CENSUS 2020

CENSUS OF POPULATION 2020

Administrative Report

DEPARTMENT OF STATISTICS SINGAPORE
Empowering You with Trusted Data

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Census of Population 2020 : Administrative Report

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PREFACE

The Census of Population 2020 was the sixth census carried out in Singapore since Independence and the fifteenth in the series of census taking from 1871. The census is the most comprehensive source of information on population and households and provides benchmark data for demographic and social statistics.

Similar to Census 2000 and 2010, Census 2020 adopted a register-based approach with a large-scale sample survey. Basic population count and characteristics were compiled from administrative records. More detailed information on language, economic characteristics, transport, religion, difficulty in performing basic activities as well as housing and household characteristics were obtained from a sample enumeration of about 150,000 households.

For Census 2020, a tri-modal data collection strategy comprising Internet enumeration, Computer-Assisted Telephone Interviewing (CATI) and face-to-face interviews using mobile devices was adopted to facilitate data collection for the households in the census sample. Leveraging technological advances, machine learning was also applied to improve the data processing processes.

This Administrative Report provides a comprehensive documentation of the Census of Population 2020 planning and operations. It outlines the major milestones including preparations for the sample enumeration, implementation of the IT application system as well as documenting the collection, processing, dissemination, administrative activities and resources utilised to conduct Census 2020. In addition, adjustments made to adapt to the new operating environment for the Census operations in view of the COVID-19 situation were also discussed.

I would like to thank all who have, in one way or another, contributed to the success of Census 2020, which was conducted under challenging conditions with the evolving COVID-19 situation in 2020. My deep appreciation is extended to all participating households who had given their full support and cooperation to the Census. The contributions of government ministries and statutory boards, which provided pertinent information for Census 2020, are also gratefully acknowledged.

Wong Wee Kim
Chief Statistician
Singapore

June 2021

Our Vision

National Statistical Service of Quality, Integrity and Expertise

Our Mission

We deliver Insightful Statistics and Trusted Statistical Services that Empower Decision Making

Our Guiding Principles

Professionalism & Expertise	*We adhere to professional ethics and develop statistical competency to produce quality statistics that comply with international concepts and best practices.*
Relevance & Reliability	*We produce statistics that users need and trust.*
Accessibility	*We facilitate ease of access to our statistics through user-friendly platforms.*
Confidentiality	*We protect the confidentiality of individual information collected by us.*
Timeliness	*We disseminate statistics at the earliest possible date while maintaining data quality.*
Innovation	*We constantly seek ways to improve our processes, leveraging on new technology, to deliver better products and services to users.*
Collaboration	*We engage users on data needs, data providers and respondents on supply of data, and undertake the role of national statistical coordination.*
Effectiveness	*We optimise resource utilisation, leveraging on administrative and alternative data sources to ease respondent burden.*

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Introduction to Population Census 2020

CHAPTER 1

INTRODUCTION TO POPULATION CENSUS 2020

1.1 WHAT IS A CENSUS?

The United Nations (UN) Principles and Recommendations for Population and Housing Censuses defines a population census as "the total process of planning, collecting, compiling, evaluating, disseminating and analysing demographic, economic and social data at the smallest geographic level pertaining, at a specified time, to all persons in a country or in a well-delimited part of a country." [1]

1.2 SIGNIFICANCE AND OBJECTIVES OF THE CENSUS

Singapore conducts the population census once in ten years, during years ending with "0". This is in line with the UN's recommendation for countries to conduct the national censuses at least once every 10 years, in or close to years ending with "0", to allow for better international comparability of census data.

The Census is the most comprehensive source of information providing a statistical profile of the population and households in Singapore. It collects information from the population and households and provides benchmark data for demographic and socio-economic statistics. The large sample size and coverage of the Census facilitate analyses on different population groups by fine disaggregation and by geographical area. Hence, the Census is considered an exercise of national importance. Data from the Census provide key information that is used to inform public policy studies, private business decision making and for research and analysis.

1.3 HISTORY OF CENSUS – HOW SINGAPORE'S CENSUSES EVOLVED

The Census of Population 2020 (Census 2020) is the sixth population census carried out since Independence and the fifteenth in Singapore since census taking first began in 1871. It is also the third register-based Census conducted.

The history and key developments in census taking are discussed in the Statistics Singapore Newsletter (SSN[2]) Issue 2 2019 (see Appendix N).

[1] United Nations Principles and Recommendations for Population and Housing Censuses Revision 3 (2017), p 2.
[2] For this and other acronyms of terms used in the Census, please refer to Appendix K.

1.4 REGISTER-BASED CENSUS

The Census 2020 adopted a register-based approach with a large-scale sample survey. Unlike in a traditional Census where everyone in Singapore had to be surveyed, the register-based Census provided for a full coverage on basic items through administrative records. Basic population count and characteristics such as age, sex, ethnic group, place of birth, type of dwelling, geographical distribution and other basic demographic statistics were obtained from multiple administrative sources.

The sample survey conducted during the same reference period supplemented the administrative data with detailed survey information on selected topics. In 2020, a sample enumeration of about 150,000 households was conducted to obtain additional information useful for in-depth studies but not available from administrative sources. These included marital status and fertility, education and language spoken, literacy, economic characteristics, mode of transport, religion, difficulty in performing basic activities as well as housing and household characteristics.

The approach of using comprehensive up-to-date administrative databases, and the large-scale survey for the Census resulted in reduced response burden for the population and savings arising from lower manpower and resource demands.

1.5 CONCEPT AND COVERAGE

Along with the register-based approach, the Census 2020 adopted the de jure concept for Singapore's population estimates based on a person's place of usual residence. Under the de jure concept of "usual residence", Singapore residents (citizens and permanent residents) with valid local addresses and who were not away from Singapore for a continuous period of 12 months or longer were included in the total population count. Non-residents comprising foreigners who were working, studying or living in Singapore but not granted permanent residence were also included in the total population. The transient population, such as tourists and short-term visitors, was excluded.

The Census reference date was set as 30 June 2020, in line with the mid-year reference point where administrative data were updated.

1.6 TRI-MODAL DATA COLLECTION STRATEGY

To facilitate data collection for the sample enumeration, the Census 2020 retained the tri-modal data collection strategy. The tri-modal approach was first successfully implemented in the Census 2000 and improved in Census 2010. This

approach comprising Internet submission, Computer-Assisted Telephone Interviewing (CATI) and face-to-face interviews was further refined in Census 2020. Face-to-face interviews were carried out via a web-based survey form using mobile devices and the data collection process was fully integrated with secured wireless real-time data transmissions instead of having the need to synchronise the mobile devices with the System as implemented during Census 2010.

1.6.1 Internet Submission

The Internet submission was first made available to respondents in Census 2000. Over the years, adoption rate grew and it was the most common mode used by respondents to submit their survey returns for Census 2020.

Available 24 hours a day, 7 days a week, Internet submission provided respondents with the flexibility to access the system and provide their survey returns directly using any Internet-accessible device (e.g. desktop, laptop, tablet or smartphone), on-the-go, without having to go through a third party (i.e. the interviewer). In light of the COVID-19 situation, this self-enumeration mode allowed respondents to stay home while providing their responses to Census 2020 without any need for physical interaction with our field interviewers.

1.6.2 Computer-Assisted Telephone Interviewing

CATI is a tried-and-tested data collection strategy, having been deployed in Censuses 2000 and 2010 as well as General Household Surveys (GHS) 1995 and 2005. For respondents who were unable to complete their survey returns via the Internet, the Census 2020 CATI Hotline was available for them to provide their survey returns over the phone. CATI interviewers also contacted households which did not complete their survey returns by a stipulated date for telephone interviews. The Census 2020 Hotline was in operation 7 days a week, including public holidays from 9 am to 10.30 pm, to provide convenience to respondents who required assistance to complete the survey.

1.6.3 Fieldwork

Fieldwork, or face-to-face interviews, has the longest history among the three data collection modes. For households which did not respond via the Internet and could not be contacted by CATI interviewers after several attempts, visits were made by field interviewers to conduct face-to-face interviews. Respondents who preferred

to be contacted in person could also opt for the face-to-face interviews where the Census 2020 survey officers would visit and collect the information from their homes.

Tablets were used in the Census 2020 field collection. Data were captured and updated to the system directly with authentication processes in place to prevent unauthorised access. The use of tablets enhanced the data security for respondents' survey returns. Automatic branching of questions, consistency checks and electronically coded data were captured directly in the field to reduce back-end processing efforts. With this, the need for households to be re-contacted subsequently after the face-to-face interview was reduced.

1.7 LEGAL AUTHORITY

The Census 2020 was conducted under the *Statistics Act* (relevant parts extracted in Appendix C). All data collected will be kept in confidence in accordance with the *Statistics Act* and used solely for statistical purposes.

1.8 CENSUS PLANNING AND BROAD SCHEDULE OF CENSUS ACTIVITIES

As the Census is the largest national statistical exercise to meet the data needs of the government and population, various Ministries were consulted as part of Census planning.

Planning for the Census 2020 started in the Department of Statistics (DOS) in January 2017, with the review of the approach and budget. User consultation was carried out shortly after to seek inputs on the data items to be included in the Census questionnaire. Areas for improvement identified from the previous Census were also taken into consideration to make refinements to the question phrasing and operational flow.

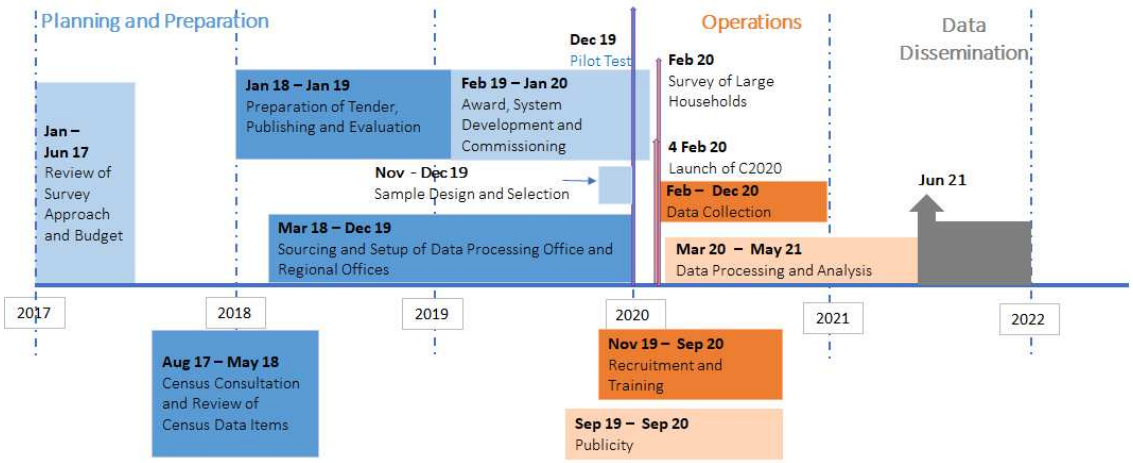
The drawing up of the Census 2020 IT tender specifications, calling of open tender and evaluation took place from January 2018 to January 2019. The development work of the IT system, user experience design and testing with the vendor spanned from February 2019 to January 2020.

The Census 2020 was officially launched on 4 February 2020. Arising from the COVID-19 outbreak and the Circuit Breaker (CB) measures taken during 7 April – 1 June 2020 to control its spread, the timeline for the conduct of the Census was impacted. The Census team swiftly made adjustments and adapted to the new operating environment for the Census operations. Details on adjustments would be elaborated under the respective sections.

Overall, during the CB, operations at the Census 2020 Call Centre and fieldwork were suspended. Operations were performed via telecommuting. Fieldwork only resumed in mid-July 2020, with data collection completed in December 2020. While data processing started in end March 2020, it was also suspended during CB and only resumed in end June 2020 and continued through January 2021.

The detailed statistical releases from the Census findings were released in June 2021. A schedule of the key activities is shown in Chart 1.1.

Chart 1.1: Project Timeline



Planning and Preparation for Sample Enumeration

CHAPTER 2

PLANNING AND PREPARATION FOR SAMPLE ENUMERATION

Census 2020 adopted the register-based approach, similar to Census 2010. In addition to information obtained from merged administrative records in the national databases, more in-depth information was collected through a sample survey of close to 150,000 households in Singapore. This represented about 10 per cent of the 1.4 million households in Singapore in 2020. To ensure the smooth running of the Census, careful planning and preparations were made prior to the actual conduct of the Census. Preparations included reviewing the sampling methodology, seeking users' inputs and finalising the list of Census data items, updating the national standard classifications, refining the workflow to manage the expected case load and conducting a pilot survey before the start of the main Census operations.

2.1 SAMPLE DESIGN AND SELECTION

This section outlines the Census 2020 sample design and selection. A separate detailed write-up on the sampling variability and errors is included in Appendix R.

The sample for the Census 2020 was selected from a sampling frame comprising all residential dwelling units in Singapore. As the sample survey of the Census 2020 covered only households in residential dwellings, institutions such as nursing homes, hostels and hotels were excluded from the frame.

The sample was selected based on a stratified design. Dwelling units in the sampling frame were divided into different groups. The groups are defined based on the planning areas demarcated by the Urban Redevelopment Authority and broad dwelling type groups. A random sample was then selected from the different groups by systematic sampling with a random start. The samples selected from each group were combined to form the sample of about 150,000 dwelling units.

2.2 CONDUCT OF THE LABOUR FORCE SURVEY AS A SUB-SAMPLE OF CENSUS 2020

As with the approach adopted in Census 2010 where Ministry of Manpower (MOM)’s Comprehensive Labour Force Survey (CLFS) was carried out as a sub-sample of the Census 2010, the Census 2020 also leveraged the 2020 CLFS. The approach ensured that there was no overlap in households selected for the two major surveys and allowed for a continuous and consistent series of annual labour statistics from the

CLFS. As a result, respondents selected only needed to respond once to either the main Census sample or the CLFS sub-sample. In 2020, the CLFS sub-sample constituted about one-fifth of the overall sample and covered detailed labour-force related items besides questions asked in the main Census.

Since the 2020 CLFS would be conducted concurrently with the Census 2020, there was a need for a common understanding and treatment to be applied for all data items collected. The Census-CLFS Workgroup was set up to ensure meaningful consolidated results at the end of the two surveys. Discussions were held between the two teams on details pertaining to data items to be collected, phrasing of the questions and the standardisation of concepts and definitions. Operational matters such as publicity, tokens of appreciation and matters involving communications to the public, were also under the purview of this Workgroup.

Arising from the COVID-19 situation and disruptions during the survey period, the Workgroup worked closely together to ensure common understanding and consistent treatment of new scenarios.

2.3 DATA ITEMS COLLECTED IN THE CENSUS 2020

As part of the planning for Census 2020, DOS undertook an extensive user consultation on the data requirements for the Census involving all ministries and their statutory boards from August 2017 to May 2018. This consultation process helped in planning for a census responsive to users' needs for relevant and meaningful statistics.

2.3.1 Selection Criteria

Multiple factors were taken into account when selecting the data items to be included in the Census enumeration. The final data items selected had an impact on the format of the questionnaire, accuracy and quality of respondents' survey returns, resources needed for data processing and schedule for the Census releases.

Each data requirement was evaluated carefully based on the principles of national priority, suitability of topics for collection via a large-scale census, the need for data at small area level and availability of alternative or close complementary data. These guiding principles were in accordance with the UN Principles and Recommendations for Population and Housing Censuses.

Table 2.3.1: Selection Criteria

No.	Guiding Principle	Consideration
1	National priority	The census topics should have wide relevance and meet the needs of a broad range of data users, including users in the government, private sector as well as members of the public.
2	Suitability of topics for collection via a large-scale census	Topics should be those that respondents are able to provide accurate information on. Sensitive questions which require detailed probing or explanations should be avoided as self-enumeration without assistance from interviewers and proxy reporting where one member reports for the whole household are commonly practised.
3	Need for data at small area level	The need to have small area statistics should be considered ahead of information needed for the general population, which may be available from other sources including smaller sample surveys.
4	Availability of alternative or close complementary data	In evaluating the requirements, alternative sources of close complementary data should be considered if available. These include alternative administrative data or customised surveys.

2.3.2 Data Items

DOS received a total of 108 data requirements from government agencies for Census 2020 and assessed the need for 135 unique data items including those from past Censuses. Detailed discussions were held with various agencies on the proposed data items for inclusion in the Census 2020 to ensure timeliness, relevance, practicability and quality of the Census. Through this iterative process and after much deliberation, a final list of data items was streamlined to 64 and endorsed by the ministries in May 2018. The endorsed list was grouped into the following broad categories:

a) Demographic and social characteristics
b) Household and housing characteristics
c) Economic and educational characteristics
d) Transport
e) Difficulty in performing basic activities

Of the 64 items, 13 items were obtained directly from the Household Registration Database (HRD) and administrative databases maintained by DOS. The remaining items not available from the HRD were collected from the large-scale sample survey. Compared with the 2010 Census, 8 new data items were collected in Census 2020. These related to information on difficulty in performing basic activities,

workplace location and second most frequently spoken language at home. The full list of data items is given below:

Table 2.3.2: List of Data Items[@]

Demographic & Social Characteristics	
1	Name^
2	Singapore National Registration Identity Card (NRIC)/ Foreign Identification Number (FIN)^
3	Sex^
4	Identification Type^
5	Ethnic Group/Dialect Group^
6	Date of Birth/Age^
7	Marital Status
8	Religion
9	Languages Literate In
10	Language/Dialect Most Frequently Spoken at Home
11	Language/Dialect Second Most Frequently Spoken at Home *[New Item]*
International Migration Characteristics	
12	Country of Birth^
13	Citizenship^
14	If residing outside Singapore, - Country Currently In - Reason for Living Abroad
Household Characteristics	
15	Relationship to Household Reference Person *(refers to "head of household" in previous censuses)*
16	Parent-Child Linkage
17	Spouse Linkage
Housing	
18	Type of Present Dwelling^
19	Tenancy of Present Dwelling
Fertility	
20	Number of Children Born Alive (for all females)

Table 2.3.2: List of Data Items@ (Cont'd)

Educational Characteristics		
21	Level of Education Attending	
22	Highest Academic Grade/Qualification Attained	
23	Major Field of Study (for polytechnic/university graduates)	
24	Country Where Highest Qualification Was Attained (for polytechnic/university graduates)	
25	Whether Acquired Vocational Qualification^	
26	Type of Vocational Qualification Acquired^	
27	Field of Study of Vocational Qualification^	
28	Educational Institution Where Vocational Qualification was Obtained^	
Employment Characteristics		
29	Current Economic Activity Status	
30	Employment Status	
31	Name of Employer/Firm	
32	Main Business/Activity or Main Products/Services	
33	Occupation/Job Title	
34	Main Tasks and Duties	
35	Workplace Location	*[New Item]*
36	Nature of Employment	
37	Usual Number of Hours Worked Per Week	
38	Income from Work, Excluding Bonus	
39	Bonus Received in Last 12 Months	
Job Mobility & Underemployment		
40	Duration of Present Job*	
41	Previous Occupation – Job Title*	
42	Previous Occupation – Main Tasks and Duties*	
43	Previous Industry – Main Business Activity or Main Products/Services*	
44	Willingness to Work for Additional Hours*	
45	Availability for Additional Work*	
Economic Characteristics of Non-Working Persons		
46	Whether Available to Start Work in the Next 2 Weeks	
47	Whether Any Action to Look for Work in the Last 4 Weeks	
48	Action Taken to Look for Work	
49	Main Reason for Not Working	
50	Whether Worked Before*	
51	Duration of Unemployment*	
52	When Left Last Job*	
53	Main Reason for Leaving Last Job*	

Table 2.3.2: List of Data Items[@] (Cont'd)

Income from Non-work Sources	
54	Rental Income*
55	Investment Income*
56	Income from Other Sources*
Transport	
57	Usual Mode of Transport to Work/School
58	Usual Travelling Time to Work/School
Difficulty in Performing Basic Activities[#]	*[New Topic: 6 New Items]*
59	Difficulty seeing, even if wearing glasses
60	Difficulty hearing, even if using a hearing aid
61	Difficulty with body movement activities such as: (a) walking or climbing steps; or (b) transferring from bed to chair/wheelchair (and vice versa)
62	Difficulty remembering or concentrating
63	Difficulty with self-care activities such as: (a) washing all over (bath/shower) or dressing; (b) feeding; or (c) using the toilet
64	Difficulty communicating, for example understanding or being understood using usual (customary) language

[@] A copy of the Census 2020 survey form is available in Appendix I.
[^] Items obtained from administrative sources.
[*] Items covered in the CLFS sub-sample only.
[#] Broadly based on Washington Group's Questions on Disability, with slight modifications to incorporate agencies' requirements.

2.4 UPDATES TO SINGAPORE STANDARD STATISTICAL CLASSIFICATIONS

The adoption of a common framework for classifying statistical information in the collection, analysis and dissemination of statistics ensures consistency and comparability of data. This in turn facilitates data sharing and analysis among data producers and users.

In the run-up to the Census 2020, the national standard statistical classifications for occupation, industry and education were reviewed and updated.

A working group, comprising representatives from key ministries and agencies which produce and/or use the data, was formed to facilitate the review of each classification. Inputs were also obtained from the relevant government ministries and statutory boards who were key users of the data. Revisions to the classifications were aligned to international classifications with appropriate modifications to take into account Singapore's context.

2.4.1 Occupational Classification

The Singapore Standard Occupational Classification (SSOC) 2020 adopts the basic framework of the International Standard Classification of Occupations 2008 (ISCO-08).

The SSOC is a classification of occupations according to the type of work performed. Its primary objective is to classify the occupations of the civilian working population, but with provisions for the collective classification of those in the armed services and the foreign diplomatic personnel. It is not applicable to the economically inactive population such as housewives, full-time students, retired persons and social volunteers.

The basic principle used in the classification of occupations in the SSOC 2020 is the main type of work performed. Persons who perform the same principal tasks are considered as doing the same type of work and classified under the same occupational group irrespective of work experience, skills and qualifications. Besides formal educational qualifications, skill levels can take the form of professional certification, informal training and experience.

The SSOC 2020 comprises five levels of aggregation, namely Major Group, Sub-major Group, Minor Group, Unit Group and Occupation. A numerical five-digit coding system is used to distinguish the different levels of classification. The numbering system is hierarchical in nature, showing progressively finer details in skill specialisation from the highest level of aggregation (1-digit) to the lowest level (5-digit). This allows users the flexibility to tabulate, analyse and publish data according to the level of detail required.

For the Census 2020, occupations were captured and coded to the 5-digit level of the SSOC 2020, which was one level more detailed than the 2010 occupational data.

2.4.2 Industrial Classification

The Singapore Standard Industrial Classification (SSIC) 2020 adopts the basic framework of the International Standard Industrial Classification Revision 4 (ISIC Rev. 4). The classification incorporates recent changes in economic activities to better reflect the current structure of Singapore's economy.

The SSIC is a classification of economic activities undertaken by economic units. It does not draw distinction according to the type of ownership, type of legal organisation or mode of operation. Economic units which engage in the same or similar kind of economic activity are classified under the same SSIC category, irrespective of whether they are corporate entities or government units, or operate in the formal or informal sector.

Like the SSOC, the SSIC 2020 is a classification with a hierarchical structure and uses a numerical five-digit coding system to distinguish the different levels of classification. Similarly, data on industries in the Census 2020 were captured and coded to the 5-digit level of the SSIC 2020, one level more detailed than the 2010 industry data.

2.4.3 Educational Classification

The Singapore Standard Educational Classification (SSEC) 2020 makes reference to and is consistent with the basic framework and principles of the International Standard Classification of Education (ISCED) 2011 and the ISCED Fields of Education and Training (ISCED-F) 2013 developed by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Institute for Statistics (UIS). It consists of three components:

- Classification of Level of Education Attending
- Classification of Educational Qualification Attained
- Classification of Field of Study

The hierarchical structure of the SSEC is defined by aggregation levels and groups which use Singapore's present education system and the formal educational qualifications currently awarded in Singapore as the basis. For educational programmes offered in Singapore based on foreign education systems, and qualifications which were awarded in Singapore in the past or those awarded overseas, the approximate equivalence to the current system and qualifications in Singapore are used to facilitate the appropriate classification.

The SSEC 2020 has been revised to maintain relevance by taking into account changes in Singapore's education landscape, as well as changes in international standards to allow for international comparability. In addition to changes in the education and certification systems, developments in the Continuing Education and Training (CET) programmes and qualification/certification systems to upgrade the workforce under the Skills Framework have also been taken into consideration when revising the SSEC 2020.

2.5 PILOT SURVEY

2.5.1 Objectives and Key Features

Pilot surveys are conducted prior to major surveys to help identify and rectify potential operational issues before the actual survey. As the data collection modes adopted for the Census 2020 were largely similar to earlier surveys, a pilot survey for the Census was conducted with officers from DOS who were not directly involved in the Census to minimise the resource requirements and potential response burden for the public.

Officers were notified via email and provided information about the pilot survey, submission mode and assigned House ID. The pilot survey was conducted from 16 to 26 December 2019.

