and on-going effort to build stronger statistical processes.

Overseas Visitors

The Singapore Department of Statistics received the following visitors in the past six months. Topics discussed include national accounts, population census operations, IT applications in official statistics development, social indicators, survey systems and establishment database.

Cambodia – *National Institute of Statistics*

General Statistics Department

- Mr Vy Heang, Director
- Mr Has Bunton, Deputy Director

Economic Statistics Department

- Ms Em Samoeun, Director
- Miss Tong Chhay Rine, Deputy Director
- Mr Mich Kanthul, Bureau Chief

Macau – *Statistics and Census Services*

- Ms Mak Cheong Man, Head
- Ms Cheng I Wan, Ana, Head

Myanmar – *Central Statistical Organisation*

Computer Division

- Mr Soung Tin, Director
- Mr Khin Maung Ba, Deputy Director (System and Analysis)
- Mr Thaug Hlaing, Deputy Director (System and Applications)
- Mr Zaw Min Htay, Assistant Engineer (Electronic)

Taiwan – *Bureau of Statistics*

- Dr Chen Chang-Shang, Director

Organisation for Economic Co-operation and Development (OECD)

- Mr Peter Scherer, Head (Social Policy Division)

DOS in Top 100 of 2002 CIO 100 Honourees List

CIO 100 Honourees – “The definitive list of companies that achieved their 2001 goals by creating breakthroughs in product development, relationship building and process management with IT.”

The Singapore Department of Statistics (DOS) is among the top 100 companies honoured by CIO magazine of the International Data Group (IDG) Communication. The CIO 100 honourees list is an annual event covering the top 100 organisations in ASEAN and Hong Kong that adopted the best innovative IT strategies to achieve their business objectives. The selection of companies is made by a top panel of judges comprising academics,

analysts and IT consultants. From the 100 honourees, 5 are given the CIO awards.

DOS was nominated for the year 2002 award in recognition of its achievements in building the IT workflow system for the recent Census of Population 2000. Being part of the CIO 100 list affirmed DOS's efficient and effective use of innovative IT solutions to address the challenges in the operational environment and achieve organisational success.

Creating Value for Singapore

The adoption of IT advances and new measures in census-taking have added value in three important ways:

- 1 Through the Census 2000 experience, the Singapore Department of Statistics contributes actively to the development of international statistical best practices.
 - Singapore's new approach combined a register-based census on basic particulars with a 20 per cent survey for detailed information.
 - The Internet, with direct access to a backend database, was used for the first time in Singapore's Census enumeration.
 - Data collection and processing systems which were based on the latest technology improved data timeliness.
- 2 Recognising respondents' concerns over data privacy and survey burden, the Department uses innovative mechanisms to provide flexibility and convenience in data submissions.
 - The integrated tri-modal data collection approach (Internet, CATI and Fieldwork) allowed respondents a choice of different modes for submitting Census information.
 - Respondents received minimal call-backs for clarifications, through the implementation of front-end data quality checks and integrated data processing modules.
- 3 The Department optimises the use of scarce manpower resources and achieves significant productivity gains.
 - The total costs was reduced from an estimated \$70 million for a traditional approach to \$22 million for Census 2000.
 - Manpower requirement was cut from an estimated 6,000 to about 600.

Singapore is the first country in the world to adopt a fully integrated tri-modal data collection system for the Census of Population 2000. This consists of internet, telephone and field enumeration using a database at the backend.

Responses from Internet and the Computer Assisted Telephone Interviewing (CATI) system were tracked by the Census Management System (CMS). Incomplete cases were channelled to a Fieldwork system for personal interviews.

Data collected through the tri-modal data collection system were directed to data processing modules to ensure data integrity and consistency. The seamless integration of applications was possible only with the CMS as the backbone of the entire set-up.

Singapore's approach for the Census has generated keen interest in other countries. The Singapore Department of Statistics has been receiving visitors from national statistical offices for discussion on the Census modus operandi.

