
Organisation and Administration

4 ORGANISATION AND ADMINISTRATION

Given the large scale operations of the Census 2010, a big pool of staff were involved in a wide range of activities from the planning and conduct of the survey to the dissemination of the results. Preparation prior to the launch of the survey and support activities during the survey implementation were just as critical as the data collection and data processing activities in contributing to the successful completion of the Census 2010.

4.1 OFFICE SET-UP AND SELECTION OF REGIONAL OFFICES

Looking for suitable locations to accommodate the various functions and equipping the staff with the necessary set-up were important tasks as part of the planning for the Census 2010. The Department of Statistics (DOS) started the identification and organisation of the offices required for the Census from mid-2008.

Census Headquarters (HQ)

The Census 2010 HQ served as the main office to co-ordinate the Census functions and activities. Besides providing the logistics and administrative support for the Census, the HQ also accommodated the Data Processing team which included a large number of daily-rated staff who worked in shifts.

After careful evaluation and consideration, DOS's office premises at The Treasury was selected to be the Census HQ. The office was strategically located within walking distance from MRT stations and bus stops. Easy access of public transport provided convenience to respondents who might visit the Census HQ and staff who worked in shifts. Locating the Census HQ within DOS's office also enabled Census staff taking on departmental duties on top of their involvement in the Census 2010 to better manage their concurrent responsibilities.

A total of 110 telephone sets and 103 leased personal computers were also setup to cater to the operational needs of the Administration and Data Processing teams at the Census HQ.

Call Centre for Computer-Assisted Telephone Interviewing (CATI) Operations

The Census 2010 call centre operated from the SingTel Call Centre (STCC) located at Serangoon North. The call centre accommodated the CATI operations which included the management of the respondent relations and provision of support for respondents using the Internet submission mode. As the personal computers and workstations needed to be connected to the call equipment and automatic outbound dialling system, the location was provided by the vendor engaged for the development of the IT solution for the Census 2010. Set-up was done through the Census 2010 IT vendor with STCC housing about 100 CATI staff, including supervisors, interviewers and IT support personnel, during each shift.

Regional Offices (ROs) for Field Operations

The main sample for Census 2010 was grouped into 5 geographical regions, namely: North, North-East, Central, West and East. Ten ROs were established across Singapore to facilitate the fieldwork operations and support.

ROs served as centres for the Field teams to hold discussions, meetings and trainings for interviewers, and to synchronise data collected in Ultra-Mobile Personal Computers (UMPCs) to the backend collection database. With ROs in close proximity to where the selected sample was covered, the travelling time and effort for interviewers were reduced. More time could then be spent on household visits.

The following factors were considered in the sourcing of ROs:

- a) Timing and duration for which the premises were available for use should meet the needs of the Census project.
- b) The identified office should be available for exclusive usage for the Census throughout the fieldwork operations to ensure data confidentiality and security.
- c) Location should be near MRT station(s) and/or bus stop(s) for easy access by the field interviewers.
- d) Location should also be reasonably centralised vis-à-vis the geographical area covered by the fieldwork sub-divisions.
- e) The office should be able to accommodate up to 20 persons as well as the basic office set-up. For the purpose of Census 2010, each RO needed to be equipped with tables, chairs, cabinet, network printer, Asymmetric Digital Subscriber Line (ADSL) modem and telephone.
- f) Cost of rental should be reasonable.

Community Clubs under the People's Association were considered following positive experiences from previous Censuses and other surveys where they served the purpose of the ROs well. Rooms were rented from the following Community Clubs from April to August 2010:

North	- Marsiling Community Centre
	- Teck Ghee Community Centre
North-East	- Jalan Besar Community Club
	- Paya Lebar Kovan Community Club @ Paya Lebar CO
East	- Tampines North Community Club
	- Kampong Ubi Community Club

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|---------|--------------------------------|
| West | - Jurong Spring Community Club |
| | - Yew Tee Community Club |
| Central | - Kreta Ayer Community Club |
| | - Queenstown Community Centre |

4.2 CENSUS BUDGET

The total project cost expended for the planning and conduct of the Census 2010 was \$18.0 million.