The main objectives of the pilot survey were as follows:

a) To test the workflow for Internet submission and CATI in operation and fine-tune the work and system processes for the actual survey;
b) To test the robustness of the system to handle volume and implementation of Internet submission, inbound and outbound calls at the Census 2020 Call Centre as an integrated system;
c) To evaluate question wording and flow, particularly new items/revised phrasing, as part of pre-testing and identify areas for improvements; and
d) To fine-tune operational procedures and enhance training, logistics support and progress management.

2.5.2 Refinements Following the Pilot Survey

Feedback from the pilot survey was obtained from both DOS officers and Census officers for evaluation. From these feedback, areas for improvements were identified, workflow and system processes were fine-tuned.

Some of the key refinements included the following:

a) Improved the system performance of the Internet submission system to reduce the loading time for enumeration screens;
b) Improved the onscreen display, i.e. placement of questions, questionnaire phrasing and options for selecting responses;
c) Refined call services and quality for calls made/received at the call centre; and
d) Updated training materials with more specific examples and improvement to survey processes.

The improvements to the system and the workflow were carried out with respondents' convenience in mind as well as to improve efficiency and effectiveness on the conduct of Census 2020. These refinements were tested again on a smaller group and implemented before the actual launch of the Census.

2.6 SURVEY OF LARGE HOUSEHOLDS (SLHH)

2.6.1 Fieldwork for Large Households

In Census 2010, the Survey of Large Households (SLHH) was conducted prior to the main Census 2010 to improve the efficiency during the fieldwork operations. The SLHH covered households that were large in size and potentially more difficult to enumerate.

For the conduct of the SLHH which started from 7 February 2020, dwelling units in the Census 2020 sample containing 12 or more persons were allocated to fieldwork senior supervisors and supervisors to enumerate using tablets prior to the start of the main fieldwork operations. As some field supervisors were newly appointed, the SLHH also allowed them to gain first-hand experience of the field planning and data collection processes.

In light of the COVID-19 outbreak in early 2020, Singapore raised its Disease Outbreak Response System Condition (DORSCON) level from Yellow to Orange on 7 February 2020. Additional precautionary measures were swiftly put in place to ensure the well-being of everyone.

Some of the essential adjustments included the suspension of field visits with the surveys completed with respondents over the phone unless there had been prior arrangements for fieldwork appointment, and sending reminder letters to respondents to encourage them to respond via Internet or Census 2020 Hotline as far as possible.

Data Collection

CHAPTER 3

DATA COLLECTION

3.1 OVERVIEW

The Census 2020 enumeration was officially launched on 4 February 2020. A tri-modal data collection strategy, comprising the Internet submission, CATI and face-to-face interviews, was implemented to facilitate data collection from about 150,000 households during the enumeration period from February to end 2020.

The impact of COVID-19 pandemic posed unprecedented challenges for the conduct of Census 2020. Adjustments were made to the data collection strategy and timeline, in response to the COVID-19 situation. The Census field operations were scaled down significantly, including being suspended from April to mid-July 2020.

At the early stage of the Census, face-to-face visits were arranged only upon request from mid-February to early March 2020. To safeguard the well-being of the field staff and the Census respondents, such visits were only carried out after health and travel declarations were obtained from households who had requested for face-to-face interviews. Field staff were also provided with surgical face masks for their face-to-face visits with survey respondents. Households were encouraged to submit their survey returns via the Internet or by phone as much as possible.

In the design of the Census workflow, a staggered rollout approach, where the Census sample was split into a number of smaller batches with survey start dates spreading over several weeks, was adopted. The design helped to spread out the case load on the Internet server, call traffic to the Census 2020 Hotline and minimise risk of data exposure for individual households on the Internet. For the Census 2020, it provided the additional flexibility for the despatch dates and sizes of each batch to be adjusted in response to the evolving COVID-19 situation and measures.

More details on the adjustments made to the Census 2020 data collection strategy amidst COVID-19 are discussed in Appendices O (SSN Issue 2 2020 – Conducting Census of Population 2020 in Singapore amidst COVID-19) and P (SSN Issue 1 2021 – Census of Population 2020 – Modes of Submission and Reminders amidst COVID-19).

3.2 WORKFLOW OF CENSUS BATCHES

For the conduct of the Census 2020 sample survey, the selected addresses were divided into 21 batches and respondents were progressively notified by batch. Staggered start dates of about 3 to 4 days apart were planned for the 21 batches to spread out the load for the data collection modes.

On average, three batches were rolled out in 2 weeks as illustrated in Figure 3.1. This staggered workflow was designed to optimise the use of resources. Apart from moderating the volume of Internet traffic to the Census 2020 Internet submission website and avoiding a sudden surge in usage if all respondents informed of the survey were to register at the same time, staggered batching also allowed for more effective case allocation and follow-up at the Census 2020 Call Centre and by field interviewers.

Figure 3.1: Flow of Records by Batch and Weeks after Census Launch

Batch	Weeks									
	1	2	3	4	5	6	7	…	N	→
1	Inter-net	Inter-net	Inter-net	Inter-net	Inter-net	Field-work	Field-work	Field-work	Field-work	
2		Inter-net	Inter-net	Inter-net	Inter-net	Inter-net	Field-work	Field-work	Field-work	Field-work
3			Inter-net	Inter-net	Inter-net	Inter-net	Inter-net	Field-work	Field-work	Field-work
4				Inter-net	Inter-net	Inter-net	Inter-net	Inter-net	Field-work	Field-work
↓										
21									Inter-net	…

Respondents in each batch were first sent a notification letter informing them that they had been selected to participate in the Census 2020. They were given two weeks to provide their survey returns via the Internet. They also had the option to call the Census 2020 Hotline to provide their information via a telephone interview. The Census 2020 Hotline was manned by the CATI interviewers who were trained to conduct the Census survey over a telephone interview, answer queries about the survey and provide technical assistance for respondents using Internet submission.

After the two-week period provided for Internet submission, the CATI system called out to respondents who had not completed their survey returns. For respondents who had not completed their survey returns by the due date for Internet

submission at the end of the second week, a reminder letter was sent. This reminder letter encouraged respondents to submit their survey returns via Internet or call the Census 2020 Hotline for telephone interview. Respondents would still be able to submit their survey returns either through Internet or CATI in the third to fifth week.

Outside of the CB period, a second reminder was sent at the end of the fourth week to alert respondents that survey officers could be arranged to visit them at their homes to assist them in completing their survey returns if they were not able to submit their survey returns via the Internet or telephone by the given deadline.

To encourage submissions through the Internet and telephone while face-to-face interviews were suspended due to the mitigating COVID-19 measures, respondents who did not complete and submit their survey returns by the deadline would receive up to a total of 4 reminder letters, two more compared to the reminders sent in 2010.

Records which were not completed via Internet or telephone interview by the end of the fifth week were assigned to survey officers for follow-up through face-to-face visits. Records were downloaded to the respective team members' tablets to facilitate the conduct of field interviews. Field interviews were planned to take place from the sixth week. The Field team was given another four weeks to complete the survey returns in each batch.

3.3 INFRASTRUCTURE SET-UP FOR DATA COLLECTION

The Census 2020 data collection system was hosted at the Government Private Cloud (GPC). GPC is a one-stop environment for government agencies to host and deploy their applications, e-Services and websites. By riding on the centrally managed infrastructure for the public sector, lower operating costs were achieved with economies of scale. The system availability was also assured through a resilient central infrastructure. In addition, the round-the-clock operational support provided was essential to meet the needs of the Census Internet submission module which was available 24 hours a day, 7 days a week.

The database set-up also provided flexibility for households to switch between different modes of submission during the survey period. To mitigate potential security concerns of hosting too much information in a single database, information was loaded only when each batch became available for enumeration. Upon receiving the complete information for a household, information for the household was transferred from the data collection database to the internal data processing database to minimise the risk of exposure.

3.4 EASING RESPONDENTS' BURDEN

3.4.1 Supporting Internet Submission

Internet submission was part of the Census digital journey which started in 2000 and aligned with Singapore's digital transformation and journey as a smart nation.

Since its introduction in Census 2000, Internet submission had seen a steady increase in take-up. In 2020, 64 per cent of selected households completed the Census online, up from 38 per cent in 2010 and 15 per cent in 2000.

Available round-the-clock, Internet submission provided respondents with the flexibility of completing the survey anytime, anywhere. It allowed respondents to provide their survey returns directly in a paperless and presence-less manner using any Internet-accessible device (e.g. desktop, laptop, tablet or smartphone) on-the-go without having to go through a third party (i.e. the interviewer).

Automated branching of questions alleviated response burden by directing respondents to only relevant questions. Tips and definitions also aided respondents in understanding the information required for specific questions. Other features such as basic verification rules helped ensure completeness of survey returns while auto-saving of responses for subsequent retrieval allowed respondents flexibility to choose to complete information over different sessions and/or by different household members. The implementation of security features and encryption of data transmissions assured the confidentiality of data provided.

Given the COVID-19 situation in a large part of 2020, responding online was one of the best ways to fulfil the census obligation from home safely. Follow-up activities, if required, were also implemented in contactless manner where viable.

3.4.2 Designing a Device-Friendly Census

The Census 2020 Internet submission website was designed as a mobile-responsive site to meet the increased proportion of mobile users. Census online survey forms were optimised in terms of size and scale, according to the type of device used by the respondent.

Among respondents who completed their Census 2020 survey online, a high 44 per cent accessed the form via their mobile phones while 31 per cent used laptops/desktops and 2 per cent used tablets.

3.4.3 Leveraging on Administrative Data

Other than not requiring respondents to provide the information already available from other government agencies, administrative data sources were also used to validate and certify census results. This allowed DOS to process the data expeditiously and reduced the need to reach out to the respondents, thereby minimising reporting burden further.

3.5 INTERNET SUBMISSION

The Electronic Submission Module (ESM) supported the Internet Submission for Census 2020. Its design built on the lessons learnt from similar systems used in Census 2010 and the more recent Household Expenditure Survey 2017/18. Improvements were made to address feedback raised and new features were introduced to meet the anticipated needs of the public.

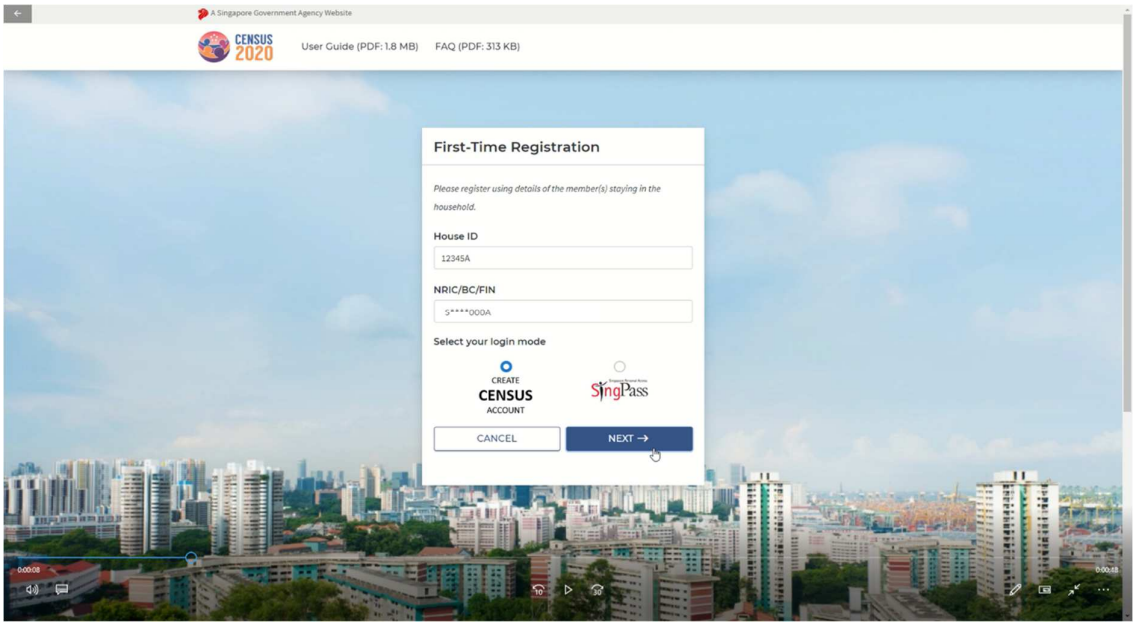
3.5.1 Key Features

Registration

To access the ESM for Census 2020, respondents had to register using the unique House ID sent to them in the notification letter. A new alternative approach was to scan the unique Quick Response (QR) code (embedded with Census 2020 Internet Submission website and House ID) on the notification letter. With increased usage of mobile devices, scanning the QR code provided convenience to the respondents where they were brought directly to the submission homepage with their House ID auto-populated in the corresponding field on the “First-Time Registration” screen. The auto-population of House ID also reduced respondents’ effort to locate the House ID and minimised potential data entry errors by the selected household leading to wrong House ID input.

Compared to Census 2010 where all members shared a single login account and password, Census 2020 allowed multiple members to register separately and login to the same survey form. In addition to the creation of a Census account and password, respondents were able to choose to register and login with their Singapore Personal Access (SingPass) (Figure 3.5.1).

Figure 3.5.1: Registration for Census 2020



Security

For respondents who did not have a SingPass account or chose not to register with their SingPass, they had the option to create a password of their own. Once the registration details were entered and verified, respondents were prompted to create their preferred password and to provide a mobile number to receive a One Time Password (OTP) as a form of Two-factor Authentication (2FA). Registration was only considered successful after entering the correct OTP. For subsequent login to the online form or resetting of password, respondents had to go through the 2FA process. This reduced the risk of unauthorised access to the online form.

To reduce the potential risk of a cyber-attack, additional security measures and procedures were built in. For example, the number of unsuccessful attempts for registration/login/change password were all tracked and reviewed. The individual account would be locked if there were multiple unsuccessful login attempts. Previously, respondents had to contact the Census Hotline to unlock their account. In 2020, respondents were allowed to unlock their accounts on their own by re-entering the details entered during registration using the password reset function.

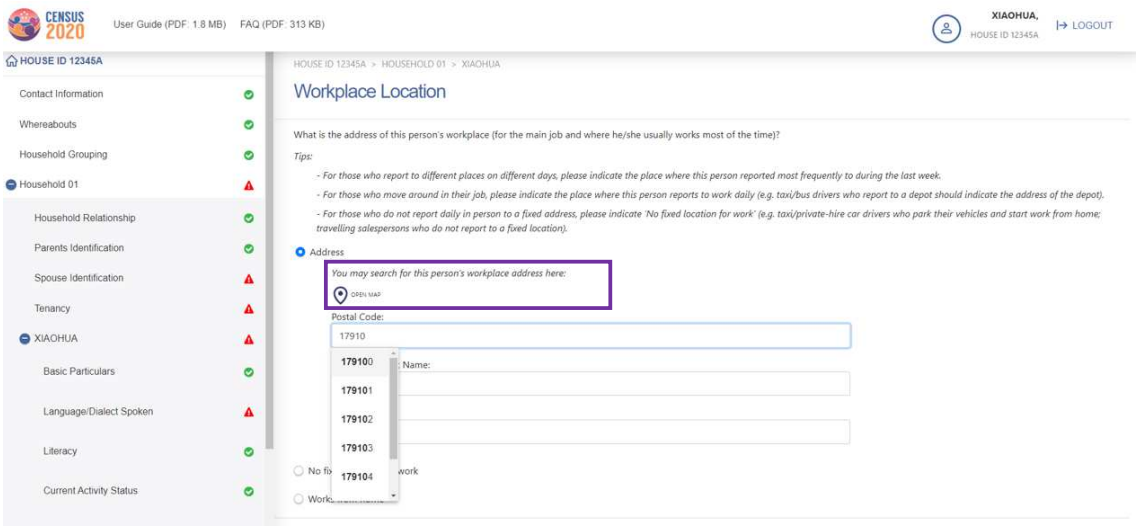
User-Friendly Survey Forms

The enumeration screens were designed to incorporate user-friendly features. Besides the consistent placement of key functions and automated branching of

questions, dropdown lists for descriptive text fields were implemented for the first time in Census 2020 to supplement free-text responses for the collection of industry, occupation and workplace location. The respondents had the option to select from the list of pre-determined search results or leave their responses as entered. This not only reduced respondent's burden but also improved the quality of the data collected.

Workplace location was collected for the first time in Census 2020. Respondents could choose to enter their workplace address in text or click on the "Map" function to search for the location (Figure 3.5.2). The "Map" function was particularly useful for respondents who were reporting on behalf of other members and might not know the exact workplace location.

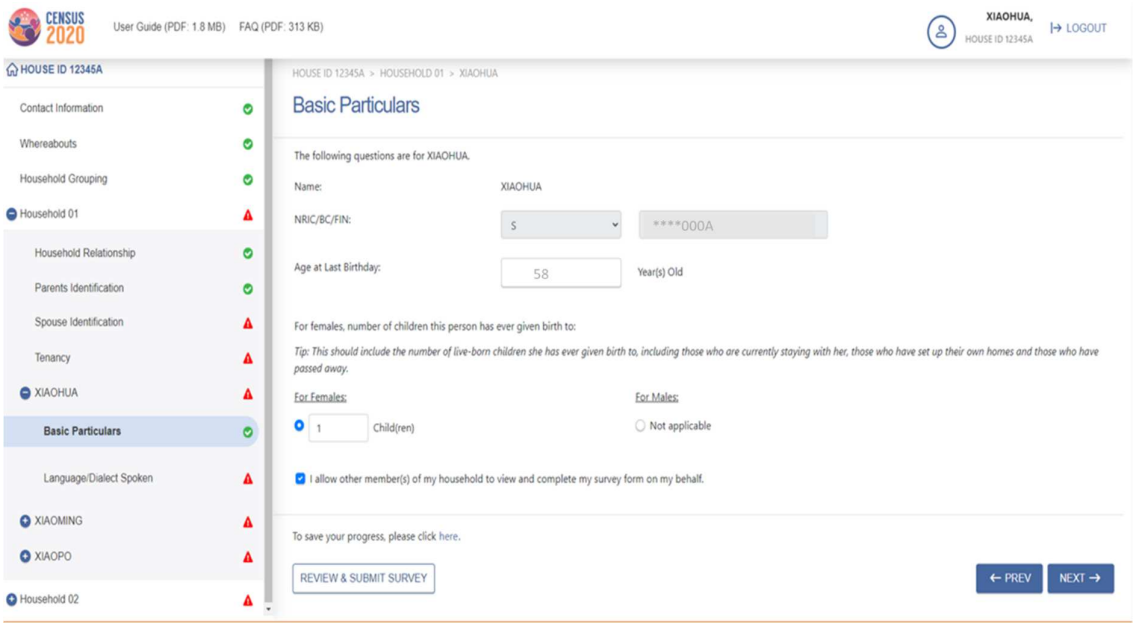
Figure 3.5.2: Workplace Location



Privacy Lock for Individual and Household

For addresses with more than one household or more than one member, respondents who logged in were able to create a privacy lock for their household and/or themselves respectively. The "lock", when activated, prevented other household(s)/member(s) from accessing their locked survey forms and enhanced the protection of confidentiality for the survey returns even among those staying in the same address (Figure 3.5.3).

Figure 3.5.3: Privacy Lock for Individual



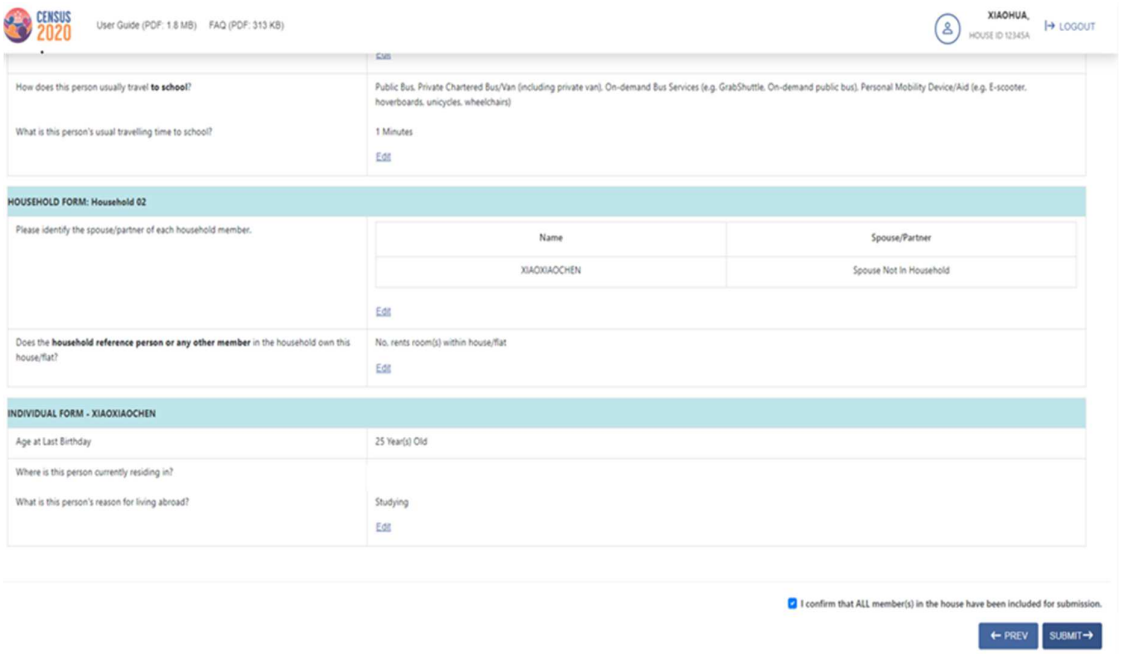
Review before Submission

Taking into account respondents' feedback on preference to be able to print or save a copy of their survey returns, the "review before submission" function was added to allow respondents to view, save and print a copy of their survey form.

The review page displayed all questions asked and the corresponding responses that were entered unless the privacy lock for the household or individual was activated. With a summary of all entered responses, respondents were able to review and return to specific question to make amendments if required (Figure 3.5.4). This increased convenience to check and update their inputs helped improve the accuracy of the data collected.

During the Census operations, the Census 2020 Hotline noticed a number of calls from respondents who were not able to access the survey form after it was accidentally submitted by other household members without including all members. To address this issue, the team implemented an additional checkbox at the review page for the respondent to acknowledge that all members were added in the survey before submission.

Figure 3.5.4: Review before Submission Function



Short Message Service (SMS) / Email Acknowledgement

Based on feedback from previous surveys, a significant number of respondents would like to receive acknowledgment after their completion of the online form. Hence, in addition to the onscreen acknowledgment message previously provided, respondents who provided their mobile number or email address were also sent an acknowledgement SMS and/or email for their reference and record.

3.6 COMPUTER-ASSISTED TELEPHONE INTERVIEWING (CATI)

CATI was a tried-and-tested data collection method, having been successfully deployed in several rounds of the Census of Population and GHS since 1995. Respondents who were not able to complete their survey returns online had the option to provide their survey returns over the phone with the assistance of telephone interviewers via the Census 2020 Hotline. In addition, the Hotline was the general enquiries and feedback line for members to call regarding the Census.

The Census 2020 Call Centre was also responsible for reaching out to respondents who did not complete their survey returns online by the stipulated date. A team of up to 53 interviewers and 16 supervisors was deployed to the Census 2020 Call Centre.

CATI interviewers were trained to multi-task and perform duties ranging from conducting interviews, answering queries, to supporting the field team. With the assistance of the CATI interviewers, the survey could be completed and submitted within 30 minutes for a typical 4-member household. CATI was a useful mode of survey for respondents who were illiterate or were not as Internet savvy.

3.6.1 Key Features

Important features and lessons learnt from previous surveys were integrated into the system design for the Census 2020. Improvements made included:

(a) Enhanced administrative summary details for interviewers/supervisors to facilitate Internet submission for respondents;
(b) A more user-friendly form with call script and key messages to convey, as well as translation of the survey questions to the other 3 official languages available onscreen to facilitate enumeration;
(c) An expanded set of functions to facilitate better coordination with the Field and other Operations teams such as to report vacant houses to be excluded, arrange for fieldwork appointment; and
(d) Easier access to important announcements and training resources.

Operating Hours

The operating hours for Census 2020 Call Centre were from 9am to 10.30pm daily, including weekends and public holidays, to cater to respondents who worked during the day and available only in the later part of the evenings. This was also in line with the Department's commitment to provide better service and support to our survey respondents.

Automated Outbound Dialler

One key feature of the CATI system was the Automatic Outbound Dialler (AOD). The automated dialling system searched through telephone numbers from the list of available records and made calls based on a set of priority rules built into the system. When a respondent answered the call, it was automatically routed to an available CATI interviewer who interviewed the respondent. If the line was busy or there was no response, the system searched for the next available telephone number to call.

Switching between Inbound and Outbound Calls

The CATI system handled both inbound and outbound calls, including appointment calls to households who had requested to be surveyed at a preferred date and time. To optimise the manpower resources to meet the demand of the day, supervisors had the flexibility to assign specific interviewers to take inbound or outbound calls. The automated dialler would identify available CATI interviewers and assign them with calls based on their assigned roles.