SAN at Singapore Department of Statistics

To manage a national statistical information system of quality and integrity, DOS collects, processes and maintains a progressive nerve centre of leading indicators and comprehensive economic, business, demographic and social statistics using state-of-the-art technology. In managing the exponential information growth at DOS, there is a radical and long-term plan to establish a robust and expandable storage architecture to support a wide range of application systems and specific-purpose statistical projects.

Storage Area Network (SAN) provides a high-speed, high-bandwidth storage network that logically connects storage to servers, so that enterprise information can be accessed from the consolidated storage platform at any time. Its scalability for increased storage of data and systems can be managed independently and effectively without having the need to change or upgrade the servers. By exploiting SAN, DOS is able to obtain high performance in storage I/O processes that are required for intensive applications' and databases' processing.

The SAN infrastructure has been assessed to be best suited for DOS in terms of the scalability, more

efficient storage utilization and management, easier data sharing, fault tolerant and redundancy features leading to reduced disk failure and long-term cost-effectiveness. DOS uses the HP SAN XP512 storage system with 2 Terabytes raw capacity, scalable up to 37 Terabytes raw capacity. SAN lays the foundation for the delivery of DOS' strategic rightsizing of mainframe applications' project. It also supports the future upgrade and consolidation of other statistical systems on the Unix and NT platforms to provide greater reliability for DOS' business critical applications.

DOS is one of the few early adopters of SAN. The DOS' SAN which will be fully implemented by May 2002, would be one of the large SAN infrastructures among the government agencies. The set-up is at the Government Data Centre where DOS' new client/server platform rides on the HP Unix, SUN Solaris and Windows 2000 operating systems. At the same time, DOS is able to fully utilize the SAN to share its centralized backup resources for its various applications needs, increase and optimize the SAN resources to support new demands, disaster recovery and clustering needs in the future.

SingStat@Your Service

The Singapore Department of Statistics offers a number of personalised statistical services to the public and private sectors on cost-recovery basis.

Statistical Information Service

Our staff attend to statistical queries via telephone, fax or email.

- Call us at 1800-3238118 (local callers)
65-6-3327738 (overseas callers)
- Email us at info@singstat.gov.sg
- Fax to us at 6-3327689 (local)
65-6-3327689 (overseas)
- Mail to us at
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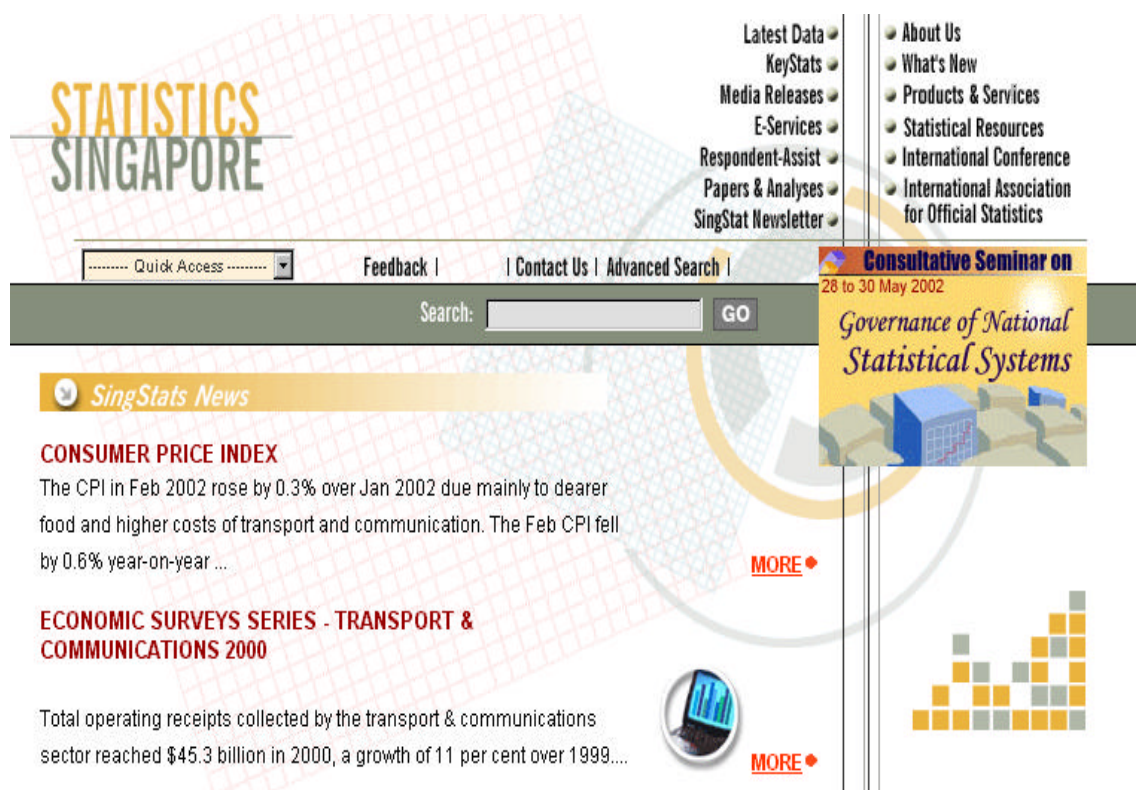
Sampling Service for Establishments