Expenditure on IT development and related items amounted to an estimated \$5.3 million. This included the development of the computer applications for the Internet, CATI and Fieldwork, provision of the UMPCs and set-up of the IT infrastructure.

Operating expenditure amounted to about \$12.7 million, including manpower cost, costs incurred for the set-up of the Census HQ, leasing of the call centre facilities, hosting services for the IT infrastructure, rental of the ROs, publicity, printing, office supplies and other IT operating services.

4.3 IT PROCUREMENT AND MANAGEMENT OF CENSUS IT SYSTEM

In developing and implementing the IT solution for the Census 2010 system, an open IT tender was called in August 2008. The tender was awarded to NCS Pte. Ltd. in January 2009.

Detailed requirement studies were conducted for the vendor to understand the various functions required of the system applications and setup. DOS officers undertook intensive usability tests to verify the system performance before it was finally commissioned for use in the actual Census.

4.4 EQUIPMENT AND SUPPLIES

Acquisition of office equipment and supplies began in 2009. Officers from the Census Administration and Logistics Teams worked closely together to ensure the timely procurement and delivery of items required for the Census 2010 project. The following items and services, among others including stationery, paper, envelopes and document bags, were acquired for the Census operations to meet the operational needs:

- | | |
|--|---|
| i) 220 UMPCs for use in the field operations | - To allow for direct capture of data in electronic format in the field and up-to-date data to be synchronised for follow-up. |
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- | | | | |
|------|--|---|--|
| ii) | Electronic street directory installed in each UMPC | - | To facilitate interviewers in making field visits and reduce additional preparation work for field supervisors to print extracts of maps. |
| iii) | 29 mobile phone sets | - | To meet the telecommunication needs of senior Census officers and field supervisors who were working away from the Census HQ or needed to be contactable after office hours for the Census operations. |
| iv) | Shuttle Bus Services for night shift CATI interviewers from the call centre to designated MRT stations | - | As the call centre was not located near any MRT station and the night shift ended only at 10.45pm, shuttle bus services were provided for staff working in the night shift to designated MRT stations. |

While planning for the provision of the computer equipment, e.g. computing devices and printers, consideration was given to their relative costs, life span and possible deployment after the Census 2010 operations to evaluate if items should be acquired via “purchase” or “lease” options. Personal computers for the data processing staff were leased as there was no immediate need for the large number of personal computers after the Census. UMPCs were purchased in view of the possibility for re-deployment in an upcoming survey.

4.5 CENSUS STAFF

Planning and conduct of the Census 2010 was carried out by DOS officers. These officers undertook key leadership roles in areas such as planning of the survey, development and testing of the system, recruitment and training, finance and payroll and supervision of the operations.

The Census team was led by the Chief Statistician, together with the Census Director and Advisor. In addition, 8 Deputy Census Directors (DCDs) oversaw key areas including pre-Census preparation and database setup, data collection, data processing, data analysis and dissemination, publicity, logistics support and administration. Another 24 Assistant Census Directors (ACDs) and 56 supervisors were appointed to run and supervise the Census 2010 operational activities.

Recruitment of Daily-Rated Staff

Besides the planning and supervisory staff, some 400 daily-rated staff supported the day-to-day operations. To meet the manpower requirements for the Census administration, data collection and data processing, two key strategies were adopted for the recruitment. Administrative staff, call centre interviewers and data

processing staff were contracted through an open tender for the provision of manpower services from employment agencies. The manpower contract ensured the supply of a constant pool of staff in anticipation of potential high turnover.

Field interviewers were recruited by DOS through direct recruitment. This was to enable prompt adjustments to the headcounts required considering that case load for the field operations could vary according to the level of responses via the other collection modes. Recruitment advertisements were published in the newspaper with six advertisements being put up between March and June 2010. Besides these, online job portals of the local polytechnics and universities were used to reach out to students on vacation. Recruitment was also done through DOS's official website as well as the Workforce Development Agency (WDA)'s job portal.