Management of Call Load and Other Needs by Supervisors

Inbound call traffic was monitored real-time and enabled supervisors to adjust the system settings to appropriately handle the call load. For peak periods with high volume of inbound calls, more CATI interviewers were allocated to receive inbound calls to ensure that respondents calling in were attended to expeditiously.

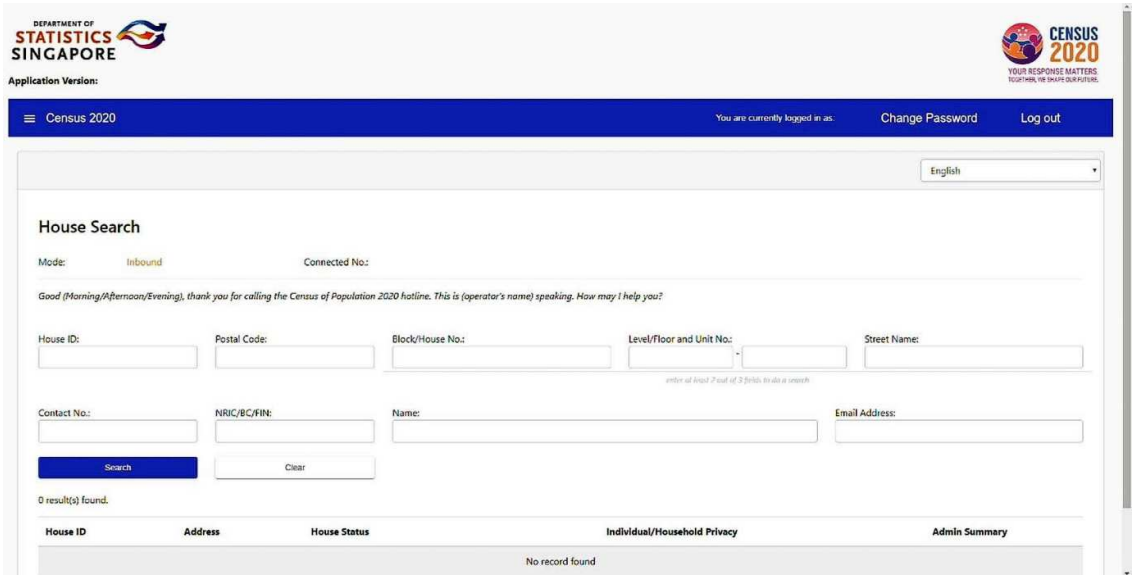
For inbound calls received before or after the CATI operating hours, or during peak periods when there were insufficient CATI interviewers available to answer their calls, the respondents could leave their telephone number for a call back. The CATI system would automatically schedule return calls at the start of the next working day or as soon as a CATI interviewer was available depending on their indicated preference.

In Census 2020, supervisors were also able to assign interviewers with different levels of language proficiency to meet language needs for appointment calls. For example, if the respondent requested for a Chinese-speaking interviewer for an appointment call, the automated dialler would assign the call to an interviewer identified as one with higher Chinese proficiency among the pool of available interviewers.

Authentication Process

There were slight variations between handling an inbound call and an outbound call. For an inbound call (including “overflow calls” made by the system to return missed calls), it was necessary for the CATI interviewer to first verify the selected address. The House Search screen (Figure 3.6.1) was displayed for inbound calls. The greeting message was added to assist interviewers to make proper call introduction. The Mode indicator reflected whether the incoming call was an “Inbound” or “Overflow” call.

Figure 3.6.1: House Search for Inbound Calls



For respondents calling into the Census 2020 Hotline, the CATI interviewer would ask for the House ID which was printed on the notification letter sent to the household. As it was common for respondents to misplace or forget the House ID, the CATI interviewer could also search for the address of the caller using the 6-digit Postal Code or a combination of Street Name, Block/House number and Level/Unit number. After the address was verified, the House Contact Info screen (Figure 3.6.2) was displayed and the CATI interviewer proceeded with the enumeration.

For system-triggered outbound calls (including appointment calls), the House Verification screen (Figure 3.6.3) was shown as the record corresponding to the telephone number was known. Similar to the House Search screen, the greeting message here assisted interviewers to make proper call introduction for outbound calls. The CATI interviewer would confirm the address with the respondent before proceeding to the House Contact screen (Figure 3.6.2) to start the interview.

Figure 3.6.2: House Contact Information

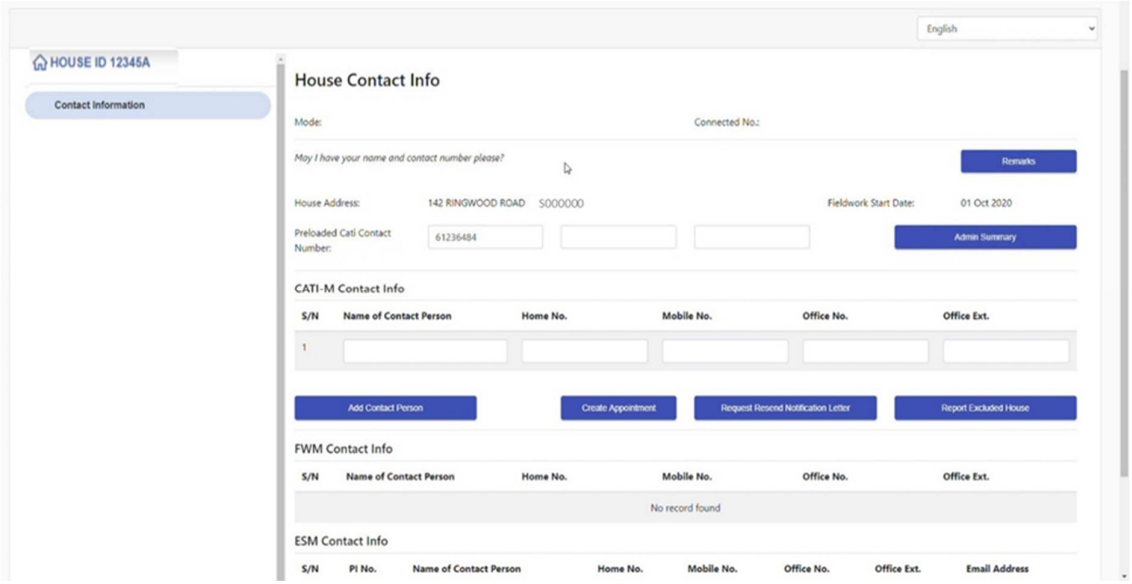
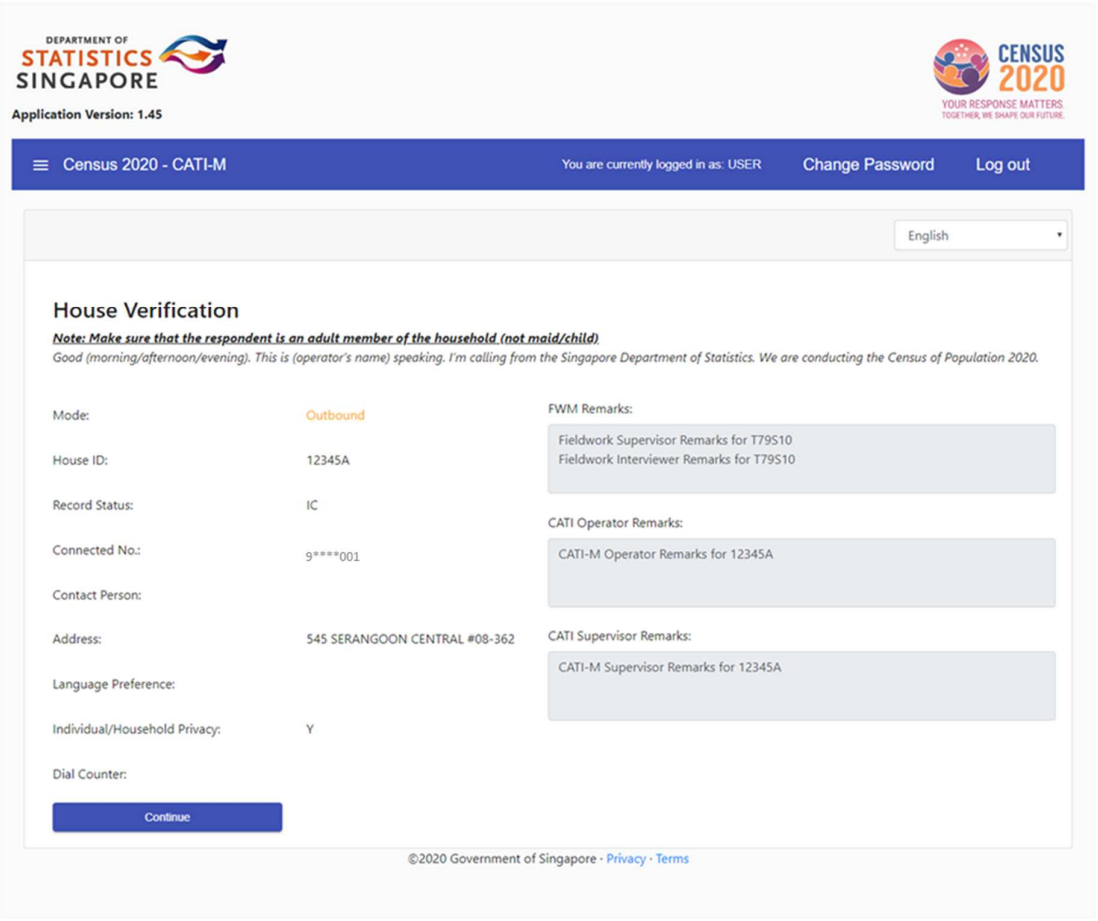


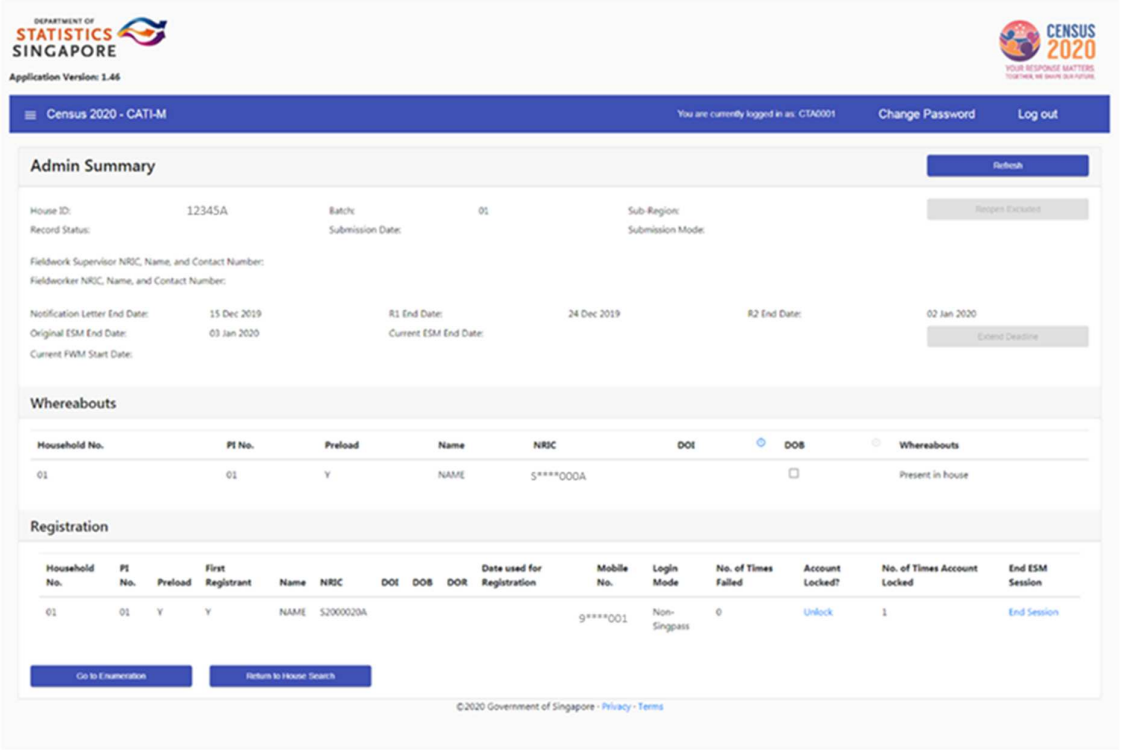
Figure 3.6.3: House Verification for Outbound Calls



Administrative Summary

An administrative summary screen enabled operators and supervisors to access various details on the house record (e.g. first registrant's information, Internet submission due date, survey mode and whether house account was locked, etc.) to assist respondents doing Internet submission and to resolve the problems they encountered. The administrative summary screen (Figure 3.6.4) was enhanced in Census 2020, with additional information on the notification and reminder letter due dates, as well as access and record status history.

Figure 3.6.4: Administrative Summary



The Registration section displayed information of online registrants and allowed supervisors to resolve account and system issues encountered by online users.

The House Access History and Record Status History sections showed the list of users who have accessed the record, as well as the updated record statuses. Such information was useful for the team to follow up on specific queries and feedback from respondents.

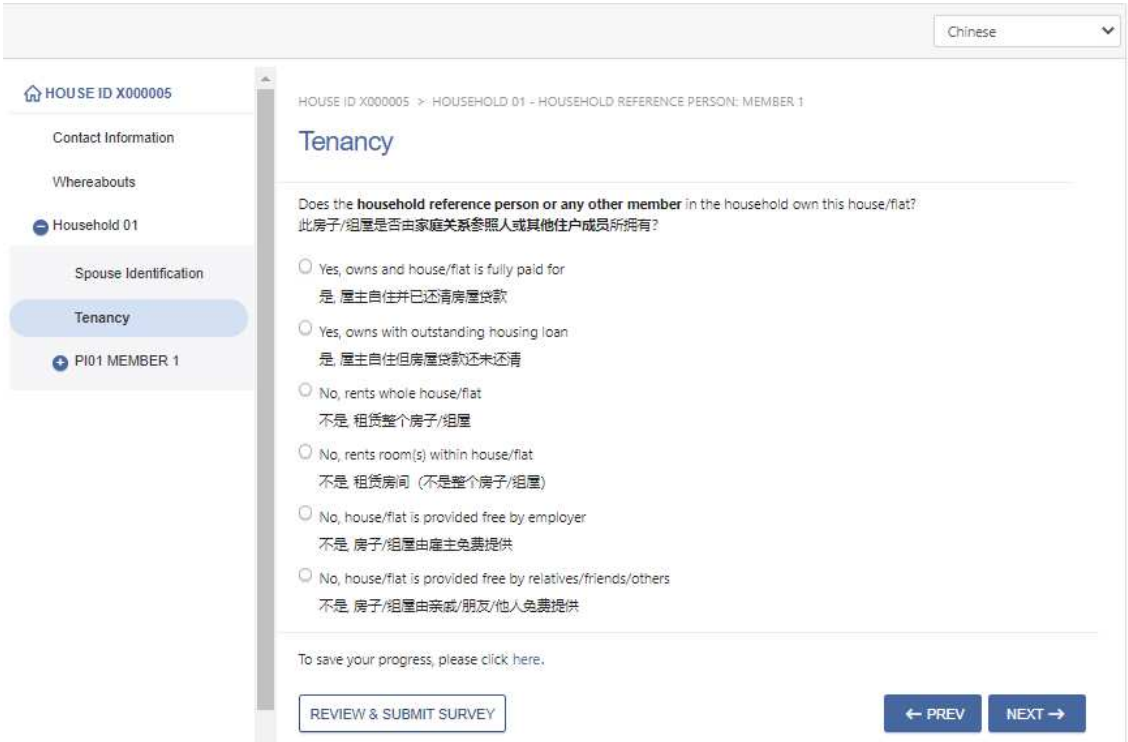
User-Friendly Survey Form

The survey form used at CATI adopted the same features as the Internet form. With automatic branching of questions, the system displayed relevant questions pertaining to the household and its members based on their profile. The online verification checks for completeness highlighted missing fields or data discrepancies to the CATI interviewers, so that clarifications could be made with the respondents before their surveys were submitted.

Information collected from the online survey, CATI and face-to-face interviews were updated directly in the server to allow a consistent set of the information to be provided through the different modes of submission. This, together with the consistency in interface with the Internet form facilitated the CATI interviewers' support to the Internet respondents. The CATI interviewers were able to provide screen-by-screen guidance that corresponded to what the respondents were seeing during their online session.

The availability of survey questions in Chinese, Malay and Tamil languages onscreen was a new addition in Census 2020 (Figure 3.6.5). CATI interviewers could select the language required from the dropdown choices. This helped interviewers with enumeration in the other 3 official languages.

Figure 3.6.5: Translation of Survey Questions



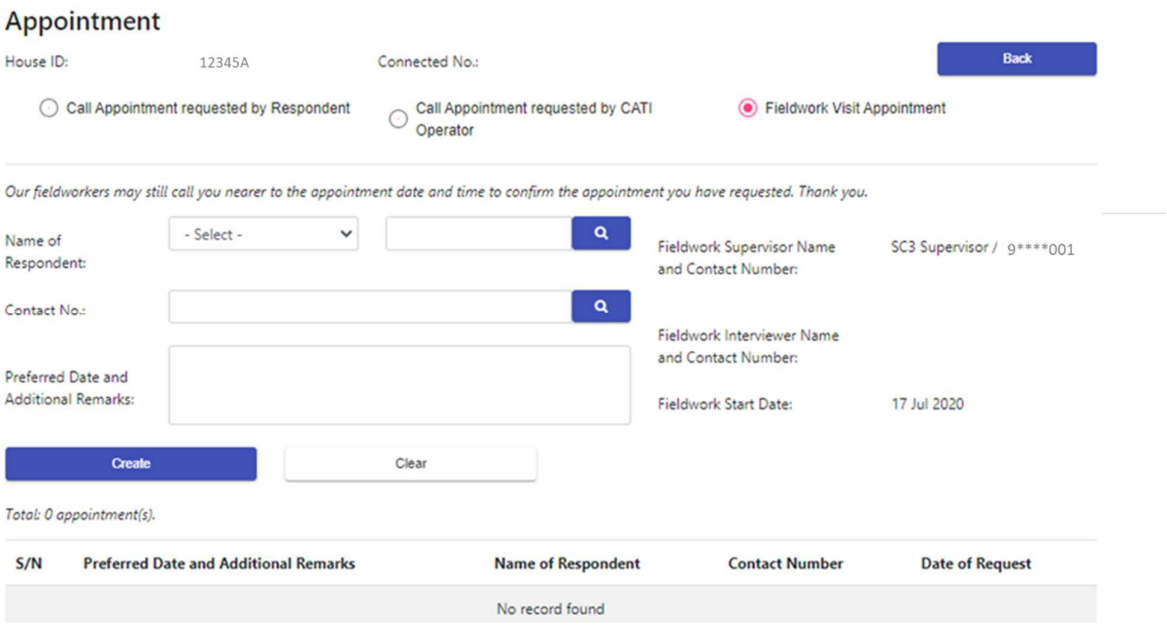
Coordination with Fieldwork and Other Operations Teams

As respondents could call in to the Census 2020 Hotline to furnish information or submit their survey returns at any point of the operations, it was important to ensure that timely updates were provided to the field and data processing teams. Several functions were improved in Census 2020 to facilitate timely information transfer across the teams.

This included a function for interviewers to indicate vacant or non-residential addresses when reported by respondents. This facilitated follow-up by the Field team for verification of such records.

The Fieldwork Visit Appointment function (Figure 3.6.6) was added at CATI to enable CATI interviewers to indicate request by respondents for face-to-face interviews. When an appointment was created, an SMS was sent to the Field team to inform of the field visit request.

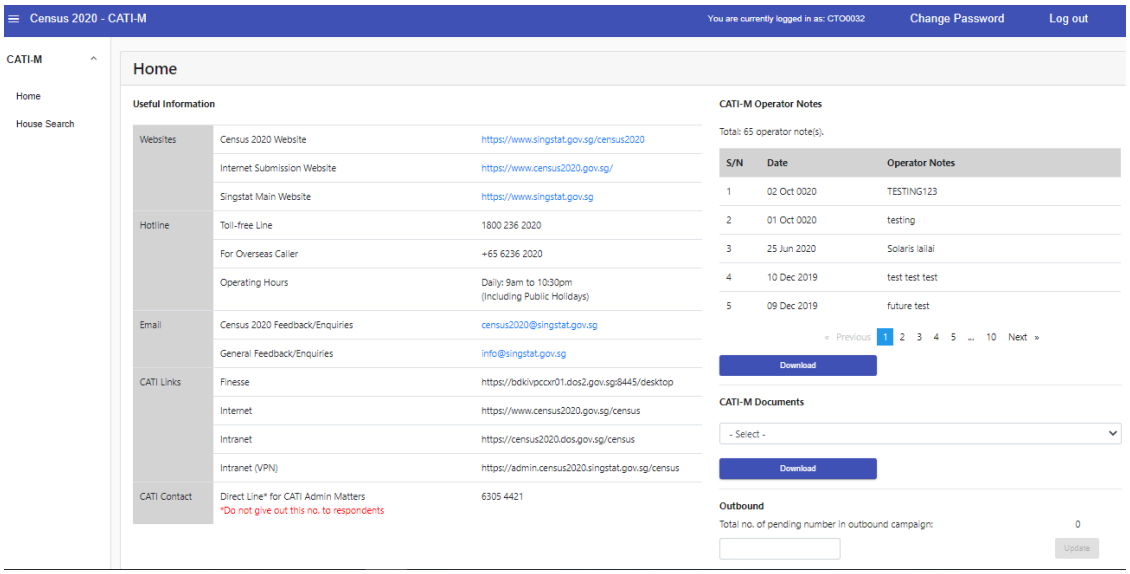
Figure 3.6.6: Fieldwork Visit Appointment



Resources for Interviewers

CATI interviewers were able to access survey reference materials easily from the CATI Home screen (Figure 3.6.7). Daily briefing notes updated under CATI-M Operator Notes and training materials available under CATI-M Documents were useful for interviewers to refer to when needed.

Figure 3.6.7: CATI Resources



CATI during COVID-19

The COVID-19 pandemic posed unprecedented challenges for the conduct of Census 2020 and CATI operations specifically. With work-from-home arrangements in place during CB period between April and June 2020, operations at the Census 2020 Call Centre were scaled down to a large extent. Work processes were changed to allow for a small pool of Census 2020 staff to continue supporting the operation of certain scope of work over the telephone. This included receiving incoming calls for phone interviews and survey enquiries. Calls made to respondents were cut down. More details are in Appendix O.

3.7 FACE-TO-FACE INTERVIEWS / FIELDWORK OPERATIONS

Fieldwork operations were grouped into 3 main regions, namely, Central-South, East-Northeast and West-North. Each region was led by an Assistant Census Director (ACD) and supported by 4 Census Supervisors who oversaw a sub-region each.

Fieldwork operations were carried out from 6 Field Regional Offices (ROs) with a combined staff strength of up to 77 field interviewers. Some of the materials used in fieldwork operations can be found in Appendix J.

3.7.1 Use of Tablets

Riding on the efficiency and enhanced productivity by leveraging technology in the Census 2010, Census 2020 continued to develop a fieldwork application for face-to-face enumeration with the use of a mobile device (i.e. a tablet in 2020), incorporating the lessons learnt from the previous Census.

With the use of tablets, data collected were encrypted and saved to the central database real time. It eliminated the need to print hardcopy forms, manage physical form handling and transcribe data as well as the need to synchronise data at specific intervals.

The same web form used by Census respondents at ESM was deployed for use by the field team. Additional field management functions were included to support the operations planning and needs. For example, field interviewers were able to schedule appointments with respondents, with reminders sent via SMSes to them on upcoming appointments. The application also broadcasted important messages to the targeted group(s) of users. This function enabled all to keep abreast with information disseminated by the ACDs and Census Supervisors.

3.7.2 Fieldwork Management System

The Fieldwork Management (FWM) system enabled the Census Supervisors to allocate and transfer records. Census Supervisors were able to view records a week prior to the allocation of records. This enabled them to plan for record allocation and conduct field reconnaissance of records before actual allocation. Field reconnaissance was especially important for difficult-to-access properties such as gated communities or apartments (mainly condominiums) with access-controlled security gates managed by gate keepers, property concierges or managers. Efforts were required to obtain separate approval for field team to access the estates.

Census Supervisors met their field interviewers twice a week, once in person at the Field ROs and once remotely for progress updates. Supervisors were able to monitor the status of each record and progress of fieldwork through the FWM. During the updates, ACDs and Census Supervisors provided guidance and conducted briefings to ensure the field interviewers were adequately trained and competent in carrying out their tasks.

3.8 NON-RESPONSE FOLLOW-UP

The follow-up of households that did not respond to the Census was an essential stage in ensuring the Census achieve its overall quality targets. Success at follow-up hinged on the ability to identify the non-responding households, make contact with them and offer the appropriate support to get their responses.

3.8.1 Follow-Up Procedures

For Census 2020, the key follow-up strategies included:

Reminder Letters

Reminder letters were an integral tool, used to prompt respondents to continue with uncompleted survey submissions. With up to a total of four reminders sent in Census 2020, timing such letters based on informed trends with the use of data analytics was found to be effective in nudging respondents to complete the survey (more details in Appendix P).