Our Department undertakes sample selection of establishments from our Commercial Establishment Information System. This establishment register has some 300,000 records of live establishments in Singapore and serves as a sampling frame. The sample listing includes name of establishment, address and industry code.

Sampling Service for Dwellings

We provide professional advice on household sample design and selection. Our National Database on Dwellings, which contains all residential addresses in Singapore, comprises a comprehensive sampling frame on dwellings. The sample listing includes address and type of dwelling.

Revamped Website Launched



The Singapore Department of Statistics has unveiled an enhanced home page with refreshing design, navigation-friendly features and enriched contents.

The Statistics Singapore Home Page was first launched in 1995. The number of hits then was less than 30,000 per month. Today, the Home Page has a monthly average of 20,000 visitors and the number of monthly hits has reached more than half a million. With the revamp of the Home Page, use of the Singstat web services is expected to rise even higher.

Enriched Web Content

The Department aims to deliver a high level of public service by disseminating more key statistics and improving data timeliness through the Home Page. The Home Page provides a wide range of statistical

indicators on the Singapore economy, business performance, population trends and household characteristics without charge.

The Department's key statistical publications are now available through the SingStat DataShop@GovMall in the Home Page. They include Census of Population 2000 Statistical Releases, Household Expenditure Survey Report, Economic Surveys Series, reports on Singapore investment abroad and foreign investment in Singapore, and Occasional/Information Papers on economic and social topics.

Data timeliness of the latest statistical releases is improved by one to three weeks. The Datashop

now serves as the channel for the first release of softcopies of the Department's publications, before the hardcopies are printed.

The Home Page has adopted a "portal" approach for key official statistics. The Home Page provides a gateway for quick and convenient access to the Singapore statistics posted by Research and Statistics Units on the Internet. In addition, links to international and national statistical offices make available a network of global statistical resources to data users in Singapore.

User-Friendly Features

The wealth of statistical information in the Home Page has been re-structured to provide improved

accessibility. Themes have been introduced. "Breadcrumbs" and "Quick Access" are introduced for easy navigation between related topics and webpages. For most information, users need at most 3 clicks to reach the required webpage.

Access to the Home Page contents has been further enhanced with the inclusion of quick and advanced search facilities. Users could search by key word or phrase or word variation on the whole web site or selected sections of interest.

For the convenience of subscribers to the Department's TREND (Time Series Retrieval and Dissemination) System, information on user services are now available in the Home Page. Data users who are interested to subscribe to TREND could also apply online.

2001 in Brief

Singapore's population

... reached a total size of 4.13 million in June 2001.

Average life expectancy at birth

... was 76 years for males and 80 years for females.

Literacy rate

... was 96.8 per cent among males and 89.7 per cent among females.

Average years of schooling

... was 11.6 years for youths aged 15–29 years.

Labour force participation rate

... was 77.8 per cent among males and 54.3 per cent among females.

Per capita GNP

... was S\$37,433.

Official foreign reserves

... increased to S\$140 billion.

Mobile phone subscribers

... reached 692 per 1,000 population.