Staff Strength

A summary of the total staff strength is as follows:

<u>Permanent/Contract Officers</u>	<u>Number</u>		
Chief Statistician	1		
Advisor	1		
Census Director	1		
Deputy Census Directors	8		
Assistant Census Directors	24		
Census Supervisors	56		
Corporate Support Officers	7		
<u>Daily-Rated Staff *</u>	<u>Total</u>	<u>Full-Time</u>	<u>Part-Time</u>
Administrative Staff	5	5	-
Call Centre Interviewers	145	145	-
Field Interviewers	140	140	-
Data Processing Staff	101	67	34

** This refers to the maximum number employed during the Census survey operations.*

The overall manpower utilised for the Census 2010 was about 500. In tandem with an increasing proportion of households submitting their Census returns via the Internet, the number of households to follow up on at the field collection stage was reduced compared to Census 2000. This reduced the number of field interviewers from an average of 300 in 2000 to some 140 in 2010. With the use of UMPCs in data collection, the additional step for data entry, or scanning of the hardcopy forms as used in Census 2000, was eliminated. The number of data processing staff employed reduced correspondingly from 209 to 101.

Shift Arrangement

The operating hours of the Census operations were reviewed to meet the needs of respondents and to reach out to households who were usually not at home during the normal office hours. The Census 2010 call centre/hotline operated from 9am to 10.30pm daily, including Saturdays, Sundays and Public Holidays. Census supervisors, including the DCD and ACDs, assigned to oversee the call centre worked on rotating shifts to cover the long operation hours and the 7-day work week. CATI interviewers were recruited to work on two different shifts, with the day shift starting from 8.45am to 4pm and the night shift starting from 3.30pm to 10.45pm.

The Data Processing team also adopted a night shift arrangement so as to reach households for verification of data that were provided. The shifts for the Data Processing team operated from 8.30am to 6pm and from 6.45pm to 10.15pm on Mondays to Fridays, excluding Public Holidays. Part-timers were engaged to take on the night shift while supervisors rotated to work at night.

Administration and Payroll Module

To manage the recruitment and interview process, staff placement and movement, attendance and payroll calculations for the temporary staff recruited for the Census 2010 operations, an Administration and Payroll Module (APM) was designed within the Census 2010 IT system. The computerised system reduced some of the manual efforts handled by the Census Administration team. The APM also systematically captured the temporary staff movement record and attendance, thereby enhancing the co-ordination processes between the CATI, Fieldwork, Data Processing and Administration teams.

4.6 TRAINING

Training of the staff at various levels was essential to ensure the quality of the data collected and processed. Training was also a key factor in ensuring that the services delivered by the Census staff to respondents meet the service standards of the Department. Training manuals were developed based on past Censuses and General Household Surveys experiences and modified to the latest Census 2010 requirements.

4.6.1 Training of CATI Staff

Training for CATI supervisors was conducted in three phases over five days. Supervisors were trained in their roles and responsibilities in the supervision of the call centre as well as the Census coverage, questions and concepts. Functions of the IT system, CATI facilities and administrative features to support respondents in electronic submission were also covered to familiarise the supervisors with the application. In addition, supervisors underwent training on telephone etiquette as part of the preparation to handle calls from the public.

Additional training on Singapore Standard Industrial Classification (SSIC) and Singapore Standard Occupational Classification (SSOC) were also provided to equip the supervisors with working knowledge in these aspects. Further to the formal training, supervisors were also involved in providing support to the Field team for the conduct of the Survey of Large Households (SLHH) to gain first-hand experience in handling the hotline operation.

A three-day training session was conducted for the CATI interviewers. A briefing on the overview of Census 2010, concepts and definitions, a walk-through of the different question flows, telephone techniques and protocols for handling different situations was provided. Hands-on sessions for practices on the enumeration process were also carried out.

Daily briefings and debriefs were conducted before and after each shift to constantly reinforce the important key points and to provide updates on processes. For new CATI interviewers, they were first attached to the experienced interviewers to learn on-the-job before attending to calls on their own.

4.6.2 Training of Field Staff

Similar to the CATI training, training of the field staff, including supervisors and field interviewers was also conducted.

Training of the supervisors on the fieldwork enumeration and management system started in September 2009. Supervisors assisted in developing and testing the IT system. Briefings and training were provided prior to the Census Trial Run and the SLHH which they were involved in.