Even though the reminder letters were sent to non-responding households, addresses with contact information continued to be called up by CATI interviewers, with field visits being the last resort.

Targeted Outbound Calls at CATI

For areas with lower response rates, more targeted calling was arranged at the Census 2020 Call Centre to better manage the load for the field. The information was obtained through data of the responses and integrated with the call priority rules.

Making Contact

To maximise the effectiveness of outreach activities by the field staff, the best times to contact households were generally late afternoons, evenings and weekends. Attempts to reach households were also made on different days of the week and at different times of day. It is noted that for 2020, for the period when work-from-home was the default, for those whose work allowed it, the field team was able to reach a high proportion of respondents at home during weekday work hours.

Through returned undelivered mails, addresses reported to be not occupied (for example, a newly-built block of flats, or houses due for demolition) were updated. Field supervisors arranged to check and confirm the occupancy status of the addresses during their field reconnaissance. These records would then not appear on future follow-up lists but be reflected as vacant and out of scope.

Vacant Properties

With the COVID-19 measures implemented, some households made adjustments to their living arrangements in view of child and elder-care needs. This resulted in more efforts in reaching and assessing if a house was occupied and temporarily vacant or was unoccupied. The field team made additional visits after the measures were relaxed to ascertain the final status of the selected address. Visitation cards were left for residents to contact the Census 2020 Call Centre or field staff to complete the survey. Responses continued to be accepted till end December 2020 to allow for delays caused by the prolonged absence from the addresses.

Given the measures implemented during CB and Phase 1 for the COVID-19 situation, Census 2020 relied on sending more reminder letters, targeted outbound calls at CATI as well as modification of outreach activities to non-responding households. In spite of the challenges faced, Census 2020 ensured that attempts were made to reach all non-responding addresses.

Data Processing and Dissemination

CHAPTER 4

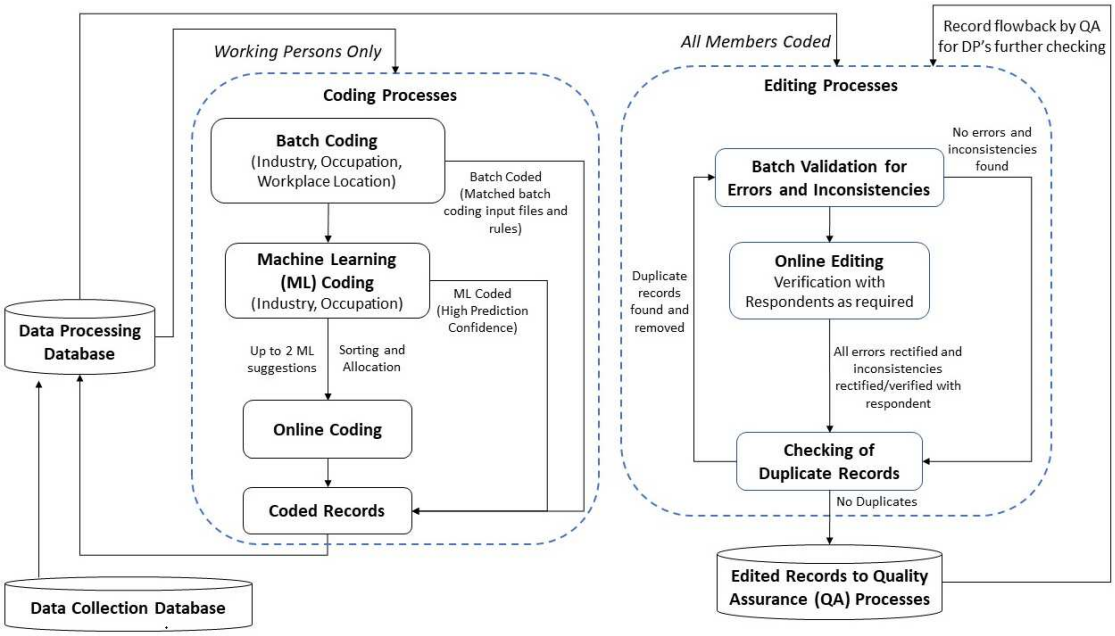
DATA PROCESSING AND DISSEMINATION

4.1 DATA PROCESSING

Census survey returns submitted from the various data collection modes flowed from the collection database to the data processing database for various data verification and processing processes, primarily statistical coding, data validation and editing. The Data Processing team started coding and editing the data after the records were submitted to the system.

The Census 2020 data processing system incorporated enhanced features to streamline operations and reduce manual effort, such as use of Machine Learning (ML) in coding and enhanced batch coding processes (Figure 4.1). After stringent quality checks and the completion of data processing, multiple aggregated cross-tabulations were also generated for broader analysis of data trends and identification of outliers for further checks.

Figure 4.1: Data Processing Workflow



4.1.1 Coding of Industry, Occupation and Workplace Location

Data collected in the Census 2020 were mostly captured in pre-coded categories except for selected descriptive fields including industry, occupation and workplace location and numerical fields such as income. This allowed majority of the items to be captured and coded at source and reduced the subsequent processing efforts.

Coding was necessary to allow descriptive data to be analysed, summarised and compared. It involved the assignment of codes based on descriptive text information collected on industry, occupation and workplace location according to specific sets of classification codes. Industry was coded using the SSIC 2020, occupation using the SSOC 2020 and workplace location using the 6-digit postal code.

All records underwent batch coding as a first stage. This was an automated process during which appropriate codes were assigned by the application program based on the descriptive information captured and in-built coding rules. Descriptive information captured from Census 2020 survey returns were matched against various input files, prepared using the standardised classifications and past survey data. Where a complete match was found during batch coding, the record was assigned with the specific code.

Enhancements to the batch coding processes included the use of more administrative sources as input files for the coding of industry and workplace location. When the respondent's survey returns were in agreement with administrative records, the records were automatically coded using the corresponding administrative data.

Dropdown lists were also implemented during data collection for the first time in Census 2020 to supplement free-text responses for the collection of industry, occupation and workplace location. Respondents were able to select their company name, occupation and workplace addresses from preloaded lists and these selections were auto-coded accordingly to reduce the proportion of survey returns based on free-text survey returns. This not only reduced respondent's burden but also improved the match rate against input files in batch coding processes by standardising the responses.

ML processes were also introduced and used for the coding of occupation and industry. This was developed in-house and built as a module to be linked seamlessly to the Census 2020 IT system. ML used various algorithms to analyse data to predict a likely statistical code. The machine was trained using historical data from MOM's CLFS. Free-text responses collected for industry and occupation were input into the model for prediction of SSOC/SSIC codes. For the coding of occupation, where the prediction confidence was high, the record was automatically coded by ML. Otherwise, up to 2

ML suggestions at a broader level of classification were displayed to facilitate online coding. For industry coding, only ML suggestions were provided to coders in online coding.

With the enhancements on batch coding processes, batch coding rates for industry and occupation were about 75 per cent and 30 per cent respectively, a significant improvement from about 18 per cent in Census 2010. Batch coding rate for workplace location was about 90 per cent. This significantly reduced the manual effort needed for coding.

Records that were not automatically coded proceeded to online coding, in which coding staff reviewed the entries and assigned suitable codes to the records. Sorting and batch allocation were performed for online coding, to group and assign records with similar characteristics to the same staff to improve the productivity.

During the online coding process, coding staff used a search facility to retrieve relevant information from the input files for determination of the appropriate codes. This search facility used the "key word" search method to find an appropriate match. The results of the search were displayed onscreen. ML suggested codes were also displayed to facilitate industry and occupation coding, where available.

After coding was completed for all working members in the house, the house records flowed to the next phase of processing for editing.

4.1.2 Data Validation and Editing

Data verification and editing were performed to ensure completeness and consistency in data collected. The main processes were batch validation, online editing and checking of duplicated records.

Batch validation was an automated process during which all records went through a series of stringent checks based on rules built in. The "error" and "consistency" rules were consolidated from past experiences with censuses and household surveys. "Error" rules checked primarily for missing key information which should not be left blank and validity of codes. They were also designed to detect records with entries for two or more data items which were logically impossible. "Consistency" rules checked for outlier records and scenarios which were unlikely to occur but were still valid and might exist. Examples of such rules include small age difference between parent and children, and attainment of university qualifications at relatively young age. Records which failed error or consistency rules during batch validation were flagged out and retrieved for online verification and editing.

Editors scrutinised the areas flagged, corrected/accepted inconsistencies highlighted for each record, and contacted respondents for clarifications where necessary. Iterative checks were performed and continued until the records were error-free and had inconsistencies resolved.

Towards the end of data processing, checks were conducted to retrieve records of individuals who were enumerated more than once during data collection. This was the result where individuals or households were enumerated at multiple addresses within the survey period. The duplicated records had to be studied and removed to prevent double counting. The retained records were then passed through the online verification and editing for another round of verification of errors and inconsistencies.

4.2 QUALITY ASSURANCE

Edited records were further reviewed at quality assurance stage. These records were put through a series of additional cross-variables consistency checks. Administrative data were also used to identify possible misreporting. Examples of such checks included inconsistency between occupation and employment status such as persons working as food deliverer, taxi driver or private-hire car driver who were not employed by a company on a fixed salary but misreported as an employee.

Records which failed the quality assurance checks were flowed back to the data processing team for further verification and editing. In addition, preliminary data compilation and analyses which included checking of data against historical trends were performed at regular intervals to identify possible data issues for further review and editing. The quality assurance checks served as an additional data verification process through an alternate perspective separate from data processing, to identify, reduce possible errors and enhance the quality of the data.

4.3 RESPONSE RATE AND MODE OF RESPONSE

Despite the Census being conducted in the midst of the evolving COVID-19 situation in 2020 and the adjustments made in response to the measures put in place, the overall response rate for the Census 2020 remained high at 94.6 per cent. Households who provided partial information, were non-contactable or overseas during the survey period, were categorised as non-responding units.

The proportion of households who submitted their survey returns over the Internet was the largest, at 64 per cent. This was followed by submission of survey returns through CATI at 25 per cent and face-to-face interviews at 11 per cent. More

details on the changing modes of response over the years were discussed in Appendix P.

4.4 DATA DISSEMINATION

With the COVID-19 situation and imposition of the CB in April – June 2020, Census 2020 Call Centre operations were scaled back with a small number of staff working from home and field work suspended. Survey returns from some respondents were also delayed till end 2020. The release of the bulk of the Census results was also shifted from February for the previous Census in 2010 to June for Census 2020.

4.4.1 Statistical Releases

From the register-based Census, the merged administrative records provide the basic population count and characteristics such as age, sex, ethnic group, type of dwelling and geographic distribution in Singapore. Basic data on population count and profile from the register-based Census were first released in the Population Trends 2020 report published in September 2020.

Following the completion of data processing for the Census sample enumeration, DOS released a series of topical Statistical Releases (SRs) on detailed Census results during the period of June 2021, as follows:

Publication	Topic	Release Date
SR No. 1	Statistical Release 1 on Demographic Characteristics, Education, Language and Religion	16 Jun 2021
SR No. 2	Statistical Release 2 on Households, Geographic Distribution, Transport and Difficulty in Basic Activities	18 Jun 2021

The SRs present the broad trends and changes between 2010 and 2020. The reports also contain key indicators, comprehensive and detailed tables, charts and descriptions of the concepts and definitions (see Appendix Q – Glossary) which serve to meet the needs of the general public for a wide range of data on Singapore's population and households. They serve as comprehensive reference sources for planners, researchers and other data users requiring in-depth data for their analyses.

The Census 2020 reports are available for free download on DOS's website.

4.5 CONFIDENTIALITY, PRIVACY AND SECURITY

The Census 2020 is conducted under the *Statistics Act*. DOS has the responsibility and obligation to ensure that any personal information provided by respondents for the Census 2020 is kept strictly confidential in accordance with the *Statistics Act*.

Stringent procedures were implemented to ensure that confidentiality was maintained at all times:

- All employees, including casual temporary employees recruited for the Census 2020 project, were required to sign undertakings to safeguard official information and individual information obtained from the Census 2020.
- Access to personal and confidential information was evaluated and granted on a need to know basis.
- Monthly reviews on the access logs were carried out for each module in the Census 2020 system to ensure that there was no unauthorised access.

In the release of statistical information:

- Data are grouped (e.g. information is provided for aggregated age groups).
- Data for specific profiles or geographic areas with populations below a specified threshold are either grouped at broader categories or suppressed.

DOS pro-actively consults with users to balance the need for more information with its requirement to protect confidentiality.

Organisation and Administration

CHAPTER 5

ORGANISATION AND ADMINISTRATION

With the Census of Population being the largest national statistical exercise undertaken, a big pool of staff was involved in a wide range of activities in planning and development, lead up to and conduct of the survey operations and to the results dissemination. Preparation prior to the launch of the survey and support activities were critical to the eventual successful completion of the Census.

5.1 OFFICE SET-UP AND SELECTION OF FIELD REGIONAL OFFICES

To house the various functions and operations teams for the Census 2020, the Department started to source and identify suitable offices from 2018.

5.1.1 Data Processing (DP) Operations

In view of the space constraints in DOS Office, data processing operations were planned to be carried out from an external office space at The JTC Summit. The JTC Summit was chosen due to its accessibility and connectivity to public transport and its ability to support the Data Processing (DP) team's extended operational hours for evening and weekend shifts. The JTC Summit office space [1] accommodated DP operations and a Field Regional Office (RO) for the West-North region. At its peak, it housed a total of about 100 staff, including data processing operators, supervisors, field interviewers and IT support personnel. The office was set up from scratch with the required IT infrastructure (including personal computing devices) to access the data processing systems, with support from DOS' IT and office management teams.

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

The Census 2020 Call Centre[1] was set up in end 2019 to accommodate the CATI operations, which included the team supporting the management of respondent relations besides the hotline team. The dedicated call centre was located offsite, housing about 50 staff per shift, including supervisors, interviewers and IT support personnel. As the personal computers and workstations with network points needed to be connected to the call equipment and automatic outbound dialling system, the call centre location and set-up were provided by the vendor engaged for the

[1] Photos of Census 2020 DP Centre and Call Centre are provided in Appendix S.

development of the IT solution for the Census 2020 project. The vendor also provided the necessary equipment, facilities and support services such as hands-free headsets, recording system and meeting room.

5.1.3 Regional Offices (ROs) for Fieldwork Operations

With the main sample being grouped into 3 regions, namely the Central-South, East-Northeast and West-North. 6 Field ROs were set up to facilitate fieldwork operations (Appendix D).

Field ROs were used primarily by the ACDs, Census Supervisors and field interviewers for reporting, discussion and training purposes. The identified ROs were in closer proximity to the areas covered by each region to reduce the time and effort for the field team in travelling to and fro Field ROs while reaching respondents when needed.

The following factors were considered in the selection of Field ROs:

Accessibility

Field ROs needed to be easily accessible for the field team. They were preferably within the same or in nearby neighbourhood to the areas covered in the region. This reduced travelling time and improved productivity of the fieldwork operations. ROs needed to be well connected to public transport network as well since most of the field team relied on public transport in the course of their work.

Operating Day/Hours

As fieldwork operations were ongoing through the week and the field teams typically worked beyond normal office hours, the Field RO needed to be accessible including on weekends to facilitate fieldwork operations.

Tenure Period

As Census fieldwork operations lasted for a duration of up to 9 months, facilities which were able to accommodate short-term lease contracts and available for rental for the period needed were considered.

Taking into the above considerations, 3 Field ROs were rented from community clubs while the remaining 3 Field ROs were set up from rooms within the CATI and DP operations and DOS Office in Funan. The 6 Field ROs included:

Central-South	-	DOS Office at Funan
	-	Whampoa Community Club
East-Northeast	-	Hougang Community Club
	-	NCS Bedok
West-North	-	Canberra Community Club
	-	The JTC Summit

5.2 CENSUS BUDGET

The total project cost incurred for the planning and conduct of the Census 2020 was $16.98 million.

Expenditure on the IT development and related items amounted to an estimated $5.14 million. This included the development of the computer applications for the Internet, CATI and Fieldwork, provision of the tablets for field survey and set-up of the IT infrastructure.

The operating expenditure, covering the manpower cost, leasing of the Census 2020 Call Centre facilities, set-up and leasing of the DP Centre and Field ROs for fieldwork, publicity, printing, office supplies, hosting services for the IT infrastructure and other IT operating services was about $11.84 million.

The Census 2020 expenditure was slightly lower than the $18.0 million incurred for the previous Census in 2010, primarily due to the reduction of manpower costs with the scaling back of fieldwork and CATI.

5.3 IT PROCUREMENT AND MANAGEMENT OF CENSUS IT SYSTEM

In developing and implementing the IT solution for the Census 2020 system, an Invitation to Tender (ITT) was issued in the Government Electronic Business (GeBiz) in October 2018. The tender was awarded to NCS Pte Ltd in February 2019.

Detailed requirement studies were conducted for the vendor to understand the various functions required of the system applications and set-up. A user experience design was conducted, and DOS officers undertook intensive usability tests to verify

the system performance before it was finally commissioned for use in the actual Census in January 2020.

5.4 CENSUS STAFF

Planning and conduct of the Census 2020 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 Deputy Chief Statistician and Census Director. In addition, 9 Deputy Census Directors (DCDs) oversaw key areas including pre-Census preparation and database set-up, data collection, data processing, data analysis and dissemination, publicity, manpower, logistics support and administration. Another 25 ACDs and 44 supervisors were appointed to run and supervise the Census 2020 operational activities (see Appendices A and B).

5.4.1 Recruitment of Daily-Rated Staff

Besides the planning and supervisory staff, some 220 daily-rated staff supported the day-to-day operations. To meet the manpower requirements for the Census administration, data collection and data processing, office clerk, computer-assisted telephone interviewing (CATI) interviewers, data processing (DP) operators and field interviewers were contracted through a bulk 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.

As some respondents did not speak English, to overcome potential language barrier to allow for the completion of census survey forms or clarification for information submitted, daily-rated staff with proficiency in different languages or dialects were recruited.

5.4.2 Staff Strength

A summary of the total staff strength is as follows:

Permanent/Contract Officers	Number
Chief Statistician	1
Deputy Chief Statistician	1
Census Director	1

Deputy Census Directors	9
Assistant Census Directors	25
Census Supervisors	44

Daily-Rated Staff *	Number
Office Clerk	1
CATI Interviewers	53
Field Interviewers	77
DP Operators (DPO)	89

** This refers to the maximum number employed during the Census 2020 survey operations.*

Due to the COVID-19 outbreak, face-to-face visits were only arranged upon request from mid-February to early March 2020 and carried out after health and travel declarations were obtained from the households which had requested for face-to-face interviews.

With the implementation of elevated safe management measures during the CB period, Census officers telecommuted and worked from home instead of reporting to the Census offices.

A small pool of the CATI interviewers and DPOs also performed hotline call duties from home, after an urgent procurement was made for the additional services required, i.e. mobile phone SIM cards, to allow them to call respondents using officially issued telephone lines.

Field visits were suspended from April to mid-July 2020 and resumed only towards the second half of July, a month after the Phase 2 post-CB started.

5.4.3 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 available for the survey during normal office hours. The Census 2020 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.

When the Census was first launched, CATI interviewers worked based 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. Each operator worked a 6-day work week with 1

day off before starting the next week. The DP team started with day shift that operated from 8.30am to 6pm on Mondays to Fridays, excluding public holidays.

To ensure business continuity and a safer working environment for those returning to the workplace, a safe management system including split team arrangements, staggered work/lunch hours, safe distancing at work and regular disinfection of common touchpoints were put in place. CATI interviewers at Census 2020 Call Centre and DPOs at DP Centre were split into 2 teams and put on a rotating roster to reduce the risk of cross-team infection in the event of an incident.

5.4.4 Staff Profile Function Under Census 2020 System

To manage the staff profile, access rights, staff placement and movement for the Census staff, Staff Profile function was designed within the Census 2020 IT system. The system systematically captured the temporary staff movement record, thereby enhancing the coordination processes between the CATI, Fieldwork, DP and Administration teams.

5.5 TRAINING

Training of the staff at various levels was essential to ensure the quality of the data collected and processed. Training was one of the key factors in ensuring that the services delivered by the Census staff to respondents met the service standards of the Department. Training materials were developed based on past Censuses and GHS experiences and updated to reflect the latest Census 2020 requirements. To better engage the trainees and optimise the effectiveness of the training, the team reviewed and incorporated more visual aids in the form of animation and role-play and the use of interactive online quizzes.

5.5.1 Training of CATI Staff

Training for CATI supervisors was conducted over two 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 Internet 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 SSIC 2020 and SSOC 2020 were also provided to equip the supervisors with working knowledge in these aspects.

A three-day mass training session was conducted in February 2020 for the CATI interviewers. A briefing on the overview of Census 2020, concepts and definitions, a walk-through of the different question flows, telephone techniques and protocols for handling different situations were 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 onsite to constantly reinforce the important key points and to provide updates on processes. For new CATI interviewers, CATI supervisors would guide them before allowing them to attend to calls on their own. During the period where interviewers worked from home, regular check-ins were also conducted by supervisors who were assigned to partner and guide the selected interviewers. As recruitment was ongoing, subsequent replacement trainings were held in small groups.

5.5.2 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 February 2020. Supervisors assisted in developing and testing the IT system. Briefings and training were provided prior to the conduct of the SLHH which they were involved in.

The ACDs and field supervisors were given two 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 Census 2020, FWM and use of the tablet for enumeration were provided by the IT vendor.

When fieldwork resumed in July 2020, in view of safe distancing measures implemented in response to the COVID-19 situation, the training for field interviewers were conducted in small groups of not more than 5 at each location. Trainings for field interviewers were conducted with the use of digital platform, with a trainer facilitating his/her own small group. This approach to mass training from different locations, enabled the streamlining and sharing of the training resources as the trainees shared and learnt from others from different locations, during the question and answer and discussion sessions. Trainings were recorded and used during subsequent trainings for the later batches of interviewers.

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 tablet for enumeration, the fieldworkers also underwent hands-on sessions using practical scenarios. Field interviewers were paired up to role-play on the enumeration procedures as part of the training, in their small groups. Fieldwork operations, including protocols for field visits and techniques of interviewing were emphasised.

5.5.3 Training of Data Processing Staff

Training of the DP staff was also conducted separately for the supervisors and DPOs.

Training for DP supervisors was completed in a day as all the supervisors were involved in both the development and testing of the DP 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 DP system, their supervisory roles and clarify any issues or concerns on new scenarios.

Training was provided to ensure that the DPOs were able to handle the coding 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 DPOs attended three days of DP training. The training was divided into two parts: (i) concepts and definitions of the data items collected in the Census 2020, and (ii) hands-on sessions to familiarise with the DP system.

For data coding, DPOs were taught the principles and structure of the SSIC 2020, SSOC 2020 and coding of workplace location. To reinforce the concepts taught, a hands-on session was conducted to allow the DPOs to be familiarised with the different techniques used for data coding.

For data editing, the DPOs 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.

When DP work resumed, in view of safe distancing measures implemented in response to the COVID-19 situation, the training for DPOs were conducted in small groups of not more than 5 at each cluster, in the DP Centre.

5.6 PUBLICITY AND RESPONDENT RELATIONS MANAGEMENT

While efficient work processes were critical in the smooth delivery of survey operations, publicity was a key factor in soliciting public support and cooperation to ensure the successful conduct of Census 2020. A whole suite of Census publicity activities was planned with the objectives of promoting awareness of the Census at the national level and providing relevant information to the respondents who were selected to participate in the Census. To ensure that publicity activities reached out to different audience groups, the campaign included digital platforms on top of the usual traditional publicity modes.

5.6.1 Thrusts of the Census 2020 Publicity

The main thrusts of the Census 2020 publicity campaign were as follows:

a) To create and sustain public awareness by publicising the conduct of the Census 2020 through various publicity channels and official media so that the public were more willing to cooperate;
b) To allow the public a better understanding of the purpose of Census and usefulness of the data collected to galvanise their support and cooperation in the Census 2020; and
c) To articulate the importance of accurate and complete information to be furnished by respondents, with provided information used by Government Ministries and agencies in their policy planning and formulation for the population.