Internet dial-up subscribers

... was 578 per 1,000 population.

Crime rate

... dropped to 693 per 100,000 population.

Change in 2001 (Year-on-Year)

Unit Labour Cost Index

... was higher by 7.3 per cent.

Consumer Price Index

... rose by 1.0 per cent.

Domestic Supply Price Index

... fell by 1.6 per cent.

Retail Sales Index

... was higher by 3.6 per cent.

Catering Trade Index

... fell by 1.5 per cent.

Domestic Wholesale Trade Index

... was 11.5 per cent lower.

Foreign Wholesale Trade Index

... fell by 11.6 per cent.

Business Receipts Index

... rose by 2.4 per cent.

Industrial Production Index

... fell by 11.5 per cent.

Overseas Travel by Singapore Residents

by
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Introduction

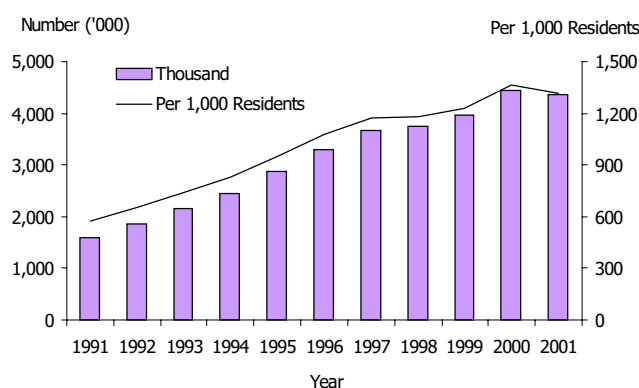
With globalization and greater affluence, more Singapore residents travel overseas for business or leisure. There is also a large number who make multiple trips abroad. The ease of air travel and Singapore's excellent facilities as a transportation hub have facilitated travel overseas.

This paper provides an overview of travel trends among Singapore residents during the last decade and a more detailed analysis of overseas travel in 2000. Data on outbound departures of Singapore residents during 1991–2001 are obtained from administrative records. Socio-economic characteristics of Singapore residents who traveled in 2000 are obtained from Singapore's Census of Population 2000.

Travel Trends

Overseas travel has become more prevalent among the Singapore resident population. In 2001, Singapore residents made a total of 4.4 million trips overseas by air and sea, up from 1.6 million trips in 1991 (Chart 1). This represented an annual growth rate of 11 per cent during the decade, which was much higher than the population growth rate of 2 per cent. Thus, the propensity to travel overseas has increased. The number of outbound departures rose from 575 per thousand residents in 1991 to 1,315 in 2001.

CHART 1 OUTBOUND DEPARTURES OF SINGAPORE RESIDENTS BY AIR AND SEA



Overseas Travel in 2000

Overseas trips in Census 2000 refer to those that lasted longer than two days and were made during the last twelve months prior to enumeration.

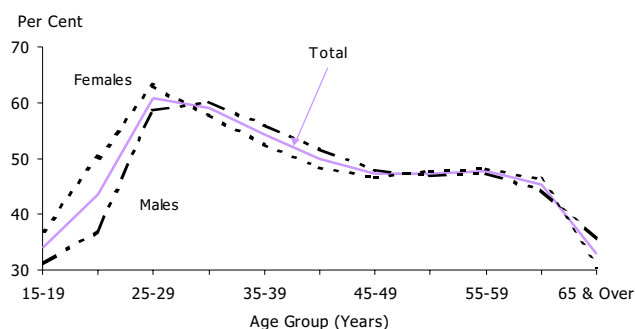
High Proportion who Traveled Overseas

About half of the adult resident population traveled to Malaysia or other countries for more than two days in the last twelve months. Among the 2.5 million residents aged 15 years and over, 48 per cent made at least 1 trip overseas.

Young adults in their late twenties and early thirties had the highest propensity to travel overseas

(Chart 2). The proportion that traveled overseas declined with increasing age. There was a sharp drop in the proportion at age 60–64 years. As older persons entered into retirement, work-related travel would be curtailed and there could possibly be health and financial constraints as well.