The ACDs and field supervisors were given 7 days of formal training to ensure in-depth understanding of their responsibilities in the fieldwork operations, supervisory skills required for the management of field interviewers, overview of the Census and the relevant questions, concepts and classifications. Additional training on the IT systems, including the APM, Fieldwork Management (FWM) and use of the UMPC, were provided by the IT vendor.

Field interviewers underwent a three-day training programme. Comprehensive training on concepts and definitions was included as it was of paramount importance for the interviewers who were working independently during the face-to-face visits to understand the concepts well. Apart from being trained on the care and usage of UMPC for enumeration, the fieldworkers also underwent hands-on sessions using practice scenarios. Field interviewers were paired up to role-play on the enumeration procedures as part of the training. Fieldwork operations, including protocols for field visits and techniques of interviewing, were emphasised. Field interviewers also visited the ROs they were assigned to and were briefed by their respective supervisors on other administrative matters.

4.6.3 Training of Data Processing Staff

Training of the data processing staff was also conducted separately for the supervisors and staff.

Training for data processing supervisors was completed in a day as all the supervisors were involved in both the development and testing of the data processing system and were familiar with the Census concepts through their preparation of the training manuals. The 1-day training was to reiterate the functions of the data processing system and their supervisory roles.

Data processing supervisors must have adequate knowledge on SSIC and SSOC in order to assign the correct code to the data collected. The supervisors were involved in conducting training for the CATI and field supervisors using the data collected during Census 2010 Trial Run. The preparation for the training provided a learning opportunity for the supervisors to discuss and clarify the common misconceptions and errors in coding.

Training was provided to ensure that the data processing staff were able to handle the coding, verification and editing roles adequately. All the staff were trained on tasks associated with both data coding and editing before they were assigned with specific roles. The duration of the training on the different systems was as follows:

Data Processing	Training Duration	
	Full-timers	Part-timers
Role		
Data Coding	2 days	2 evenings
Data Editing	1 day	1 evening

Three full-day training was provided to full-time data processing staff, while part-time staff were trained over three evening sessions. The training was divided into two parts: (i) concepts and definitions of the data items collected in the Census 2010, and (ii) hands-on sessions to familiarise with the data processing system.

For data coding, data processing staff were taught the principles and structure of the Singapore Standard Educational Classification (SSEC), SSIC and SSOC. To reinforce the concepts taught, a hands-on session was conducted to allow the staff to be familiarised with the different applications used for data coding.

For data editing, the data processing staff were trained on concepts and definitions, as well as classifications of data items. From the training, they were taught how to identify errors and data inconsistencies. Training on how to approach respondents and telephone techniques were also covered to prepare them for the verification process where they needed to contact respondents for clarifications. Constant coaching on phone etiquette was provided throughout the course of their work.

4.7 PUBLICITY AND RESPONDENT RELATIONS MANAGEMENT

Besides having efficient work processes for the survey operations, another crucial factor contributing towards the success of the Census 2010 was the public support and co-operation for the project. To garner the necessary support, a series of publicity activities were drawn up to promote awareness of the Census at the national level and to provide relevant information to the respondents who were selected to participate in it.

4.7.1 Thrusts of the Census 2010 Publicity

The main thrusts of the Census 2010 publicity campaign were as follows:

- a) To create and sustain public awareness by publicising the conduct of the Census 2010 through various publicity channels and official media so that the public would be more willing to co-operate.
- b) To let the public have a better understanding of the purpose of Census and usefulness of the data collected in order to galvanise their support and co-operation in the Census 2010.
- c) To articulate the importance of accurate and complete information to be furnished by respondents, as these information would be used by Government Ministries and agencies in their policy planning and formulation for the population.