5.6.2 Strategy of the Census 2020 Publicity

Census 2020 publicity was carried out progressively over 3 phases at a budget of about $530,700. The type of publicity channel/media for each stage was determined by the publicity focus, target audience and cost effectiveness and coordinated with the services of the Government's Master Media Agency. Together, the different channels covered as wide an audience group as possible. A summary is provided in the following table:

Table 5.6.2: Census Publicity

Phase 1: Pre-Census Aug 2019 – Jan 2020	Phase 2: Enumeration Feb – Oct 2020	Phase 3: Post-Census Nov 2020 onwards
(a) Publicity Focus		
• Create public awareness • Articulate the purpose and importance of the Census	• Galvanise public support and seek cooperation • 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	• Thank the public for their support, cooperation and feedback • Inform the public on the broad timeline of Census 2020 releases • Release of key Census 2020 results
(b) Target Audience		
• General public	• Households selected for enumeration • General public	• General public • Business community and academia
(c) Key Publicity Media/Channel		
• Census 2020 information article in Statistics Singapore Newsletter • Census 2020 logo and tagline	• Census 2020 Webpage • Press Release of launch of Census 2020 • Notification letters, Census 2020 information pamphlets and tokens of appreciation (coasters and bookmarks) to households selected for enumeration • Census 2020 print and digital posters at public locations (e.g. Public Libraries, Community Centres, Neighbourhood Police Posts, Hospitals, Sports Centres, Family Service Centres, Social Service Offices and Singapore Pools outlets) • Radio commercials • Advertisements (e.g. newspapers and MRT trains) • Uploading of Census 2020 video onto digital platforms (e.g. DOS's YouTube Channel, SingStat Website)	• Updates via DOS and Census 2020 Webpage • Press releases of key Census 2020 results • Census 2020 information article in Statistics Singapore Newsletter • Media briefing, community and academics engagement sessions on the Census release • Connect with respondents and users who previously queried about the Census release

Phase 1: Pre-Census Aug 2019 – Jan 2020	Phase 2: Enumeration Feb – Oct 2020	Phase 3: Post-Census Nov 2020 onwards
	(c) Key Publicity Media/Channel (Cont'd)	
	• Targeted digital advertisements through platforms (e.g. YouTube and websites such as The Straits Times, Channel NewsAsia) • Broadcast across government agencies on Workplace by Facebook • Census 2020 information article in Statistics Singapore Newsletter • Collaboration with NLB on a Census article	

Phase 1 – Pre-Census

Census Information Article

The September 2019 issue of the Statistics Singapore Newsletter (SSN) featured an article on Census 2020. It provided information on what the Census was about, the history of Census, the approach of conducting the Census 2020, improvements made to better support data collection and the tri-modal data collection strategy comprising Internet submission, CATI and Fieldwork. The paper is included as Appendix N in this report.

The Census 2020 logo and tagline (Figure 5.1) were unveiled in the same issue of the SSN. The logo for Census 2020 depicted four stylised icons of individuals representing people from the four ethnic groups – Chinese, Malay, Indian and Others. The positioning with one in front of the other symbolised togetherness in supporting Census 2020. Elements of the Singapore crest have been incorporated to create a Census logo that is representative of census-taking in Singapore. The logo was designed to reflect the cooperation and active participation of all respondents towards the successful conduct of Census 2020 in Singapore. The tagline "Your Response Matters. Together, We Shape Our Future." emphasised the importance of participation of all selected households.

Figure 5.1: Census 2020 Logo and Tagline

Phase 2 – Enumeration

Census 2020 Webpage

The Census 2020 Webpage was launched on 4 February 2020. It served as an avenue to:

a) Publicise and create awareness for the Census 2020;
b) Assure the public of data confidentiality and security of information;
c) Seek cooperation from selected respondents to submit their survey returns via Internet, telephone or face-to-face interviews;
d) Provide a convenient entry point to Internet submission portal; and
e) Allow users to self-help on Frequently Asked Questions (FAQ) via the Ask Jamie virtual assistant which helped reduce the enquiry calls to the Census 2020 Hotline.

Official Launch

A press release (Appendix L) was issued on the Census launch date, 4 February 2020, to inform the public of the modes of data collection and how selected households could submit their survey returns. General information on the Census 2020 was also provided.

Notification to Households

Notification letters (Appendix H) were posted to households selected for the Census sample enumeration progressively from 4 February 2020. Together with the notification letter, the selected household received the Census 2020 information pamphlet (Appendix F) and a specially designed Census souvenir (Appendix E).

The notification letter informed households that they have been selected for the Census 2020 and provided information on the available submission modes and submission deadline. The information pamphlet outlined the purpose of the Census and the type of information collected. These materials were available in the four official languages of English, Chinese, Malay and Tamil. With greater familiarity and adoption of Internet submission of forms, the Internet user guide (Appendix G) was placed online to assist users on-the-go and provided step-by-step instructions and screenshots on how to submit the survey returns online.

Other useful information like the Census 2020 Internet submission website, toll-free hotline number (1800-236-2020), Census Webpage and email address were also printed in the publicity materials to facilitate Internet and telephone submissions as well as public enquiries.

Reminders to Households

Reminder letters (Appendix H) were posted to selected households if their survey returns remained incomplete by the stipulated deadlines. Due to the impact of COVID-19, fieldwork was suspended for 2 – 3 months. In addition to the two reminder letters sent, further reminder letters were sent to households yet to submit the survey by the extended due dates to boost response.

Reminder emails and SMSes were also sent to respondents who requested for email reminders/SMSes via the self-service feature on our Internet submission portal.

Census 2020 Poster

The design of the Census 2020 poster (Appendix E) portrayed the coverage of the Census 2020, including household and housing characteristics, economic profile, education profile and demographic characteristics. To generate public awareness, these posters were distributed to Singapore Police Force (SPF), People's Association, Town Councils and other government agencies for display at strategic locations such as community centres/clubs, neighbourhood police posts, regional and community libraries, sports centres and hospitals.

Radio Commercials

Radio commercials were broadcasted in four official languages over Class 95.0 FM, Yes 93.3 FM, Capital Radio 95.8 FM, Warna 94.2 FM and Oli 96.8 FM during the enumeration period from February to August 2020.

Advertisements in Newspapers and Mass Rapid Transits (MRTs)

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

Advertisements were also placed in MRTs running on North-South, East-West, North-East, Circle and Downtown lines to generate public awareness.

Digital Advertising on YouTube and Websites

With an increased reliance on digital platforms for news and entertainment updates, a video on Census 2020 was produced and placed/advertised on YouTube, Singapore Department of Statistics' Corporate Website and Census 2020 Webpage. Digital advertisements were also displayed on other whitelisted websites (e.g. The Straits Times, Channel NewsAsia, TheSmartLocal, Yahoo, AsiaOne) to reach out to the online community.

Census 2020 Token of Appreciation

As part of the notification package, Census 2020 coasters 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.

Census Information Article

In conjunction with the conduct of the Census in 2020, the National Library Board wrote an article "Head Count: The History of Census Taking in Singapore", which was reviewed by DOS, on how census taking had evolved over the last 150 years. The article was published in the January – March 2020 issue of NLB's BiblioAsia publication. The article is included as Appendix M in this report.

The September 2020 and March 2021 issues of the Statistics Singapore Newsletter (SSN) featured other articles on the conduct of Census 2020 amidst the

COVID-19 pandemic and response modes. These are included as Appendices O and P in this report.

Phase 3 – Post-Census

Latest updates on Census 2020 were posted on the Census Webpage until its closure on 31 December 2020.

With the release of the Census 2020 results, softcopy publications and accompanying tables in excel format were made available for free download online from DOS's website.

5.6.3 Public Feedback

During the Census operations from February to December 2020, a total of 4,236 feedback and queries on the Census 2020 were received via emails and letters. Majority of these (97 per cent) were received via emails.

Feedback can be broadly classified as follows:

Table 5.6.3: Public Queries and Feedback

Total	**4,236**
Internet Submission Related Issues	**1,932**
Login and Account Activation	608
Requests to Extend Internet Submission Due Date	1,077
Clarifications on Data Items	77
Reports on Technical Problems Encountered	32
Requests for House ID and Password	96
Other Issues	42
Request for CATI Interview	**352**
Operations	**1,873**
Updates of Survey Returns Submitted, including from Overseas Members	116
Requests for Notification Letters	362
Clarifications on Participation in the Survey	519
Requests for Confirmation of Submission	92
Report Successful Completion of Survey	281
Report Vacant Addresses or Addresses Used for Other Purposes	126
Clarifications on Confidentiality Issues	32
Verify Authenticity of Survey and Identity of Survey Officers	78

Table 5.6.3: Public Queries and Feedback (Cont'd)

Operations (Cont'd)	
Requests to Extend Submission Due Date	51
Requests for Fieldwork Follow-Up	25
Requests for Email/Letter with Required Information	107
Other Requests/Clarifications	84
Feedback on Service	**35**
Others	**44**
Data Requests	11
Comments/Suggestions	33

The additional letters sent to encourage households to submit their survey returns via the Internet led to an increase in the percentage of respondents' feedback for assistance on Internet submission, from slightly more than one-third of the total feedback in 2010 to almost half of the total feedback in 2020. Of these, majority of the feedback for Internet submission was to request for an extension to the submission deadline.

Separately, with increased public education and awareness in illegitimate soliciting of personal information, respondents were also more vigilant when providing information for the survey via the phone. On top of calls to the Census 2020 Hotline to verify identities of callers/visitors, 78 emails were received to confirm the authenticity of the survey and identity of Census officers before respondents were willing to provide the required information.

Overall, Census 2020 received a total of 4,236 feedback, more than double the 1,958 feedback received in Census 2010. Aside from growing Internet penetration and the convenience of using emails as a feedback tool, the increase in feedback is also partly attributed to the scaled-down call operations during CB. With a reduced pool of hotline officers in line with the government initiative on safe distancing measures, respondents who had difficulties connecting through the Census 2020 Hotline relied on email as a form of communication. Email was also the main mode of communication for the pool of respondents who were overseas and were unable to return to Singapore due to travel restrictions implemented.

The Census 2020 toll-free Hotline received over 36,000 calls from respondents who called in mainly to submit their survey returns via telephone, make general enquiries, verify identity of hotline, fieldwork and data processing officers or seek assistance in submitting information over the Internet. Compared to the over 52,000 calls received in Census 2010, the decreased inbound call volume for Census 2020 could be attributed to scaled-down call operations and the increased preference for

digital communication such as emails and online self-help over speaking to an interviewer in person.

Appendices

CENSUS 2020 LIST OF CENSUS OFFICERS

(As at 4 February 2020, launch of Census 2020)

DEPARTMENT OF STATISTICS

Chief Statistician	Ms Wong Wee Kim
Deputy Chief Statistician	Dr Koh Eng Chuan
Census Director	Ms Seet Chia Sing
Deputy Census Directors	
Internet Support, CATI and Respondent Management	Mr Foo Chuanyang
Fieldwork	Ms Teo Wan Choo (till Mar 2020)
Data Processing	Ms Huang Kailing, Karin
Database Activities and Quality Assurance	Ms Tan Yeow Lip
Data Analysis & Publication	Ms Koh Wee Ling
Manpower and Logistics	Mrs Lim Pek Hoon, Sally
Administration, Procurement and Budget	Ms Koh Hwee Fang Ms Tan Siok Hoon
Publicity	Ms Ang Seow Long
Assistant Census Directors	
Internet Support, CATI and Respondent Management	Ms Chan Huiyi, Charlene Ms Chia Wai Yin Mrs Tan-Chang Hwee Yin, Eunice Ms Kalavathy Jayaram Mr Sia Ziyi Mr Tan Wah Kia Ms Wong Wei Lin

Fieldwork	Ms Foo Wan Ting Mr Seen Jian Yi, Roger Mr Tan Kian Heng
Data Processing	Ms Cai Jialin Mr Tham Zheng Kang Mr Toh Wei Jun Ms Yap Wei Ni
Database Activities and Quality Assurance	Ms Tan Min Ting, Edna Mr Pang Chin Eng Ms Chia Aik Miang Ms Seet Ming Lee
Data Analysis & Publication	Ms Chia Aik Miang Ms Tan Min Ting, Edna Mr Eng Kah Joo Mr Seah Cheng Xin, Esmond Mr Pang Chin Eng Ms Lim Mui Kuen, Sandra Mr Tham Zheng Kang Mr Wong Kwok Wing Ms Wong Wei Lin
Manpower and Logistics	Mr Yap Yee Liong
Administration, Procurement and Budget	Ms Wong Chee Yong, Joey
Publicity	Ms Lee Pey Bing

Census Supervisors and Corporate Support Staff

Internet Support, CATI and Respondent Management	Ms Ang Qiu Yan Ms Chua Bee Lian Mr Loh Kheam Yeow, Gabriel Ms Goh Kheng Shyan Ms Chew Hui Li, Jacqueline Mr Mohamed Hisyamuddin Ms Nuraini Sjamsoeddin Ms Wong Mun Mun

Fieldwork	Ms Tan Shuying, April Ms Cheong Wei Qi Ms Lim Wen Xin, Charmaine Ms Cynthia Wilson Mr Kok Zi Yao, Gabriel Ms Heng Siyun, Cheryl (till May 2020) Mr Neo Jie Sheng, Jackson Ms Lam Xin Hua Mr Lee Han Peng Ms Lee Yan Ms Ong Si Hui, Shannen Mr Soh Chee Wei Mr Wong Wei Hao
Data Processing	Mr Tay Hao Zhong, Daryl Ms Feng Huimin Ms Tan Yu Wen, Joanne (till Oct 2020) Mr Ho Rui Hern, Jonathan (till Oct 2020) Mr Neo Teng Yong Mr Tan Zheng Hao, Ronald Ms Wong Lye Ying
Database Activities and Quality Assurance	Mr Koh Yong Siang Ms Toh Yan Ling Ms Yeo Soek Lee Ms Yeo Yen Fang
Manpower and Logistics	Mr Ong Yi Chon, Russell Ms Ho Si Hui, Sylvia Ms Tan Shi Ying
Administration, Procurement and Budget	Ms Ang Kim Ling Mr Ng Meng Huei, Darren (till Nov 2020) Mr Lim Ching Thong, Dennis Ms Lim Jia Jun, Fiona
Publicity	Ms Tiew Jia Ling
Human Resource	Ms See Bee Leng, Michelle Ms Ng Wan Ting Mr Ng Yew Yeong

Machine Learning	Mr Chan Wen Chang Mr Chen Tian Min Mr Chui Tian Wei Mr Teo Zhiwei

IT SERVICES AND SUPPORT[1]

(As at 4 February 2020, launch of Census 2020)

Infocomm Technology Section

Deputy Director	Mr Gan Wei Boon
Senior Assistant Directors	Mr Gregory Seow Mr Alvin Wu Mr Lai Yew Meng (till Jan 2021)
Project Manager	Ms Gayathri Narayanan
Digital Business Analyst	Mr Wang Jun Kun
Application Infrastructure Engineer	Mr Alvin Wu Mr Eugene Seah

Vendor Team from NCS Pte. Ltd. and NexLabs

Project Managers	Mr Chew Kok Yong, Edwin Mr Kee Chye Huat Mr Ong Chin Po, Johnny Mr Tho Lai Kum, Kenny
Team Leaders	Ms Huang Wei Xuan Mr Ker Shih Jie Mr Lau Wee Yen Mr Ng Ying Ming Ms Soong Li Ching, Michelle
Programmers and Support Staff	Mr Asurage Sures Dananjaya Senevirathna Mr Chan Yong Jia Mr Chong Chee Wai, Mike Ms Hung Poh Poh Ms Kong Kai Li, Kelly Mr Mervyn Kwok Mr Ong Aerone Guerrero

[1] All IT officers including the vendor team, provided support to IT systems and development with no access to data.

Programmers and Support Staff	Mr Ooi Sin Eng Ms Sivagamavalli Pachaiyappan Mr Teoh Yong Yao, John Mr William Atienza Ms Wong Tze Yin

EXTRACTS FROM THE STATISTICS ACT, CHAPTER 317

REVISED EDITION 2012

Authority to Collect and Process Data

Section 3. (1) The Department of Statistics and all research and statistics units may, in accordance with the provisions of this Act, collect and process data for statistical purposes.

Authority to Issue Requisition for Information

Section 5. (1) It shall be lawful for the Chief Statistician or the director of a research and statistics unit to issue a requisition to any person or the occupier of any premises to furnish particulars and supply information to him, for the purpose of obtaining data for statistical purposes, and every such person or occupier is bound to furnish the particulars and supply the information to the best of his knowledge and belief.

Section 5. (2) A requisition shall —

(a) be in writing;

(b) be served upon the person to whom it is addressed or the occupier of any premises, as the case may be, in the manner specified in section 11; and

(c) specify the particulars of information required.

Section 5. (3) A requisition may —

(a) specify the form in which and the time within which the particulars and information are to be furnished;

(b) require the particulars and information to be furnished periodically at or within such time or times and in such form or forms as are specified in the requisition; and

(c) specify the place or manner at or in which the particulars and information are to be delivered.

Section 5. (4) No person is bound to furnish any particulars or information other than those which are accessible to him or derived by him from any business, occupation or work in the conduct or supervision of which he is engaged.

Disclosure of Information

Section 7. (1) No person shall disclose any particulars or information obtained under section 5 or 6 in a form that may identify any person without the prior consent in writing of the person that may be identified by such disclosure.

Section 7. (2) Notwithstanding subsection (1), the Chief Statistician or the director of a research and statistics unit, as the case may be, may disclose particulars or information obtained under section 5 or 6 —

(a) as statistics which do not identify any person;

(b) as anonymised microdata to —

(i) any public agency; or

(ii) any other person within a class specified in the Third Schedule;

(c) for the purposes of any proceedings for an offence under this Act or any report of those proceedings;

(d) that are of a general nature relating to the products or services provided by, the number of employees in or the addresses of, an establishment; or

(e) that are already available in the public domain.

Section 7. (3) The Chief Statistician or the director of a research and statistics unit may, in respect of any particulars or information disclosed to any person under subsection (2), impose conditions as to the use of such particulars or information by notice in writing to that person.

Section 7. (4) If any person discloses any returns or any particulars or information contrary to this section, or fails to comply with any conditions imposed on him under subsection (3), he shall be guilty of an offence and shall be liable on conviction to a fine not exceeding $10,000 or to imprisonment for a term not exceeding 12 months or to both.

Impersonation of Statistical Officer

Section 8. (1) Any person who impersonates a statistical officer shall be guilty of an

offence and shall be liable on conviction to imprisonment for a term not exceeding 6 months.

Section 8. (2) In this section, statistical officer means —

(a) an officer of the Department of Statistics; or

(b) an officer of a research and statistics unit.

General Penalties

Section 9. (1) Any person who —

(a) wilfully refuses or without lawful excuse (the proof of which lies on him) neglects to furnish the particulars or information required by a requisition within the time allowed for furnishing them or to furnish them in the form specified or prescribed, or to authenticate them in the prescribed manner, or to deliver them at the place or in the manner specified or prescribed for the delivery thereof;

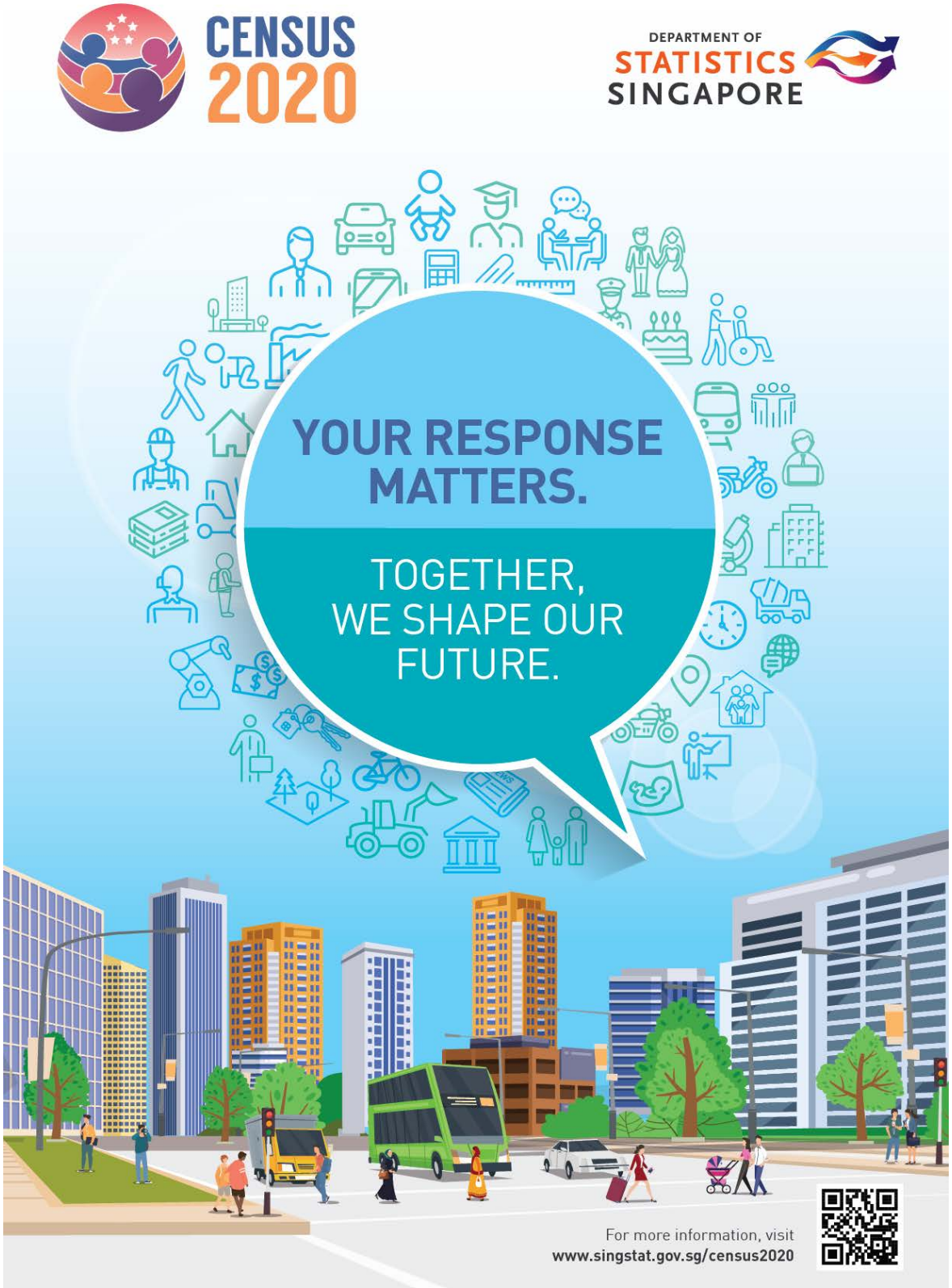
(b) wilfully furnishes or causes to be furnished any false particulars or information in respect of any matter specified in the requisition requiring particulars or information to be furnished; or

(c) refuses to answer, or wilfully gives a false answer to, any question necessary for obtaining any information or particulars required by a requisition to be furnished under this Act, shall be guilty of an offence and shall be liable on conviction to a fine not exceeding $1,000 and, in the case of a continuing offence, to a further fine not exceeding $100 for every day during which the offence continues after conviction.