CHART 2 PROPORTION WHICH TRAVELED OVERSEAS BY AGE GROUP AND SEX, 2000



Proportionately more young females traveled overseas than their male counterparts. This could be because males serve National Service at

age 18–21 years and pursue higher education in their early twenties. Among both males and females, relatively few of the youths aged 15–19 years traveled overseas, possibly because of study priorities and limited budgets.

Working persons had the highest propensity to travel overseas while retirees and students have the least (Table 1). Among the working residents, managers and professionals had the highest proportion making at least 1 trip overseas.

High Proportion of Multiple Trippers

Given Malaysia's close proximity and the close family and business ties with Singapore, multiple trips are often made by Singapore residents who travel to Malaysia. Among the total of 372,000 Singapore residents aged 15 years and over who traveled to Malaysia only in 2000, almost half (48 per cent) made two or more trips there (Table 2). For those who traveled to other countries only, only one third made multiple trips overseas.

TABLE 1 SELECTED CHARACTERISTICS OF SINGAPORE RESIDENTS AGED 15 YEARS AND OVER, 2000

	Number ('000)	Proportion who Traveled Overseas in Last 12 Months
TOTAL	2,494.6	48.3
Males	1,229.8	48.1
Females	1,264.9	48.5
Economic Status		
Working	1,482.6	54.3
Homemakers	361.6	44.7
Retired	247.8	36.2
Students	217.2	37.3
Occupational Distribution		
Managerial & Professional	362.1	75.0
Technical	283.4	63.1
Clerical	213.6	50.8
Sales & Services	183.0	43.1
Others	440.6	38.0

TABLE 2 BROAD DESTINATION OF OVERSEAS TRIPS, 2000

Number of Trips	Total	Malaysia Only	Other Countries Only	Malaysia & Other Countries
No. with At Least 1 Trip ('000)	1,206.0	371.5	516.4	318.1
Per Cent*	100.0	100.0	100.0	100.0
1	44.7	51.6	67.3	–
2 – 3	31.1	30.6	23.6	43.8
4 – 5	10.3	8.8	4.3	21.7
6 or More	13.0	8.5	4.3	32.4

* Includes a small proportion who did not specify the number of overseas trips.

Multiple trips were relatively more common for males than females (Chart 3). Some 57 per cent of resident males had made 2 or more trips overseas, compared with 52 per cent of the resident females.

Frequency of Overseas Travel

Among Singapore residents who traveled overseas, an average of 3.4 trips was made in 2000. Males in the prime working ages of 30–49 years were the most well-traveled, with an average of 5 trips during the 12-month reference period (Chart 4). Among

single and married females, there was no significant difference in the average number of overseas trips for most ages.

Differentials by Economic Status

Working persons traveled more frequently than non-working persons. In 2000, they had the highest average of 3.8 trips in a year, some of which could be work-related (Table 3). Students made the least number of trips overseas and a relatively large proportion traveled only to Malaysia.