4.7.2 Strategy of the Census 2010 Publicity

Census 2010 publicity was carried out progressively over 3 phases at a budget of about \$641,500. The type of publicity channel/media for each stage was determined by the publicity focus, target audience and cost effectiveness. Together, the different channels covered as large a population as possible. A summary is provided below:

Phase 1: Pre-Census Sep 2009 - Feb 2010	Phase 2: Enumeration Mar - Aug 2010	Phase 3: Post-Census Sep 2010 onwards
(a) Publicity Focus		
<ul style="list-style-type: none">• Create public awareness• Articulate the purpose and importance of the Census	<ul style="list-style-type: none">• Galvanise public support and seek co-operation• Inform the public on the type of information sought and highlight the importance of furnishing accurate and complete information• Encourage Internet submission• Assure the public of data confidentiality	<ul style="list-style-type: none">• Thank the public for their support, co-operation and feedback• Inform the public on the broad timeline of Census 2010 releases• Release of key Census 2010 results
(b) Target Audience		
<ul style="list-style-type: none">• General public	<ul style="list-style-type: none">• Households selected for enumeration• General public	<ul style="list-style-type: none">• General public• Business community and academia

Phase 1: Pre-Census Sep 2009 – Feb 2010	Phase 2: Enumeration Mar - Aug 2010	Phase 3: Post-Census Sep 2010 onwards
(c) Key Publicity Media/Channel		
<ul style="list-style-type: none"> • Census 2010 information article • Census 2010 logo and tagline 	<ul style="list-style-type: none"> • Census 2010 homepage • Census 2010 Web Banners on key government websites • Press briefing of launch of Census 2010 • Notification letters and Census 2010 information pamphlets to households selected for enumeration • Census 2010 posters at public locations (e.g. Public Libraries, Community Centres and Neighbourhood Police Posts) • Radio and TV commercials • Advertisements (e.g. newspapers, bus/taxi shelters and MRT trains) • Message on mobile phone operator's billing envelopes • E-mail broadcasts across government agencies • Updates on progress of Census 2010 and key messages in local press 	<ul style="list-style-type: none"> • Updates via DOS and Census 2010 website • Press releases of key Census 2010 results

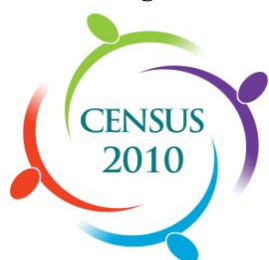
Phase 1 – Pre-Census

Census Information Article

The September 2009 issue of the Statistics Singapore Newsletter (SSN) featured an article on Census 2010. It provided information on what the Census was about, the history of Census, the approach of conducting the Census 2010, the uses of data collected and the tri-modal data collection strategy comprising Internet enumeration, CATI and Fieldwork. The paper is included as Appendix N in this report.

The Census 2010 logo and tagline (Figure 4.1) were revealed in the same issue of the SSN. The logo depicted four stylised drawings of individuals embracing “Census 2010”. It represented people from different ethnic groups coming together to embrace “Census 2010”. It symbolised the co-operation and active participation of every individual and household towards the successful conduct of this national statistical project. The logo was used in the Census 2010 homepage and related Census materials, releases and publications. The tagline “Your Response Matters. Help Shape the Future Together.” emphasised the importance of each individual's response.

Figure 4.1: Census 2010 Logo and Tagline



**“Your Response Matters.
Help Shape the Future Together.”**

Phase 2 – Enumeration

Census 2010 Homepage

The Census 2010 homepage was launched on 11 March 2010. It served as an avenue to:

- a) Publicise and create awareness for the Census 2010;
- b) Assure the public of data confidentiality and security of information;
- c) Seek co-operation from selected respondents to submit their returns via Internet, telephone and face-to-face interviews;
- d) Provide a convenient entry point to Internet submission; and
- e) Allow users who wish to find out more on Census to do so online.

Census Web Banners

Census Web Banners were placed on key government websites such as Singapore Government Intranet, Ministry of Manpower's, People's Association's and Singapore Online Government website. These banners provided links to the Census 2010 homepage for civil servants and general public to access the Census information and updates.

Official Launch

A press briefing was held on 12 March 2010, chaired by the Chief Statistician, to officially launch the Census. A press release was also issued to inform the public of the modes of data collection and how selected households could submit their returns. General information on the Census 2010 was also provided.

Notification to Households

Notification letters were posted to households selected for the Census sample enumeration progressively from 11 March 2010. Together with the notification letter, the selected household received the Census 2010 information pamphlet, Internet user guide and a specially designed Census post-it pad souvenir.

The notification letter informed households of their selection for the Census 2010, the period opened for their submission and the available modes. The information pamphlet outlined the purpose of the Census and the information sought. The notification letter and information pamphlet were in four official languages of English, Malay, Chinese and Tamil. The Internet user guide provided step-by-step instructions and screenshots on how to submit returns via the Internet.