CENSUS 2020 FIELDWORK REGIONS

Note:
* Planning Area is covered by two fieldwork regions

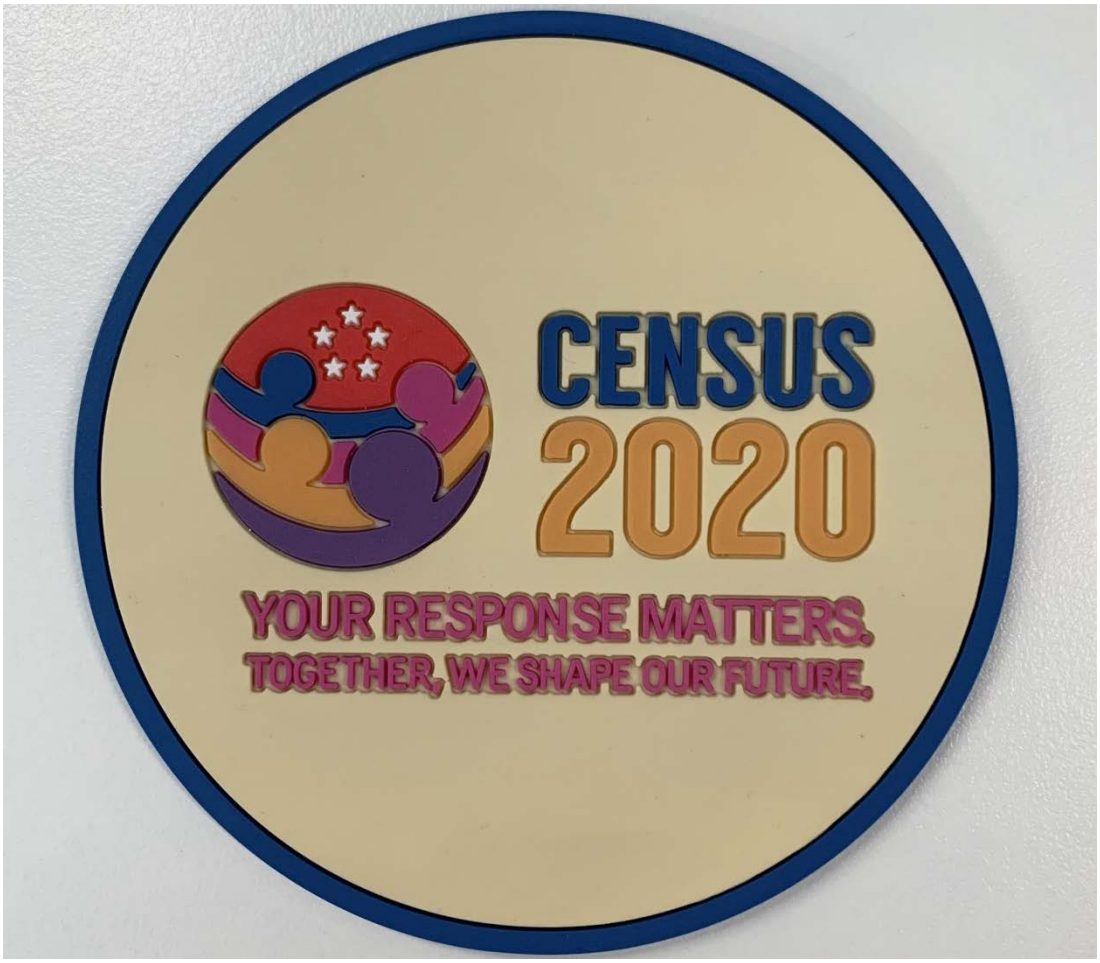
CENSUS 2020 POSTER



CENSUS 2020 PUBLICITY ON MRT WINDOW PANELS

CENSUS 2020 NOTIFICATION PACKAGE

CENSUS 2020 COASTER – TOKEN OF APPRECIATION



CENSUS 2020 BOOKMARK – TOKEN OF APPRECIATION

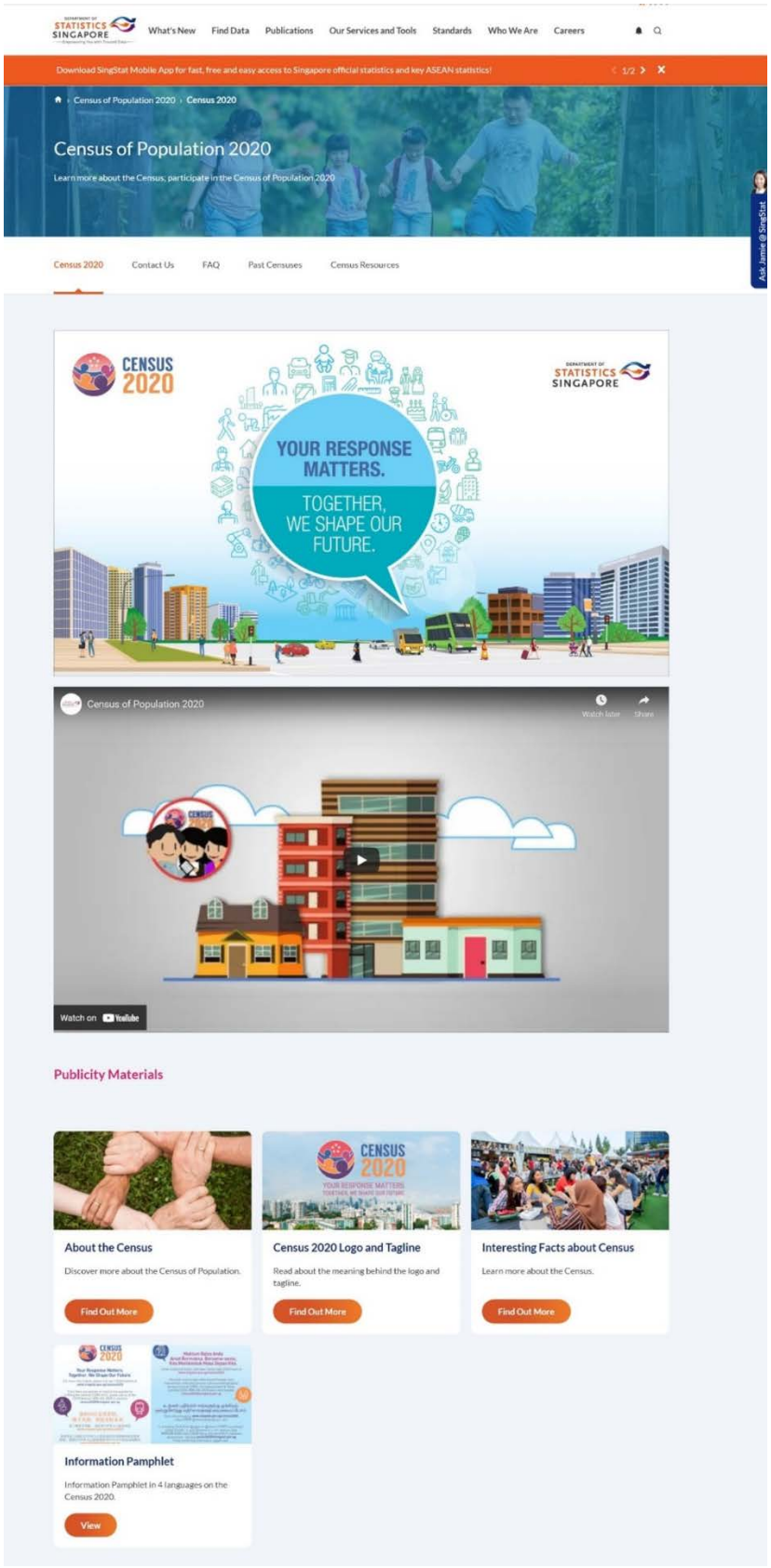
Front

Back

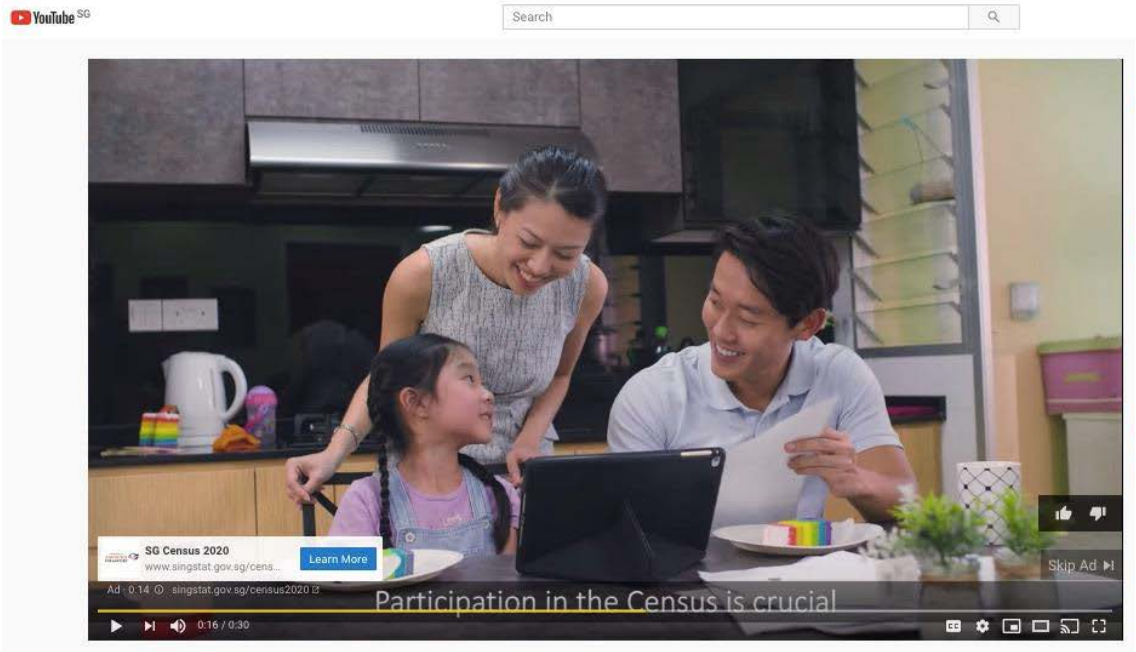
Front

Back

CENSUS 2020 HOMEPAGE



YOUTUBE ADVERTISEMENTS



CENSUS 2020 INFORMATION PAMPHLET

CENSUS 2020 INFORMATION PAMPHLET – ENGLISH SECTION

About the Census

The Census of Population is conducted once in ten years and is the single largest national survey undertaken in Singapore. Census of Population 2020 (C2020) is the sixth Census after Singapore's Independence and the fifteenth in the series of Census taking in Singapore.

The objective of the C2020 is to collect information on key characteristics of the population and households. The information will be used as key inputs for policy formulation and review, and for planning of programmes and services for the community.

Basic information such as age, sex and ethnic group will be obtained from administrative records. Additional information useful for in-depth studies will be obtained from a sample of households.

Submitting Your Census Return

If your household is selected for C2020, you can choose to submit your survey return via Internet, telephone or face-to-face interview.

Internet Submission
You are encouraged to submit the Census form via internet. Available 24/7, the form can be accessed via Personal Computers, tablets and smartphones. The Internet User Guide is available online for reference. If you require any assistance when submitting your Internet form, you may also call our C2020 hotline at 1800-236-2020.

Telephone Interview
You can provide the Census information via a telephone interview. Please call 1800-236-2020, 9am to 10.30pm, Mondays to Sundays, for an immediate interview. You may also call to make an appointment to be interviewed on a later date at your convenience.

Face-to-face Interview
If you prefer to be interviewed at your house, please call the C2020 hotline at 1800-236-2020 to arrange for an appointment for a face-to-face interview.

Your participation and co-operation in the Census is important. Please submit your survey return early.

Our telephone interviewers may call your house if we do not receive your return by the due date indicated in your letter. Our Census interviewers will visit you only if we have not received your return via the Internet and you cannot be contacted via the telephone. They will carry an official identification card and a letter of authorisation from the Singapore Department of Statistics for identification purposes.

How are the Households Selected?

Households are selected for the survey based on an established sampling methodology to ensure accurate representation of the population.

Your participation in the Census is crucial to ensure that representative data are collected.

Confidentiality of Data Assured

The conduct of Census is governed by the Statistics Act (Chapter 317). Your responses will be kept in the strictest confidence in accordance with the Statistics Act.

Key Information for C2020

The C2020 collects demographic and socio-economic items as well as topics of current interest. Here are some of the information that is collected:

On Households
Members living in the household, their whereabouts and relationship of members with the Household Reference Person.

On Education
Level of education attending, highest qualification attained, field of study and country where highest qualification was attained.

For Working Persons
Employment status, name of firm, main type of business, workplace location, occupation, main tasks/duties, nature of employment, usual number of hours worked and income.

For Persons Not Working
Whether person is actively looking for work, whether person is available to start work in the next 2 weeks, action taken to look for work and reason for not working.

For Females Aged 15 And Above
Number of children born.

For Persons Living Overseas for 12 Months or More
Country presently in and reason for living abroad.

Other Information
Language literacy, language most/second most frequently spoken, religion, difficulty in performing basic activities such as seeing, hearing, moving, cognition, self-care, and communication, mode of transport to school or work and time spent traveling to school or work.

On average, a household with 4 members will take about 30 minutes to complete the survey.

CENSUS 2020 INFORMATION PAMPHLET – CHINESE SECTION

关于人口普查

新加坡人口普查每十年进行一次。是一项具规模的全国性调查。2020年人口普查是我国独立以来的第六次人口普查，也是在新加坡举行的第十五次人口普查。

2020年人口普查旨在收集有关人口和住户的主要特征等资料。有关当局在制定和检讨政策以及规划社区计划和服务措施时将参考这些重要的数据。

普查所需的基本资料列如年龄、性别和种族等将取自行政记录。其余有助于深入研究的资料将从抽样住户中收集。

提交您的普查表

如果您的住户被选中参与2020年人口普查，您可以选择通过网络、电话或者面对面访问的方式提交普查表。

互联网提交
我们吁请您请尽可能通过互联网提交普查表。网络提交全日开放，您可以随时随地通过个人电脑、平板电脑或智能手机在线填写表格。网页也附网络用户说明手册可供浏览参考。如果您在提交表格时需要协助，请拨打我们的2020年人口普查热线1800-236-2020与我们联络。

电话访问
您可以通过电话访问提供普查资料。请于星期一至星期日，上午9时至晚上10时30分之间，致电1800-236-2020立即接受访问，或另行预约时间安排在您方便的时间进行访问。

当面访问
如果您选择在家中接受访问，请拨2020年人口普查热线1800-236-2020，预约安排我们的普查员上门进行访问。

您的参与及合作对普查工作非常重要。请尽早提交普查表。

如果我们未能在信中注明的提交期限内收到您的普查表，我们的电话访员会尝试致电联络您。倘若我们既未收到您通过互联网提交的普查表，又无法通过电话与您取得联系，我们的外勤访员将会登门拜访。他们会随身携带普查访员身份卡以及新加坡统计局发出的授权书，以共查证。

住户的抽选方式

这项调查是采用公认的抽样方法来抽选住户，以确保所选的住户具有准确代表性。

您的参与将确保我们收集的资料是具有代表性和完善的。

资料绝对保密

人口普查是根据《统计法令（第317章）》进行的。该法令确保您所提供的资料将受到严格保密。

2020年人口普查收集的关键资料

2020年人口普查会收集人口统计和社会经济相关的资料，同时也会涵盖当前人们关注的话题。您需要提供的资料包括：

住户
同屋共住的住户成员、他们之间的关系、他们目前身在何处。

教育
目前就读的教育程度、已考获的最高学历、修读的科目、在何国取得最高学历。

工作人士
就业状况、公司的主要业务、商业类型、工作地点、职业、主要工作/职责、就业性质、工作时数、收入。

目前没就业者
是否在积极寻找工作、是否在未来两周内可以开始工作、采取何种行动寻找工作、没有工作的原因。

15岁及以上的女性
生育过几名孩子。

在海外居住了12个月或以上的人士
目前居住在哪个国家、旅回海外的原因。

其它资料
所通晓的语言、最常讲的语言、宗教信仰，是否在视觉、听觉、行动、认知、生活自理以及交流上有困难、上学或上班常使用的交通工具、上学或上班所需花费的时间。

一个有四名成员的住户平均需要30分钟来完成调查。

CENSUS 2020 INFORMATION PAMPHLET – MALAY SECTION

Mengenai Banci

Banci Penduduk merupakan kaji selidik kebangsaan yang terbesar dan dijalankan sekali dalam masa sepuluh tahun di Singapura. Banci Penduduk 2020 (C2020) merupakan Banci keenam selepas Kemerdekaan Singapura dan kelima belas dalam siri pengambilan Banci di Singapura.

Objektif C2020 adalah untuk mengumpulkan maklumat mengenai ciri-ciri utama penduduk dan isi rumah. Maklumat tersebut akan digunakan sebagai input utama bagi penggubalan dan kajian dasar serta bagi perancangan program dan perkhidmatan untuk masyarakat.

Maklumat asas seperti umur, jantina dan kumpulan etnik akan diperoleh daripada rekod-rekod pentadbiran. Maklumat tambahan yang berguna untuk kajian mendalam akan diperoleh daripada sampel beberapa isi rumah.

Menyerahkan Borang Penyata Banci Anda

Sekiranya isi rumah anda dipilih untuk menyertai C2020, anda boleh memilih untuk menyerahkan kaji selidik anda melalui Internet, temu bual telefon atau secara bersemuka.

Penyerahan melalui Internet
Anda digalakkan untuk menyerahkan borang Banci tersebut melalui Internet. Borang tersebut boleh didapati 24/7, melalui Komputer Peribadi, tablet dan telefon pintar. Panduan Pengguna Internet boleh didapati dalam talian sebagai rujukan. Jika anda memerlukan sebarang bantuan semasa menyerahkan borang Internet anda, anda juga boleh menghubungi talian penting C2020 kami di talian 1800-236-2020.

Temu bual Telefon
Anda boleh memberikan maklumat Banci melalui temu bual telefon. Sila hubungi talian 1800-236-2020, dari jam 9pg hingga 10.30mlm, hari Isnin hingga Ahad, untuk temu bual segera. Anda juga boleh membuat panggilan janji temu untuk ditemu bual pada tarikh lain mengikut kesesuaian anda.

Temu bual secara bersemuka
Jika anda lebih suka ditemu bual di rumah anda, sila hubungi talian penting C2020 di talian 1800-236-2020 untuk mengaturkan janji temu bagi temu bual secara bersemuka.

Penyertaan dan kerjasama anda dalam Banci ini adalah penting. Sila serahkan penyata kaji selidik anda lebih awal.

Penemu bual telefon kami mungkin akan menghubungi rumah anda jika kami tidak menerima penyata anda mengikut tarikh tamat yang dinyatakan dalam surat anda. Penemu bual Banci kami akan menemui anda hanya jika kami belum menerima penyata anda melalui Internet dan anda tidak dapat dihubungi melalui telefon. Mereka akan membawa kad pengenalan rasmi dan surat pengesahan daripada Jabatan Perangkaan Singapura bagi tujuan pengenalan.

Bagaimanakah Isi Rumah Dipilih?

Isi rumah dipilih bagi kaji selidik ini berdasarkan kaedah pensampelan yang telah ditetapkan untuk memastikan perwakilan penduduk yang tepat.

Penyertaan anda dalam Banci adalah penting untuk memastikan bahawa data perwakilan telah dikumpulkan.

Jaminan Kerahsiaan Data

Pengendalian Banci dikawal oleh Akta Perangkaan (Bab 317). Maklum balas anda akan dirahsiakan menurut Akta Perangkaan tersebut.

Maklumat Utama untuk C2020

C2020 mengumpulkan item demografi dan sosio-ekonomi serta tajuk-tajuk kepentingan semasa. Berikut adalah beberapa maklumat yang dikumpulkan:

Mengenai Isi Rumah
Ahli keluarga yang tinggal dalam rumah, tempat tinggal mereka dan hubungan ahli keluarga dengan Orang Rujukan Isi Rumah.

Mengenai Pelajaran
Tahap pendidikan yang sedang dihadiri, kelayakan tertinggi, bidang pengajian dan negara kelayakan tertinggi yang telah dicapai.

Bagi Orang Yang Bekerja
Status pekerjaan, jenis perniagaan utama, lokasi tempat kerja, pekerjaan, tugas utama, sifat pekerjaan, jumlah waktu bekerja yang biasa dan pendapatan.

Bagi Orang Yang Tidak Bekerja
Sama ada orang itu sedang aktif mencari pekerjaan, sama ada orang itu boleh mula bekerja dalam masa 2 minggu akan datang, tindakan yang diambil untuk mencari pekerjaan dan sebab tidak bekerja.

Bagi Wanita Yang Berumur 15 Tahun Ke Atas
Bilangan anak yang dilahirkan.

Bagi Orang Yang Tinggal Di Luar Negara Melebihi 12 Bulan Ke Atas
Negara yang sedang didiami dan sebab tinggal di luar negara.

Maklumat Lain
Kecakapan berbahasa, bahasa yang paling kerap/kedua paling kerap dituturkan, agama, kesukaran dalam melakukan aktiviti asas seperti melihat, mendengar, bergerak, kognisi, penjagaan diri dan komunikasi, cara pengangkutan ke sekolah atau ke tempat kerja dan masa yang dihabiskan untuk pergi ke sekolah atau bekerja.

Secara purata, isi rumah yang mempunyai 4 orang ahli akan mengambil masa kira-kira 30 minit untuk melengkapkan kaji selidik ini.

CENSUS 2020 INFORMATION PAMPHLET – TAMIL SECTION

மக்கள் தொகைக் கணக்கெடுப்புக் குறித்து

மக்கள் தொகை கணக்கெடுப்பு பத்து வருடங்களுக்கு ஒரு முறை நடத்தப்படுகிறது. இதுவே சிங்கப்பூரில் தேசிய அளவில் நடைபெறும் ஒரே, ஆகப் பெரிய ஆய்வாகும். 2020 ஆம் ஆண்டு மக்கள் தொகை கணக்கெடுப்பு சிங்கப்பூரின் சுதந்திரத்திற்குப் பிறகு நடைபெறும் ஆறாவது மக்கள் தொகை கணக்கெடுப்பாகும். மேலும் சிங்கப்பூரில் இடம்பெறும் மக்கள் தொகை கணக்கெடுப்பு வரிசையில் இது பதினைந்தாவதாகும்.

C2020-யின் முக்கிய நோக்கம், மக்கள் தொகை மற்றும் குடும்பங்களின் முக்கிய பண்புகள் குறித்த தகவல்களைச் சேகரிப்பதாகும். சேகரிக்கப்படும் தகவல்கள் சமூகத்திற்குத் தேவையான கொள்கை உருவாக்கத்திற்கும், மறு ஆய்வுக்கும், நிகழ்ச்சிகளுக்குத் திட்டமிடவும் முக்கிய உள்ளீடுகளாகப் பயன்படுத்தப்படும்.

அடிப்படைத் தகவல்களான வயது, பாலினம், இனக் குழு ஆகியவை நிர்வாகப் பதிவேடுகளிலிருந்து பெறப்படும். ஆழமான ஆய்வுகளுக்குத் தேவையான கூடுதல் தகவல் சில தேர்ந்தெடுக்கப்பட்டக் குடும்பங்களிடமிருந்துப் பெறப்படும்.

உங்கள் மக்கள் கணக்கெடுப்பு ஆய்வைச் சமர்ப்பித்தல்

C2020 க்கு உங்கள் குடும்பம் தேர்ந்தெடுக்கப்பட்டால், நீங்கள் உங்கள் ஆய்வை இணையம் வழி, தொலைப்பேசி அல்லது நேரடி பேட்டி மூலம் சமர்ப்பிப்பதைத் தேர்வு செய்யலாம்.

இணையவழி சமர்ப்பித்தல்
மக்கள் கணக்கெடுப்பு ஆய்வை இணையவழி சமர்ப்பிக்க நீங்கள் ஊக்குவிக்கப்படுகிறீர்கள். 24/7 மணிநேரமும் அலுவலர் கணினி, கைக்கணினி, திறன்பேசிகள் ஆகியவற்றின் மூலம் சமர்ப்பித்திடலாம். இணையத்தைப் பயன்படுத்துவதற்கான பயனர் வழிகாட்டி இணையத்தில் உள்ளது. உங்கள் இணைய படிவத்தைச் சமர்ப்பிக்கும் போது உங்களுக்கு உதவி எதும் தேவைப்பட்டால், நீங்கள் C2020 மின் நேரடித் தொலைப்பேசியை 1800-236-2020 என்ற எண்ணில் அழைத்திடலாம்.

தொலைப்பேசி நேர்காணல்
மக்கள்தொகைக் கணக்கெடுப்புத் தகவலைத் தொலைப்பேசி நேர்காணல் மூலமாகவும் நீங்கள் அளித்திடலாம். அதற்காக 1800-236-2020 என்ற எண்ணை நீங்கள் முதல் ஞாயிறுவரை காலை 9 மணி முதல் இரவு 10.30 மணிவரை உட்பட்ட நேர்காணலுக்கு அழைக்கலாம். உங்களுக்குச் சௌகரியமான மின்னொரு நாளில் நேர்காணல் நடத்துவதற்கான நேர முன்பதிவு செய்திடவும் நீங்கள் இந்த எண்ணைத் தொடர்புகொள்ளலாம்.

நேரடி பேட்டி
உங்களை உங்கள் வீட்டில் பேட்டி காணவேண்டும் என்று நீங்கள் விரும்புகிறீர்களானால், 1800-236-2020 என்ற C2020 நேரடித் தொலைப்பேசியை அழைத்து நேரடி பேட்டிக்கான முன்னேற்பாட்டை செய்திடுங்கள்.

இந்த மக்கள் தொகைக் கணக்கெடுப்பில் நீங்கள் பங்கேற்பதும், இதற்கு ஒத்துழைப்பு அளிப்பதும் மிகவும் முக்கியமாகும். உங்கள் ஆய்வை முடிக்கவும் சமர்ப்பித்திடுங்கள்.

ஒருவேளை உங்கள் பதிலை, உங்கள் வீட்டில் குறிப்பிட்டிருந்தக் கடைசித் தேதி வரை நாங்கள் பெறவில்லையென்றால், எங்கள் தொலைப்பேசி பேட்டியாளர்கள் உங்கள் வீட்டை தொடர்புகொள்ளக்கூடும். உங்கள் பதில் இணையம் வழியாகவோ அல்லது தொலைப்பேசி மூலமாகவோ எங்களுக்கு கிடைக்கவில்லையென்றால் மட்டுமே எங்கள் மக்கள் தொகைக் கணக்கெடுப்பு பேட்டியாளர்கள் உங்கள் வீடுதேடி வருவார்கள். அவர்கள் அடையாள காணும் நோக்கத்திற்காக, சிங்கப்பூர் புள்ளிவிவரப் பிரிவு அவர்களுக்கு அளித்த அதிகாரப்பூர்வ அடையாள அட்டையையும் அதிகாரிகளிடம் வழங்கியிருப்பார்கள்.

குடும்பங்கள் எவ்வாறு தேர்ந்தெடுக்கப்படுகின்றன?

மக்கள்தொகையை துல்லியமாக பிரதிநிதிப்பதை உறுதிசெய்யும் விதமாக எற்றுக்கொள்ளப்பட்ட மாதிரி முறை ஒன்றைப் பயன்படுத்தி குடும்பங்கள் தேர்ந்தெடுக்கப்படுகின்றன.
பிரதிநிதிக்கப்பட வேண்டிய தகவல்கள் சேகரிக்கப்படுவதை உறுதி செய்வதற்கு இந்த மக்கள் தொகை கணக்கெடுப்பில் உங்கள் பங்கேற்பு மிகவும் முக்கியமானது.