CHART 3 NUMBER OF OVERSEAS TRIPS BY SEX, 2000

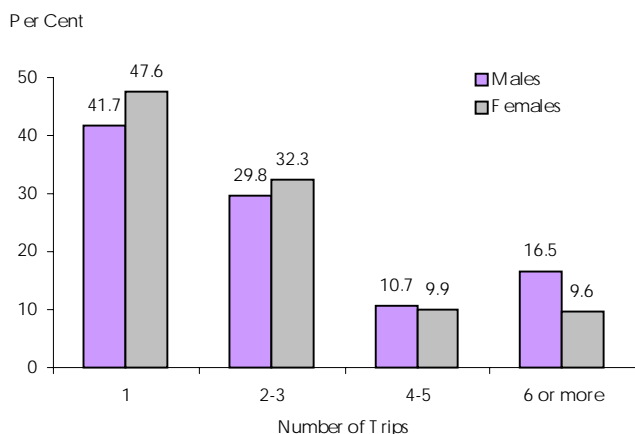


CHART 4 AVERAGE NUMBER OF TRIPS BY MALE AND FEMALE TRAVELERS, 2000

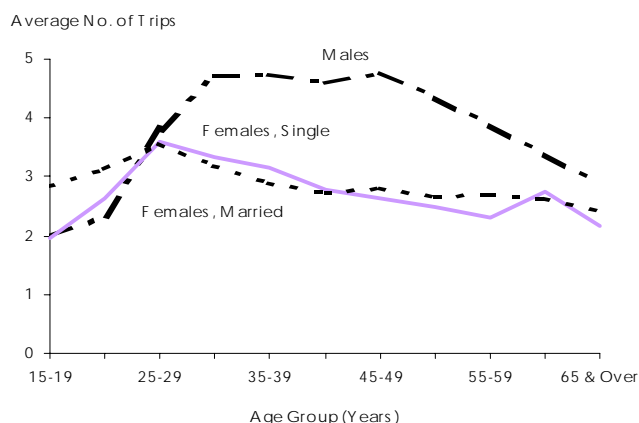


TABLE 3 ECONOMIC STATUS OF OVERSEAS TRAVELERS AGED 15 YEARS AND OVER, 2000

	Total	Working	Homemaker	Retired	Student
No. with At Least 1 Trip ('000)	1,206.0	805.3	161.7	89.7	81.0
Per Cent*	100.0	100.0	100.0	100.0	100.0
1	44.7	41.5	49.4	48.5	60.8
2 – 3	31.1	31.2	31.6	31.4	28.7
4 – 5	10.3	11.0	9.6	9.7	6.2
6 or More	13.0	15.3	8.9	9.9	4.2
Average No. of Trips	3.4	3.8	2.7	2.8	2.0
% Who Traveled to Malaysia Only	30.8	28.2	39.6	29.4	38.9

* Includes a small proportion who did not specify the number of overseas trips.
 Note : Average number of trips is computed based on persons with at least 1 trip.

Occupational Differentials

Among the working population who traveled overseas, those in managerial and professional occupations made an average of 5.2 trips in a year (Table 4). In contrast, working persons in clerical positions had the lowest average of 2.7 trips.

Income Differentials

Table 5 shows that the number of overseas trips made in a year is positively correlated with household income. Among residents with household income of \$6,000 and over, an average of 4.2 trips was made. Those with household

income of less than \$6,000 had a lower average of 3 trips and a large proportion traveled to Malaysia only.

Concluding Remarks

Travelling for business or leisure is increasingly common among Singapore residents. Multiple trips have also become more common. With higher disposable income and work-related trips, people are enjoying greater opportunity to travel. Overseas travel by Singapore residents is expected to rise in future with increasing globalization, as the number of business trips will increase.

TABLE 4 OCCUPATIONAL DISTRIBUTION OF OVERSEAS TRAVELERS WHO WERE WORKING, 2000

	Total	Managerial & Professional	Technical	Clerical	Sales & Services	Others
No. with At Least 1 Trip ('000)	805.3	271.5	178.9	108.4	78.9	167.5
Per Cent*	100.0	100.0	100.0	100.0	100.0	100.0
1	41.5	28.8	41.1	49.9	50.3	52.7
2 – 3	31.2	31.3	33.7	31.9	27.3	29.6
4 – 5	11.0	14.1	11.3	9.3	7.5	8.4
6 or More	15.3	24.6	13.0	8.6	11.3	8.7
Average No. of Trips	3.8	5.2	3.5	2.7	4.0	2.8
% Who Traveled to Malaysia Only	28.2	16.7	27.4	35.0	34.5	40.3

* Includes a small proportion who did not specify the number of overseas trips.

Note : Average number of trips is computed based on persons with at least 1 trip.

TABLE 5 HOUSEHOLD INCOME OF OVERSEAS TRAVELERS, 2000

	Total	Below \$2,000	\$2,000–\$3,999	\$4,000–\$5,999	\$6,000 & Over
No. with At Least 1 Trip ('000)	1,206.0	167.6	279.7	250.9	507.9
Per Cent*	100.0	100.0	100.0	100.0	100.0
1	44.7	53.2	51.9	47.6	36.5
2 – 3	31.1	28.7	29.6	31.2	32.6
4 – 5	10.3	8.4	8.6	9.8	12.1
6 or More	13.0	9.1	9.2	10.7	17.6
Average No. of Trips	3.4	2.7	2.8	3.1	4.2
% Who Traveled to Malaysia Only	30.8	38.9	40.7	33.1	21.5

* Includes a small proportion who did not specify the number of overseas trips.