Other useful information like the Census 2010 Internet enumeration website, toll-free hotline number (1800-8777-888), website and e-mail address were also printed in the publicity materials to facilitate Internet and telephone submissions as well as public enquiries.

Census 2010 Poster

The design of the Census 2010 poster portrayed the coverage of the Census 2010, including household and housing characteristics, economic profile, education profile and demographic characteristics. To generate public awareness, these posters were distributed to government departments, community centres/clubs, neighbourhood police posts, regional and community libraries, eCitizen Connect Centres and schools for display.

Radio and TV Commercials

Radio commercials were broadcasted in four official languages over Class 95.0 FM, Capital Radio 95.8 FM, Warna 94.2 FM and Oli 96.8 FM during the enumeration period from mid-March till July 2010. At the same time, TV commercials were also being broadcasted in four official languages through MediaCorp Channel 5, Channel NewsAsia, Channel 8, Suria and Vasantham.

Advertisements in Newspapers, Bus/Taxi Shelters and MRTs

Newspaper advertisements were published in the Straits Times, Lianhe Zaobao, Berita Harian and Tamil Murasu during the enumeration period.

Advertisements were also placed on bus/taxi shelters and in the MRTs where there are high public and human traffic to generate public awareness.

Message on Mobile Phone Operator's Billing Envelopes

Arrangements were made with SingTel to imprint the Census 2010 logo, tagline and website on the billing envelopes sent to their customers for 2 months. This alternative method served to reach the general public with subscription to SingTel's mobile phone lines, residential phone lines, broadband and MioTV.

Census 2010 Token of Appreciation

Census 2010 post-it pads and bookmarks were given to houses selected to participate in the Census as a form of appreciation for their time and effort spent in completing the survey.

Phase 3 – Post-Census

Latest updates on Census 2010 were posted on the Census website until its closure on 31 December 2010.

With the release of the Census 2010 results since end-August 2010, softcopy publications and accompanying tables in excel format were made available for free download online from the Department's website when each report was released.

4.7.3 Public Feedback

During the Census operations from mid-March to October 2010, a total of 1,958 feedback and queries on the Census 2010 were received via e-mails and letters. Majority of these (99 per cent) were received via e-mails.

Feedback can be broadly classified as follows:

Table 4.1: Public Queries and Feedback

Total	1,958
Internet Submission Related Issues	812
Login and Account Activation	535
Requests to Extend Internet Submission Due Date	71
Clarifications on Data Items	68
Reports on Technical Problems encountered	43
Requests for House Reference Number and Password	66
Other Issues	29
Request for CATI Interview	49
Operations	870
Updates of Returns Submitted, including from Overseas members	336
Requests for Notification Letters	127
Clarifications on Participation in the Survey	88
Requests for Confirmation of Submission	66
Report Successful Completion of Survey	63
Report Vacant Addresses or Addresses Used for Other Purposes	37
Clarifications on Confidentiality Issues	29
Requests to Extend Submission Due Date	27
Requests for Fieldwork Follow-up	15
Other Requests/Clarifications	82
Feedback on Service	36
Others	191
Data Requests	21
Comments/Suggestions	170

The feedback proved to be useful. More than one-third of the feedback received via e-mails was regarding Internet submission, e.g. technical problems on logging in, unlocking of accounts and registering for a password. Steps were taken following the feedback to resolve some of the immediate issues faced by respondents

where possible. For example, additional instructions were provided on the Internet login page to clarify the procedures. Other suggestions and feedback would be taken into consideration when planning for future surveys conducted by our Department.

In addition, more than 2,000 comments were received from users who rated the Census Internet submission web service after using it.

Compared to the 938 feedback received in Census 2000, the number of feedback for Census 2010 was significantly higher. This could be attributed to a higher usage of IT such as e-mails as a convenient and efficient feedback mechanism.

The Census 2010 toll-free hotline received over 52,000 calls from respondents who called in mainly to submit their returns via telephone, make general enquiries, request for e-mails on survey assistance or seek assistance in submitting information over the Internet.