தகவல்களின் இரகசியத்தன்மைக்கு உறுதியளிக்கப்படும்.

மக்கள் தொகைக் கணக்கெடுப்பு, புள்ளிவிவர சட்டத்தால் (பிரிவு 317) நிர்வகிக்கப்படும். உங்கள் பதில்கள் புள்ளிவிவர சட்டத்திற்கு இணங்க கண்டிப்பாக இரகசியமாக வைக்கப்படும்.

C2020 க்கான முக்கியத் தகவல்.

C2020 மக்கணைப் பற்றியும், சமூக பொருளாதார வகைகள் பற்றியும், தற்போது எடுபடு காட்டப்படும் தலைப்புகள் குறித்தும் விவரங்கள் சேகரிக்கும். சேகரிக்கப்படும் விவரங்கள் சில கீழேக் கொடுக்கப்பட்டுள்ளன.

நமது குடும்பங்கள்
குடும்ப உறுப்பினர்கள் குறித்த விவரம், அவர்கள் எங்கு இருக்கிறார்கள், இந்த வீட்டில் குடிப்பிடப்பட்டிருக்கும் நபருடனான உறவுமுறை.

கல்வி
படித்துக்கொண்டிருக்கும் நிலை, பெற்றுள்ள அதிகபட்சக் கல்வித் தகுதி, படித்தப் பாடம், எந்த நாட்டில் அதிகபட்சக்கல்வித் தகுதிப் பெறப்பட்டது.

வேலைப் பார்க்கும் நபர்களுக்கு
வேலை நிலை, வேலைப் பார்க்கும் நிறுவனத்தின் பெயர், என்ன வகை வேலை, அலுவலகம் இருக்கும் இடம், பார்க்கும் வேலை, முக்கிய பணிகள்/கடமைகள், வேலையின் தன்மை, வேலைப் பார்க்கும் வழக்கமான நேரம், வருமானம்.

வேலைப் பார்க்காத நபர்களுக்கு
அவர் முழுமூச்சாக வேலைத் தேடிக் கொண்டிருக்கிறாரா, அடுத்த 2 வாரங்களில் வேலையைத் துவக்க தயாராக இருக்கிறாரா, வேலைத் தேடுவதற்காக மேற்கொள்ளப்பட்டிருக்கும் முயற்சிகள், வேலைப் பார்க்காமல் இருப்பதற்கான காரணங்கள்.

15 மற்றும் அதற்கும் கூடுதல் வயதுடைய பெண்களுக்கு
பிறந்த குழந்தைகளின் எண்ணிக்கை.

12 மாதங்கள் அல்லது அதற்கும் அதிகமாக வெளிநாட்டில் வாழும் நபர்கள்
தற்போது வசிக்கும் நாட்டின் பெயர், வெளிநாட்டில் வசிப்பதற்கானக் காரணம்.

மற்ற தகவல்
மொழியறிவு, பெரும்பாலும் / இரண்டாவது அதிகமாக பேசும் மொழி, மதம், பாரம்பரியம், கேட்பது, நடமாடுவது, அறிவும் திறன், சுய-பராமரிப்பு மற்றும் தொடர்புகொள்ளுதல் போன்ற அடிப்படை விஷயங்களைச் செய்வதற்கு சிரமப்படுதல், பள்ளிக்கு, வேலைக்கு பயன்படுத்தும் போக்குவரத்து, பள்ளி அல்லது அலுவலகப் பயணத்திற்கு செலவழிக்கும் நேரம்.

4 பேர் கொண்ட குடும்பத்திற்கு ஆய்வைப் பூர்த்தி செய்தி.. சராசரியாக 30 நிமிடங்கள் தேவைப்படும்.

CENSUS 2020 INTERNET USER GUIDE

CENSUS 2020

CENSUS 2020
Online Submission

Your guide to completing the Census online

CENSUS 2020

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1 Accessing the Census Online Submission Form

Access the Census Online Submission Form by entering the URL www.census2020.gov.sg or scanning the QR code found on the notification letter sent to your house. You will see the homepage below.

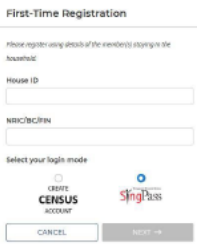
(a) If you are logging in for the first time, click on **'REGISTER NOW'**.

(b) For subsequent login after you have registered, click on **'SIGN IN'**.

(c) Login to only one session at a time.

1.1 First-Time Registration

If you are accessing the form for the first time, register by entering your **House ID** (as indicated in your notification letter sent to your residential address) and **NRIC/BC/FIN**. Select your preferred login mode and click **'NEXT'**.



Login Mode

You are encouraged to login via SingPass.

If you do not have a SingPass account, you may create a Census Account to access the survey.

CENSUS 2020

1.1.1 By SingPass

If you select **SingPass** as your login mode, you will be directed to the SingPass website. Please log in using your SingPass to continue with the registration.

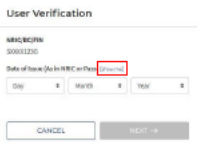
1.1.2 Creating Census Account

If you select **Create Census Account** as your login mode, you will be brought to the step-by-step screens to create your account.

Step 1: User Verification

Specify the **Date of Issue** (As in NRIC or Pass) and click **'NEXT'**.

Note: Click on [show me] to locate the Date of Issue.



Step 2: Password Creation

(a) Enter a password of **at least 12 characters**. The password is case-sensitive and shall contain characters from at least **two (2)** of the following categories:

- Upper case (A through Z)
- Lower case (a through z)
- Digits (0-9)
- Special Characters ($!#&@?%=_)

(b) Re-enter the password for confirmation. This password will be used for subsequent logins upon successful registration.

(c) Enter your mobile number and click **'CONFIRM'**. This mobile number will be used to receive the One-Time Password (OTP) for all subsequent logins and password reset. Please note that each mobile number can only be used for one account and not shared among members in the house.

Step 3: OTP

Key in the One-Time password (OTP) sent to your designated mobile number and click **'SUBMIT'**.

(a) If you did not receive your OTP in 2 minutes, click on **'Resend OTP'**.

(b) If you need to amend the mobile number entered, click on **'Return to edit mobile number'**.

For security reason, you will not be able to edit your mobile number after your account is successfully registered.

1.1.3 Registration Completed

Upon successful authentication (for both **SingPass** and **Census Account** users), you will be brought to the Registration Completed screen. Click **'CONTINUE'** to proceed to the survey.

1.2 Subsequent Login

If you are unable to complete the survey in one sitting, you may log in again before the due date of the Census 2020 as indicated in the Notification Letter.

(a) For SingPass users, click on **'Sign in with SingPass'**.
(b) For Census Account users, key in your **NRIC/BC/FIN** and Password and click **'SIGN IN'**.

1.3 Reset Census Account Password

If you have forgotten the password for your Census Account, or have your Census Account locked due to multiple failed attempts, please click **'Forgot Password?'** at the Sign In screen.

At the User Verification screen, key in your NRIC/BC/FIN, the Date of Issue (As in NRIC or Pass) and click **'NEXT'**.

After successful authentication and OTP, you would be able to reset your password.

Login Management
1. You should keep your login details confidential.
2. If you encounter problems with registration or logging in, you may
   - call our Census 2020 Hotline at 1800-236-2020 (Local) or +65-62362020 (Overseas) for assistance between 9.00am to 10.30pm from Mondays to Sundays (including Public Holidays), or
   - email us at census2020@singstat.gov.sg, with your name, House ID/residential address and contact number.

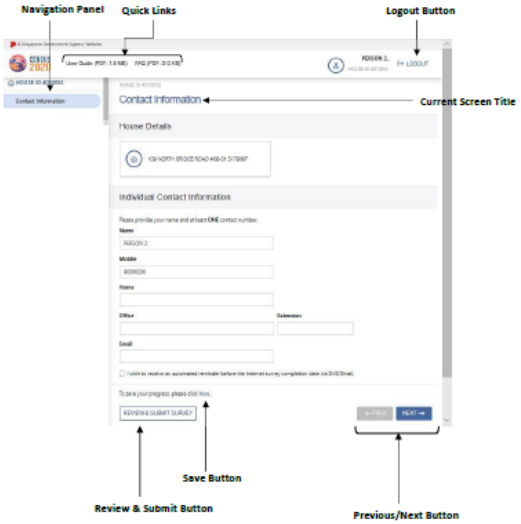
2 Using the Census Online Submission Form

2.1 Common Functions

These are the common navigation and action buttons within the survey:

Button	Button Description
Next	Go to the next screen of the survey.
Previous	Go to the previous screen of the survey.
Save	Save your current screen responses.
Review & Submit Survey	Check your survey form responses. If the form is incomplete, you will be brought to the **Item(s) Require(s) Attention Screen** to provide the required information. If the form is complete, you will be brought to the **Review and Submit Screen** to view a summary of your responses before submitting.
Menu – User Guide	Open this PDF file with instructions on using the Online Submission Form.
Menu – FAQ	Open a PDF file with a list of Frequently Asked Questions.
Logout	Logout of the survey.

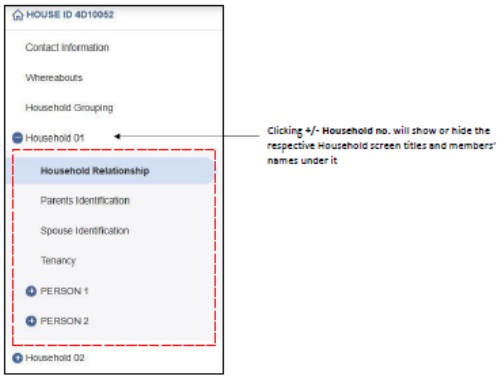
2.2 Where to locate the header and navigation aid (Desktop)

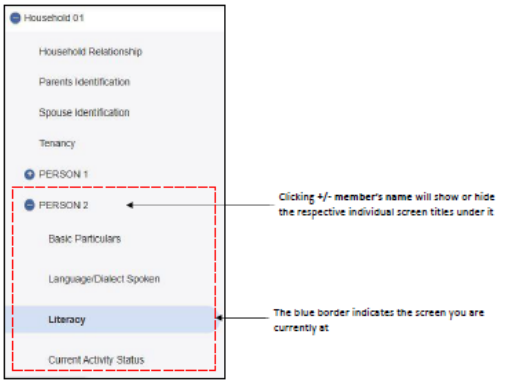


2.3 Where to locate the header and navigation aid (Mobile)

2.4 How to use the Navigation Panel

When first accessing a new house survey form, the only screen title you will see in the Navigation Panel is the **Contact Information**. Other relevant screen titles will appear automatically in the Navigation Panel as you proceed.





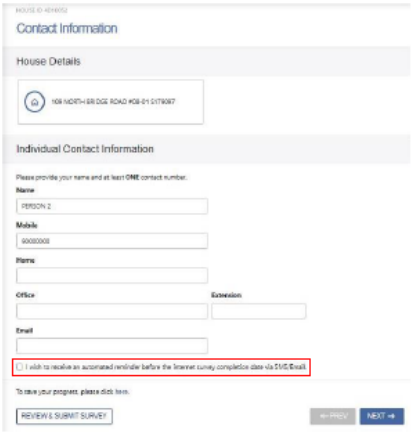
Checking your Survey Responses

Click on the **'REVIEW & SUBMIT SURVEY'** button or **'NEXT'** from the last screen of the last house member to validate your response. An indicator will be shown beside each screen title.

2.5 Providing your Responses

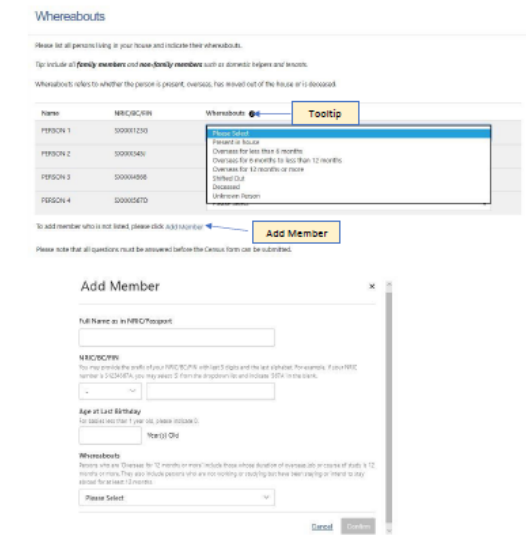
2.5.1 Contact Information Screen

- At the **Contact Information** screen, please provide your Name and at least one contact number.
- You may indicate your preference to receive a reminder before the due date for internet submission of your Census form via SMS or Email by checking the checkbox at the bottom of the screen.



2.5.2 Whereabouts Screen

- **You will need to indicate the Whereabouts (i.e. Present in house, Overseas, Shifted out, Deceased or Unknown) of all persons living in your house by selecting from the dropdown list.**
- **The list includes all family members and non-family members such as domestic helper(s) and tenant(s).**
- **Tooltip is included to explain some of the terms used. Click on the tooltip icon to view the message.**
- **If there is any member not listed on screen, click on 'Add Member' to provide the details of the member.**



Note:
All questions in the Census form must be answered before it can be submitted.

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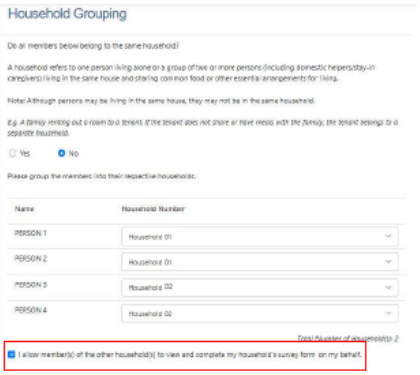
2.5.3 Household Grouping Screen

- **You are required to group the house members listed.**
  - **If all listed members belong to the same household, select 'Yes' to the question on whether they belong to the same household.**
  - **Otherwise, select 'No' to group the members into their respective households using the dropdown list.**

Note:
A household refers to one person living alone or a group of two or more persons (including domestic helpers/stay-in caregivers) living in the same house and sharing common food or other essential arrangements for living.

- **If you do not wish to share your household information with member(s) from another household, please uncheck the checkbox at the bottom of this screen.**



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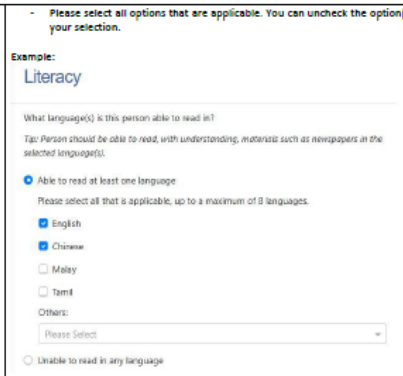
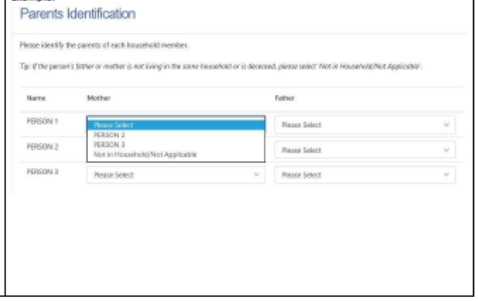
2.5.4 Basic Particulars Screen

- **If you do not wish to share your individual information with other member(s) in your household, please uncheck the checkbox at the bottom of your Basic Particulars screen.**

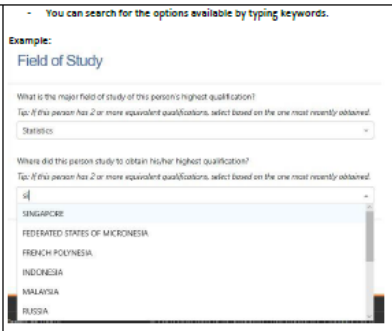
2.5.5 Types of Responses

Response Type	How it Works?
Radio Button	- **Please select only 1 response.** **Example:**
Checkbox	- **Please select all options that are applicable. You can uncheck the option(s) to remove your selection.** **Example:** 
Dropdown	- **Activate the dropdown by clicking and select 1 option.** **Example:** 

15 16

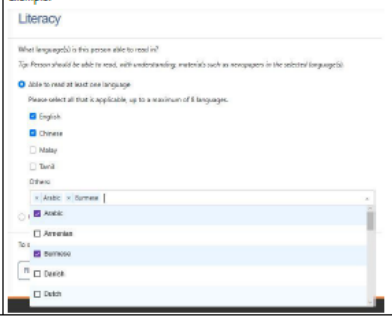
- **You can search for the options available by typing keywords.**

Example:



- **More than 1 selection is allowed for the Others selection on the Literacy screen.**

Example:



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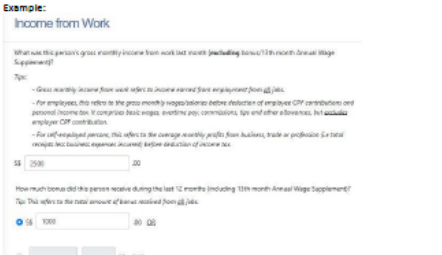
Text Box	- **Textbox allow for numeric and/or text inputs** - **Only numbers are allowed to be keyed in for fields asking for numeric inputs.**

Example:



- **Text in alphanumeric values are allowed to be keyed in for free text response fields.**

Example:

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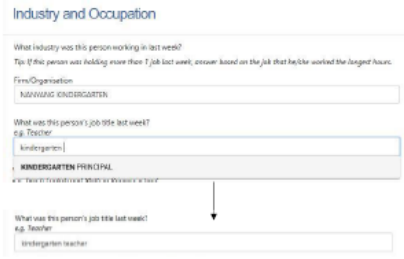
Text Box with Search Function	- **You can search for the options available by typing keywords.** - **If you are not able to find your response in the search results, the system will accept the text as entered.** - **For example, for a kindergarten teacher, when you enter 'Kindergarten', you will only see "KINDERGARTEN PRINCIPAL" in the search result. However, you can continue to enter "teacher" to complete your job title as "Kindergarten Teacher".** - **This response method is also applicable for the question *'What industry was this person working in last week?'*.**

Example:



Workplace Location	- **You may input an address by entering:** a) **Postal Code;** b) **Block and Street Name;** c) **Building Name** - **Alternatively, you can click on the 'OPEN MAP' icon which opens up a search textbox and location map to key in the address or pin your location.**

Example:

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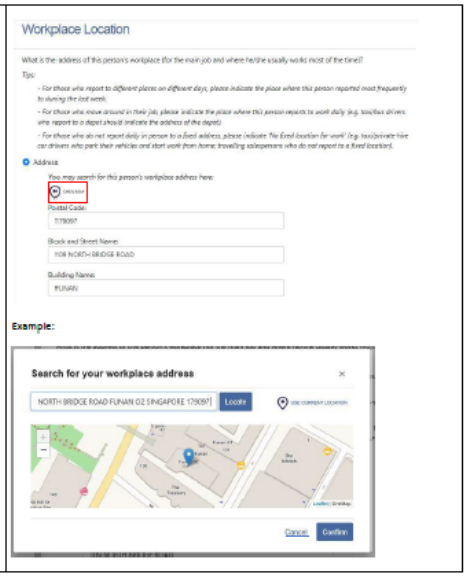

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3 Reviewing and Submitting the Census Online Submission Form

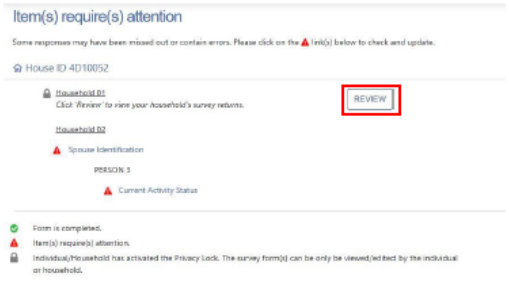
You can check your survey form responses by:

(a) Clicking on the **'REVIEW & SUBMIT SURVEY'** button
(b) Clicking **'NEXT'** from the last screen of the last house member

3.1 Item(s) Require(s) Attention Screen

Click on each link with ⚠ to go back to the screen where you can update the responses that have been missed out.

If you have indicated your preference not to share your household or individual information and have completed your Household or Individual survey form, you may review the respective survey forms by clicking on the **'REVIEW'** button.

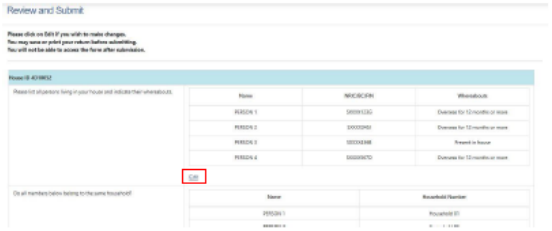


3.2 Review and Submit Screen

Once you have completed the survey form, you will be brought to the **Review and Submit** screen where you can review your responses.

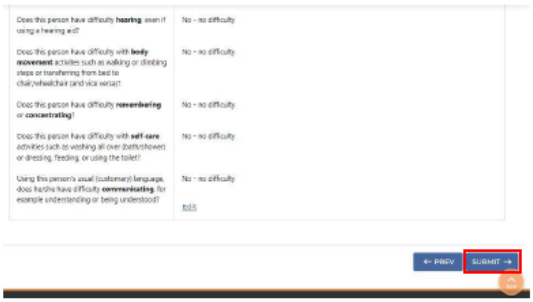
If you wish to edit your responses, click on the 'Edit' button below each response to go back to the respective screen.

If you wish to keep a copy of your responses, please use the save or print function in the browser at this screen before submitting.



You may submit your survey by clicking on the **'SUBMIT'** button at the bottom of this screen.

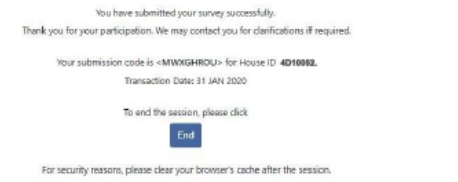
Do note that you will not be able to access or edit your responses once your survey form is successfully submitted.



3.3 Acknowledgement Screen

If your submission is successful, you will see the successfully submitted screen with a transactional ID.

If you have provided your contact details in the **Contact Information** screen, a SMS/Email will be sent to you after you have submitted the Census form successfully.



4 Browser Settings

The Census Online Submission Form works best on desktop and mobile platforms running on the following Operating Systems:

Operating Systems	- Microsoft Windows 7 or later - MAC OS X or later - Android 9 or later - iOS 11 or later
Browser Requirements	Supports the following browsers: - Internet Explorer 11, 12; - Edge 17, 18; - Firefox 69, 70; - Chrome 77, 78; - Safari 12, 13 (MAC OS, iOS only). Enable JavaScript/Cookies/Pop-up and set up TLS

The use of other browsers or settings may result in difficulties in logging in, face issues with password resets and failure in receiving system prompts such as session timeout alerts etc.

5 Contact Us

If you need help, you can:

- Ask Jamie which can be accessed via www.census2020.gov.sg.
- Look at the Frequently Asked Questions for Census Online Submission form by clicking here.
- Call our Census 2020 Hotline at 1800-236-2020 (Local) or +65-62362020 (Overseas) between 9am to 10.30pm, Mondays to Sundays (including Public Holidays).
- Email us at census2020@singstat.gov.sg with your name, House ID/residential address and contact number.

CENSUS 2020 NOTIFICATION LETTER

[DD MTH YYYY]

House ID	
Submission Due Date	

THE OCCUPANT
[Block] [Street Name]
[Unit number]
[Postal Code]

CENSUS OF POPULATION 2020

Dear Sir/Madam

The Singapore Department of Statistics is currently conducting the Census of Population 2020 (C2020). Your household has been selected for participation in C2020.

The Census is conducted once in ten years. It is the single largest national survey undertaken in Singapore. Information on key characteristics of the population and households will be collected and used for planning and evaluation of programmes and services. You may refer to the enclosed pamphlet for more information on C2020.

Your participation is important. Please complete and submit your C2020 returns by the due date. In appreciation of your participation, we are pleased to enclose a specially-designed Census souvenir.

The conduct of C2020 is governed by the Statistics Act (Chapter 317). Your responses will be kept in confidence in accordance with the Statistics Act.

Thank you for your co-operation and assistance.

Yours faithfully

WONG WEE KIM
CHIEF STATISTICIAN
SINGAPORE

Ways to Submit Your C2020 Returns

Online
www.census2020.gov.sg

Scan the QR code to directly access the survey website.

QR Code

Register and login using the House ID (provided at the top right of this letter) and your SingPass.

Non-SingPass users may create a password using NRIC/FIN to access the survey form.

Call C2020 Hotline
1800-236-2020

Call us for an immediate phone interview or to schedule an interview.

Our interviewers may also contact you to conduct an interview if your contact number is available in our records. They will identify themselves as C2020 officers and quote your House ID.

The C2020 hotline operates from 9am to 10.30pm, Mondays to Sundays (including Public Holidays)

Face-to-Face Interview

Face-to-face interview will be conducted if you have not provided a response via Internet or telephone by the due date.

Our field interviewers will carry an official Identification Card and a letter of authorisation when they visit your house.