Note : Average number of trips is computed based on persons with at least 1 trip.

Food Prices Today

This last series of "Food Prices Today" presents the price trends of selected varieties of fresh vegetables over the last four decades. Prices of leafy, fruit and root vegetables increased significantly between 1970 and 1980, and moderately between 1990 and 2000 (Table 1). Over the forty-year period (1961–2000), leafy vegetables experienced the most substantial price increase compared with fruit and root vegetables. In particular, prices of spinach surged by 5 times, from 33 cents a kilogram in 1961 to \$2.11 in 2000. Other selected varieties of leafy vegetables also registered price increases of 3–4 folds in 2000 compared to 40 years ago.

Among the fruit vegetables, price of long beans which was \$2.74 per kilogram in 2000 was more than 5 times the price of 50 cents per kilogram in 1961. Similarly, prices of cucumbers, red chillies

and tomatoes were about 1.5 to 2.5 times higher in 2000 than in 1961.

As for root vegetables, prices of potatoes and large onions tripled between 1961 and 2000. Selling at just 38 cents and 43 cents per kilogram respectively in 1961, their prices stood at a high \$1.18 and \$1.20 per kilogram in 2000. During the past 2 decades, carrots and garlics had become cheaper. While one kilogram of carrots and garlics were priced at \$2.03 and \$3.90 respectively in 1980, they were available for \$1.97 and \$2.75 per kilogram in 2000.

The average household income from work rose by 156 per cent in 1990 over 1980 and by 61 per cent in 2000 over 1990 (Table 2). These increases are much higher than the corresponding increases of 18 per cent and 16 per cent respectively recorded in the general food prices.

TABLE 1 AVERAGE RETAIL PRICES OF SELECTED TYPES OF VEGETABLES

	Dollar				
	1961	1970	1980	1990	2000
Leafy Vegetables, Fresh					
Cabbage, 1 kg	0.48	0.60	1.29	1.64	1.71
Spinach, 1 kg	0.33	0.38	1.07	1.82	2.11
Small Mustard, 1 kg	0.46	0.55	1.77	2.21	2.26
Kale, 1 kg	na	na	2.76	3.41	3.12
Bean Sprouts, 1 kg	0.26	0.30	0.91	0.99	1.04
Fruit Vegetables, Fresh					
Cucumbers, 1 kg	0.41	0.43	0.78	1.00	1.07
Red Chillies, 1 kg	1.50	1.59	3.57	4.71	4.90
Tomatoes, 1 kg	0.73	0.83	1.88	2.21	2.56
Long Beans, 1 kg	0.50	0.56	1.32	2.01	2.74
Root Vegetables, Fresh					
Carrots, 1 kg	na	na	2.03	2.03	1.97
Garlic, 1 kg	na	na	3.90	3.39	2.75
Large Onions, 1 kg	0.43	0.55	1.31	1.03	1.20
Potatoes, 1 kg	0.38	0.53	1.03	1.09	1.18

TABLE 2 PERCENTAGE CHANGE IN AVERAGE RETAIL PRICES OF SELECTED FOOD ITEMS AND AVERAGE HOUSEHOLD INCOME FROM WORK

	Per Cent	
	1990/1980	2000/1990
General Food Prices	18.0	16.4
Leafy Vegetables, Fresh		
Cabbage, 1 kg	27.1	4.3
Spinach, 1 kg	70.1	15.9
Small Mustard, 1 kg	24.9	2.3
Kale, 1 kg	23.6	-8.5
Bean Sprouts, 1 kg	8.8	5.1
Fruit Vegetables, Fresh		
Cucumbers, 1 kg	28.2	7.0
Red Chillies, 1 kg	31.9	4.0
Tomatoes, 1 kg	17.6	15.8
Long Beans, 1 kg	52.3	36.3
Root Vegetables, Fresh		
Carrots, 1kg	-	-3.0
Garlic, 1 kg	-13.1	-18.9
Large Onions, 1 kg	-21.4	16.5
Potatoes, 1 kg	5.8	8.3
Average Household Income from Work	156.3	60.7

Formation and Cessation of Companies and Businesses, 2001

Companies

The economic slowdown of 2001 saw a sharp dip in the number of new companies formed. Company formation decreased by 23 per cent, from 11,032 in 2000 to 8,511 in 2001. All the major industries experienced declines in company formation, with the largest drop in transport and communications sector. It shrank by 49 per cent in 2001 after achieving a record growth of 122 per cent in the previous year. Web hosting services, software consultancy and IT development were among those with fewer new comers.

During the same period, company cessation increased by 5.5 per cent. Company closures rose to 5,593 in 2001, up from 5,303 in 2000. Among the industries, financial and business services, and transport and communications sectors registered the largest cessation increases of 15 and 11 per cent respectively.

Businesses

The impact of the slowdown was lesser on business formation. In 2001, a total of 24,691 new businesses was formed. This was a decrease of 2.9 per cent compared to 25,425 new businesses formed in 2000. All the key industries posted decreases in new businesses except commerce sector. Sectors that registered declines in business formation included construction (mainly renovation contractors and electrical works), transport and communications (chartered buses and moving services) and manufacturing (mainly furniture, plastic products and machinery and equipment). Conversely, there were more new businesses providing technical and commercial education.

Despite the downturn in economy, business cessations were down across all major industries. The total number of business closures in 2001 was 22,521, representing a contraction of 7.0 per cent compared to 2000.

TABLE 1 FORMATION AND CESSATION OF COMPANIES BY INDUSTRY, 2000 AND 2001

Industry	Number		% Change
	2000	2001	
Formation			
All Industries	11,032	8,511	-22.9
Manufacturing	821	748	-8.9
Construction	667	547	-18.0
Commerce	3,027	2,717	-10.2
Transport & Communications	1,096	559	-49.0
Financial & Business Services	4,707	3,122	-33.7
Others	714	818	14.6
Cessation			
All Industries	5,303	5,593	5.5
Manufacturing	518	516	0.4
Construction	349	349	0.0
Commerce	2,260	2,262	0.1
Transport & Communications	397	439	10.6
Financial & Business Services	1,605	1,841	14.7
Others	174	186	6.9

TABLE 2 FORMATION AND CESSATION OF BUSINESSES BY INDUSTRY, 2000 AND 2001

Industry	Number		% Change
	2000	2001	
Formation			
All Industries	25,425	24,691	-2.9
Manufacturing	1,991	1,758	-11.7
Construction	2,847	2,283	-19.8
Commerce	9,753	10,069	3.2
Transport & Communications	1,683	1,385	-17.7
Financial & Business Services	6,287	5,863	-6.7
Others	2,864	3,333	16.4
Cessation			
All Industries	24,208	22,521	-7.0
Manufacturing	1,768	1,652	-6.6
Construction	3,228	3,047	-5.6
Commerce	10,293	9,126	-11.3
Transport & Communications	1,329	1,318	-0.8
Financial & Business Services	5,031	4,982	-1.0
Others	2,559	2,396	-6.4

Singapore Department of Statistics

New Corporate Logo



The logo brings out the professional image of the Department as a modern and progressive organisation.

The use of a neat and straight font type portrays the Department as a knowledge centre built on solid fundamentals of the

statistical system.

The Department is committed to develop and manage a national statistical information system of quality and integrity to support Singapore's social and economic development.

Add Prefix '6' to Telephone and Fax Numbers

From 1 March 2002, the digit "6" is prefixed to all existing fixed-line telephone and fax numbers in Singapore. The new main telephone and fax numbers of Singapore Department of Statistics are :

	Local User	Overseas User
Tel Number	6-332 7686	65-6-332 7686
Fax Number	6-332 7689	65-6-332 7689
Statistical Enquiries	1800-323 8118	65-6-332 7738

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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