Singapore Department of Statistics
109 North Bridge Road #08-01 Funan
Singapore 179097
www.singstat.gov.sg/census2020

SAMPLE

CENSUS 2020 NOTIFICATION LETTER – CHINESE

[DD MTH YYYY]

住户
[Block] [Street Name]
[Unit number]
[Postal Code]

住户编号	
提交 截止日期	

2020 年人口普查

尊敬的先生/女士，

新加坡统计局目前正在进行 2020 年人口普查。贵户是获选参与 2020 年人口普查的住户之一。

人口普查每十年进行一次，是新加坡规模最大的全国性调查。我们将收集人口与住户相关的主要特征等资料，用于策划及评估发展计划和服务。有关 2020 年人口普查的更多详情，请参阅随附的小册子。

您的参与是重要的。请在截止日期前填写并提交您的普查表。为了感谢您的参与，谨随函附上特别设计的普查纪念品。感谢您的合作与协助。

2020 年人口普查是根据《统计法令（第 317 章）》进行的一项强制性调查。所有被选中参与调查的住户**必须**提供所需的资料。该法令确保贵户所提供的所有资料将受到严格保密。

王辉锦
新加坡统计局局长
敬上

如何提交 2020 年人口普查表格

网上提交
www.census2020.gov.sg

扫描 QR 码衔接调查网站。

QR 码

使用住户编号（参阅本信函右上角）和您的电子政府密码（SingPass）注册并登录。

没有电子政府密码（SingPass）的用户可以使用身份证号码/外国人身份证号码设置密码并提取普查表。

电话访问
1800-236-2020

致电热线直接参与电话访问，或另约时间进行访问。

如果您的联系号码在我们的记录中，我们的访员也会联系您进行访问。他们将会介绍自己为2020年人口普查访员，并确认您的住户编号。

2020 年人口普查热线开放时间为星期一至星期日（包括公定假日），上午 9 时至晚上 10 时 30 分。

当面访问

如果您未在截止日期前通过网络或电话提交普查表，我们的外勤访员将登门造访，并进行当面访问。

他们会携带普查员身份卡片以及授权书。

Singapore Department of Statistics
109 North Bridge Road #08-01 Funan
Singapore 179097
www.singstat.gov.sg/census2020

SAMPLE

CENSUS 2020 NOTIFICATION LETTER – MALAY

[HH BUL TTTT]

PENDUDUK
[Blok] [Nama Jalan]
[Nombor Unit]
[Poskod]

ID Rumah	
Tarikh Tamat Penyerahan	

BANCI PENDUDUK 2020

Tuan/Puan yang dihormati

Jabatan Perangkaan Singapura kini sedang menjalankan Banci Penduduk 2020 (C2020). Isi rumah anda telah dipilih untuk menyertai C2020.

Banci ini dijalankan sekali dalam masa sepuluh tahun. Banci ini merupakan kaji selidik kebangsaan yang terbesar dilaksanakan di Singapura. Maklumat mengenai ciri-ciri utama penduduk dan isi rumah akan dikumpulkan dan digunakan bagi perancangan dan penilaian program dan perkhidmatan. Anda boleh merujuk risalah yang dilampirkan untuk maklumat lanjut mengenai C2020.

Penyertaan anda amat penting. Sila lengkapkan dan serahkan penyata C2020 anda sebelum tarikh tamat. Sebagai menghargai penyertaan anda, kami dengan sukacitanya menyertakan cenderahati Banci yang direka khas. Terima kasih atas kerjasama dan bantuan anda.

Yang benar

C2020 dijalankan di bawah Akta Perangkaan (Bab 317). Penyertaan adalah **wajib**. Semua maklumat yang diberi akan disimpan secara rahsia menurut Akta Perangkaan.

WONG WEE KIM
KETUA AHLI PERANGKAAN
SINGAPURA

Cara untuk Menyerahkan Penyata C2020 Anda

Dalam Talian
www.census2020.gov.sg

Imbas kod QR untuk mengakses laman web kaji selidik secara langsung.

Kod QR

Daftar dan log masuk dengan menggunakan ID Rumah (boleh didapati di bahagian kanan sebelah atas surat ini) dan SingPass anda.

Bukan pengguna SingPass boleh mencipta kata laluan dengan menggunakan NRIC/FIN untuk mengakses borang kaji selidik.

Hubungi Talian Penting C2020
1800-236-2020

Hubungi kami bagi mendapatkan temu bual telefon segera atau untuk menjadualkan temu bual.

Penemu bual kami juga mungkin akan menghubungi anda untuk menjalankan temu bual jika nombor hubungan anda boleh didapati dalam rekod kami. Mereka akan mengenalkan diri mereka sebagai pegawai C2020 dan menyebutkan ID Rumah anda.

Talian penting C2020 beroperasi dari jam 9pg hingga 10.30mlm, hari Isnin hingga Ahad (termasuk Cuti Umum)

Temu Bual Secara Bersemuka

Temu bual secara bersemuka akan dijalankan jika anda belum memberi respons melalui Internet atau telefon menjelang tarikh tamat.

Penemu bual lapangan kami akan membawa Kad Pengenalan rasmi dan surat pengesahan apabila mereka datang ke rumah anda.

Singapore Department of Statistics
109 North Bridge Road #08-01 Funan
Singapore 179097
www.singstat.gov.sg/census2020

SAMPLE

CENSUS 2020 NOTIFICATION LETTER – TAMIL

[நாநா மாமா வவவவ]
குடியிருப்பவர் [புளோக்] [ஸ்ட்ரீட் பெயர்] [வீட்டு எண்] [அஞ்சல் குறியீடு]

வீட்டு அடையாளம்	
சமர்ப்பிப்பதற்கானக் கடைசி நாள்	

2020 ஆம் ஆண்டுக்கான மக்கள்தொகை கணக்கெடுப்பு

அன்புடையீர்

சிங்கப்பூர் புள்ளிவிவரப் பிரிவு தற்போது 2020 ஆம் ஆண்டுக்கான கணக்கெடுப்பை (C2020) நடத்தி வருகிறது. உங்கள் வீடு C2020வில் பங்கேற்க தேர்ந்தெடுக்கப்பட்டிருக்கிறது.

மக்கள்தொகை கணக்கெடுப்பு பத்து வருடங்களுக்கு ஒருமுறை நடத்தப்படுகிறது. இதுவே சிங்கப்பூரில் நடத்தப்படும் ஆகப் பெரிய தேசிய அளவிலான ஒரே ஆய்வாகும். மக்கள்தொகை, குடும்பங்கள் குறித்த முக்கியத் தகவல்கள், நிகழ்ச்சிகள் மற்றும் சேவைகளை திட்டமிடுவதற்காகவும், மதிப்பிடுவதற்காகவும் சேகரிக்கப்படும். C2020 குறித்த மேல்விவரங்களை இத்துடன் இணைக்கப்பட்டுள்ள சிற்றேட்டைப் பார்த்துத் தெரிந்து கொள்ளலாம்.

இதில் நீங்கள் பங்கேற்பது முக்கியமானது. இறுதித் தேதிக்குள் C2020 பதிலைப் பூர்த்தி செய்து சமர்ப்பித்திடுங்கள். உங்கள் பங்கேற்பை பாராட்டி உங்களுக்குப் பிரத்தியேகமாக வடிவமைக்கப்பட்ட மக்கள் கணக்கெடுப்பு நினைவுப்பொருள் ஒன்று வழங்கப்படும். உங்கள் ஒத்துழைப்புக்கும் உதவிக்கும் நன்றி.

உங்கள் உண்மையுள்

C2020 புள்ளிவிவர சட்டத்தின் (பிரிவு 317) கீழ் நடத்தப்படுகிறது. இதில் பங்கேற்பது **கட்டாயமாகும்**. நீங்கள் அளிக்கும் தகவல்கள் அனைத்தும் புள்ளிவிவரச் சட்டத்திற்கு இணங்க இரகசியமாக வைத்திருக்கப்படும்.

WONG WEE KIM
தலைமை புள்ளியியலாளர்
சிங்கப்பூர்

உங்கள் C2020 பதிலை சமர்ப்பிப்பதற்கான வழிகள்

இணையம்வழி
www.census2020.gov.sg

- QR குறியீட்டை ஸ்கேன் செய்து ஆய்வு இணையதளத்திற்கு நேரடியாக சென்றிடுங்கள்.

QR குறியீடு

- கடிதத்தின் வலது பக்கம் மேலே உள் வீட்டு அடையாளத்தையும் சிங்பாஸையும் பயன்படுத்திப் புகுபதிவு செய்திடுங்கள்.

  சிங்பாஸ் இல்லாதவர்கள் ஆய்வுப் படிவத்தை அணுக NRIC/FIN-ஐ பயன்படுத்தி ஒரு மறைச்சொல்லை உருவாக்கிக் கொள்ளலாம்.

C2020 நேரடித் தொலைப்பேசியை அழைக்கவும்
1800-236-2020

- உடனடி தொலைப்பேசி நேர்காணலுக்கு அல்லது நேர்காணலுக்குத் திட்டமிட எங்களை அழைத்திடுங்கள்.
- எங்கள் பதிவுகளில் உங்கள் தொலைப்பேசி எண்கள் இருந்தால் எங்கள் பேட்டியாளர்கள் நேர்காணலுக்காக உங்களைத் தொடர்புக்கொள்ளக்கூடும். அவர்கள் தங்களை C2020 அதிகாரிகள் என்று அறிமுகம் செய்துகொண்டு உங்கள் வீட்டு அடையாளக் குறியீட்டைக் குறிப்பிடுவார்கள்.

C2020 நேரடி தொலைப்பேசி திங்கள் முதல் ஞாயிறு வரை காலை 9 மணி முதல் இரவு 10.30 மணி வரை செயல்படும். (பொதுவிடுமுறைகள் உட்பட)

நேருக்கு நேர் பேட்டி

- நீங்கள் இணையம் வழியோ அல்லது தொலைப்பேசி வழியோ கடைசித் தேதிக்குள் பதிலளிக்காதிருந்தீர்களானால் நேருக்கு நேர் பேட்டி எடுக்கப்படும். எங்கள் களப் பேட்டியாளர்கள் உங்கள் வீட்டிற்கு வரும்போது அவர்களுடைய அதிகாரப்பூர்வ அடையாள அட்டையையும் அதிகாரமளிக்கும் கடிதத்தையும் வைத்திருப்பார்கள்.

Singapore Department of Statistics
109 North Bridge Road #08-01 Funan
Singapore 179097
www.singstat.gov.sg/census2020

SAMPLE

CENSUS 2020 FIRST REMINDER LETTER

[DD MTH YYYY]

THE OCCUPANT
[Block] [Street Name]
[Unit number]
[Postal Code]

House ID	
Extended Due Date	

CENSUS OF POPULATION 2020 – FIRST REMINDER*

Dear Sir/Madam

The Singapore Department of Statistics is currently conducting the Census of Population 2020 (C2020). A notification letter was sent on <<DD MM YYYY>> to inform that your household is selected for C2020.

As we have not received your C2020 returns, please submit them as soon as possible. If you have Internet access, we encourage you to submit your returns online. We have extended the due date for Internet submission. If you encounter any technical difficulty, kindly call our C2020 Hotline for assistance.

The conduct of C2020 is governed by the Statistics Act (Chapter 317). Your responses will be kept in confidence in accordance with the Statistics Act.

We look forward to hearing from you. Thank you for your co-operation and assistance.

Yours faithfully

WONG WEE KIM
CHIEF STATISTICIAN
SINGAPORE

* Please ignore this reminder if you have already submitted your C2020 returns or fixed an appointment with our interviewer.

Ways to Submit Your C2020 Returns

Online **www.census2020.gov.sg**	Call C2020 Hotline **1800-236-2020**	Face-to-Face Interview
Scan the QR code to directly access the survey website. QR Code Register and login using the House ID (provided at the top right of this letter) and your SingPass. Non-SingPass users may create a password using NRIC/FIN to access the survey form.	Call us for an immediate phone interview or to schedule an interview. Our interviewers may also contact you to conduct an interview if your contact number is available in our records. They will identify themselves as C2020 officers and quote your House ID. The C2020 hotline operates from 9am to 10.30pm, Mondays to Sundays (including Public Holidays)	Face-to-face interview will be conducted if you have not provided a response via Internet or telephone by the due date. Our field interviewers will carry an official Identification Card and a letter of authorisation when they visit your house.

Singapore Department of Statistics
109 North Bridge Road #08-01 Funan
Singapore 179097
www.singstat.gov.sg/census2020

SAMPLE

CENSUS 2020 SECOND REMINDER LETTER

House ID	
Final Due Date	

[DD MTH YYYY]

THE OCCUPANT
[Block] [Street Name]
[Unit number]
[Postal Code]

CENSUS OF POPULATION 2020 – SECOND REMINDER*

Dear Sir/Madam

The Singapore Department of Statistics is currently conducting the Census of Population 2020 (C2020). A notification letter was sent on <<DD MM YYYY>> to inform that your household is selected for C2020. A reminder was also sent on <<DD MM YYYY>>.

As we have not received your C2020 returns, an extension has been made to the due date for Internet submission.

The C2020 is conducted under the Statistics Act (Chapter 317). Participation is compulsory. All information provided will be kept in confidence in accordance with the Statistics Act.

We will be grateful for your co-operation in submitting your C2020 returns by the final due date.

Yours faithfully

WONG WEE KIM
CHIEF STATISTICIAN
SINGAPORE

* Please ignore this reminder if you have already submitted your C2020 returns or fixed an appointment with our interviewer.

Ways to Submit Your C2020 Returns

Online
www.census2020.gov.sg

Scan the QR code to directly access the survey website.

QR Code

Register and login using the House ID (provided at the top right of this letter) and your SingPass.

Non-SingPass users may create a password Using NRIC/FIN to access the survey form.

Call C2020 Hotline
1800-236-2020

Call us for an immediate phone interview or to schedule an interview.

Our interviewers may also contact you to conduct an interview if your contact number is available in our records. They will identify themselves as C2020 officers and quote your House ID.

The C2020 hotline operates from 9am to 10.30pm, Mondays to Sundays (including Public Holidays)

Face-to-Face Interview

Face-to-face interview will be conducted if you have not provided a response via Internet or telephone by the due date.

Our field interviewers will carry an official Identification Card and a letter of authorisation when they visit your house.

Singapore Department of Statistics
109 North Bridge Road #08-01 Funan
Singapore 179097
www.singstat.gov.sg/census2020

SAMPLE

CENSUS 2020 THIRD REMINDER LETTER

[DD MTH YYYY]

House ID	

THE OCCUPANT
[Block] [Street Name]
[Unit number]
[Postal Code]

CENSUS OF POPULATION 2020*

Dear Sir/Madam

The Singapore Department of Statistics is currently conducting the Census of Population 2020 (C2020). A notification letter was sent on <<DD MMM YYYY>> to inform that your household is selected for C2020. Reminder letters were also sent on <<DD MMM YYYY>> and <<DD MMM YYYY>>.

We note that the C2020 return for your house is still incomplete. We urge you to complete the survey as soon as possible via the Internet or our C2020 Hotline by <<final extended due date>>. If there is a need for you to be interviewed at your house, you may also call the C2020 Hotline during our hotline operating hours to arrange for a face-to-face interview.

The C2020 is conducted under the Statistics Act (Chapter 317). Participation is compulsory. All information provided will be kept in confidence in accordance with the Statistics Act.

Your participation and support in completing this national survey is greatly appreciated to ensure that accurate and representative data is collected. Thank you.

Yours faithfully

WONG WEE KIM
CHIEF STATISTICIAN
SINGAPORE

* Please ignore this reminder if you have already submitted your C2020 returns or fixed an appointment with our interviewer.

Ways to Submit Your C2020 Returns

Online
www.census2020.gov.sg

Scan the QR code to directly access the survey website.

QR Code

Register and login using the House ID (provided at the top right of this letter) and your SingPass.

Non-SingPass users may create a password using NRIC/FIN to access the survey form.

Call C2020 Hotline
1800-236-2020

Call us for an immediate phone interview or to schedule an interview.

Our interviewers may also contact you to conduct an interview if your contact number is available in our records. They will identify themselves as C2020 officers and quote your House ID.

The C2020 hotline operates from 9am to 10.30pm, Mondays to Sundays (including Public Holidays)

Face-to-Face Interview

Face-to-face interview may be arranged if you are unable to respond via Internet or telephone. You will be required to provide a health and travel declaration prior to their visit.

Our field interviewers will carry an official Identification Card and a letter of authorisation when they visit your house.

Singapore Department of Statistics
109 North Bridge Road #08-01 Funan
Singapore 179097
www.singstat.gov.sg/census2020

SAMPLE

CENSUS 2020 FOURTH REMINDER LETTER

[DD MTH YYYY]

House ID	

THE OCCUPANT
[Block] [Street Name]
[Unit number]
[Postal Code]

CENSUS OF POPULATION 2020*

Dear Sir/Madam

The Singapore Department of Statistics is conducting the Census of Population 2020 (C2020). We wrote to you on <<DD MMM YYYY>> to inform that the above address is selected for the C2020. As the survey was incomplete, reminders were also sent between <<month>> and <<month>>.

You may have overlooked replying to the Census 2020 survey despite our previous attempts to reach you. As we will be closing the Census survey operations by Oct 2020, we seek your kind co-operation to contact us as soon as possible. Our field interviewers are visiting households to assist with the survey. If you prefer, you may also call the C2020 Hotline for assistance or to complete the survey via a phone interview.

Participation in the C2020 is compulsory. All information provided will be kept in confidence in accordance with the Statistics Act (Chapter 317).

The Census is an exercise of national importance. More information can be found in the enclosed information pamphlet or on our Census webpage at http://www.singstat.gov.sg/census2020. Your participation and support are greatly appreciated to ensure that accurate and representative data is collected. We look forward to your prompt response. Thank you.

Yours faithfully

WONG WEE KIM
CHIEF STATISTICIAN
SINGAPORE

* Please ignore this reminder if you have already submitted your C2020 returns or fixed an appointment with our interviewer.

Ways to Submit Your C2020 Returns

Online **www.census2020.gov.sg**	Call C2020 Hotline **1800-236-2020**	Face-to-Face Interview
Online submission has lapsed. You are encouraged to submit your survey returns via a phone interview instead. If you would still like to complete your returns via our Online Submission Form, please call our C2020 Hotline or email us at Census2020@singstat.gov.sg and quote your House ID or residential address for us to make special arrangements for you.	Call us for an immediate phone interview or to schedule a phone or face-to-face interview. The C2020 hotline operates from 9am to 10.30pm, Mondays to Sundays (including Public Holidays)	Our field interviewers are currently visiting households for face-to-face interviews and to verify if addresses are occupied. They will carry an official Identification Card and a letter of authorisation when they perform their duties.

Singapore Department of Statistics
109 North Bridge Road #08-01 Funan
Singapore 179097
www.singstat.gov.sg/census2020

SAMPLE

SINGAPORE DEPARTMENT OF STATISTICS
CENSUS OF POPULATION 2020
(STATISTICS ACT, CHAPTER 317)
HOUSEHOLD FORM

CONFIDENTIAL

HOUSE ID: _____ **HOUSEHOLD NO.:** _____

ADDRESS: _____ S ( )

Name of Contact Person: _____

Home: _____ **Office:** _____

Mobile: _____ **Email:** _____

Do all persons living in this house belong to the same household?
☐ Yes ☐ No
If No, please use a separate household form for each separate household.

A household refers to one person living alone or a group of two or more persons (including domestic helpers/stay-in caregivers) living in the same house and sharing common food or other essential arrangements for living.
Note: Although persons may be living in the same house, they may not be in the same household.
E.g. A family renting out a room to a tenant. If the tenant does not share or have meals with the family, the tenant belongs to a separate household.

WHEREABOUTS

Please list all persons living in this household and indicate their whereabouts.
Whereabouts refers to whether the person is present, overseas, has moved out of the house or is deceased.
*Tip: Include all **family members** and **non-family members** such as domestic helpers and tenants.*
(Persons who are 'Overseas for 12 months or more' include those whose duration of overseas job or course of study is 12 months or more. They also include persons who are not working or studying but have been staying or intend to stay abroad for at least 12 months.)

Person 01

Full Name as in NRIC/Passport: _____

NRIC/BC/FIN: _____
(You may provide the prefix of your NRIC/BC/FIN with last 3 digits and the last alphabet. For example, if your NRIC number is S1234567A, you may indicate 'S567A' in the blank.)

Age at Last Birthday: _____
(For babies less than 1 year old, please indicate 0.)

Whereabouts:
☐ Present in house
☐ Overseas for less than 6 months
☐ Overseas for 6 months to less than 12 months
☐ Overseas for 12 months or more
☐ Shifted out
☐ Deceased
☐ Unknown Person

Person 02

Full Name as in NRIC/Passport: _____

NRIC/BC/FIN: _____
(You may provide the prefix of your NRIC/BC/FIN with last 3 digits and the last alphabet. For example, if your NRIC number is S1234567A, you may indicate 'S567A' in the blank.)

Age at Last Birthday: _____
(For babies less than 1 year old, please indicate 0.)

Whereabouts:
☐ Present in house
☐ Overseas for less than 6 months
☐ Overseas for 6 months to less than 12 months
☐ Overseas for 12 months or more
☐ Shifted out
☐ Deceased
☐ Unknown Person

SAMPLE

SINGAPORE DEPARTMENT OF STATISTICS
CENSUS OF POPULATION 2020
(STATISTICS ACT, CHAPTER 317)
HOUSEHOLD FORM

CENSUS 2020
YOUR RESPONSE MATTERS.
TOGETHER, WE SHAPE OUR FUTURE.

CONFIDENTIAL

SAMPLE

Person 03

Full Name
as in NRIC/Passport: _____

NRIC/BC/FIN: _____
(You may provide the prefix of your NRIC/BC/FIN with last 3 digits and the last alphabet. For example, if your NRIC number is S1234567A, you may indicate 'S567A' in the blank.)

Age at Last Birthday: _____
(For babies less than 1 year old, please indicate 0.)

Whereabouts:

☐ Present in house
☐ Overseas for less than 6 months
☐ Overseas for 6 months to less than 12 months
☐ Overseas for 12 months or more
☐ Shifted out
☐ Deceased
☐ Unknown Person

Person 04

Full Name
as in NRIC/Passport: _____

NRIC/BC/FIN: _____
(You may provide the prefix of your NRIC/BC/FIN with last 3 digits and the last alphabet. For example, if your NRIC number is S1234567A, you may indicate 'S567A' in the blank.)

Age at Last Birthday: _____
(For babies less than 1 year old, please indicate 0.)

Whereabouts:

☐ Present in house
☐ Overseas for less than 6 months
☐ Overseas for 6 months to less than 12 months
☐ Overseas for 12 months or more
☐ Shifted out
☐ Deceased
☐ Unknown Person

Person 05

Full Name
as in NRIC/Passport: _____

NRIC/BC/FIN: _____
(You may provide the prefix of your NRIC/BC/FIN with last 3 digits and the last alphabet. For example, if your NRIC number is S1234567A, you may indicate 'S567A' in the blank.)

Age at Last Birthday: _____
(For babies less than 1 year old, please indicate 0.)

Whereabouts:

☐ Present in house
☐ Overseas for less than 6 months
☐ Overseas for 6 months to less than 12 months
☐ Overseas for 12 months or more
☐ Shifted out
☐ Deceased
☐ Unknown Person

SINGAPORE DEPARTMENT OF STATISTICS
CENSUS OF POPULATION 2020
(STATISTICS ACT, CHAPTER 317)
HOUSEHOLD FORM

CENSUS 2020
YOUR RESPONSE MATTERS. TOGETHER, WE SHAPE OUR FUTURE.

CONFIDENTIAL

SAMPLE

Person 06

Full Name
as in NRIC/Passport: _____

NRIC/BC/FIN: _____
(You may provide the prefix of your NRIC/BC/FIN with last 3 digits and the last alphabet. For example, if your NRIC number is S1234567A, you may indicate 'S567A' in the blank.)

Age at Last Birthday: _____
(For babies less than 1 year old, please indicate 0.)

Whereabouts:

☐ Present in house
☐ Overseas for less than 6 months
☐ Overseas for 6 months to less than 12 months
☐ Overseas for 12 months or more
☐ Shifted out
☐ Deceased
☐ Unknown Person

Person 07

Full Name
as in NRIC/Passport: _____

NRIC/BC/FIN: _____
(You may provide the prefix of your NRIC/BC/FIN with last 3 digits and the last alphabet. For example, if your NRIC number is S1234567A, you may select 'S567A' in the blank.)

Age at Last Birthday: _____
(For babies less than 1 year old, please indicate 0.)

Whereabouts:

☐ Present in house
☐ Overseas for less than 6 months
☐ Overseas for 6 months to less than 12 months
☐ Overseas for 12 months or more
☐ Shifted out
☐ Deceased
☐ Unknown Person

Person 08

Full Name
as in NRIC/Passport: _____

NRIC/BC/FIN: _____
(You may provide the prefix of your NRIC/BC/FIN with last 3 digits and the last alphabet. For example, if your NRIC number is S1234567A, you may indicate 'S567A' in the blank.)

Age at Last Birthday: _____
(For babies less than 1 year old, please indicate 0.)

Whereabouts:

☐ Present in house
☐ Overseas for less than 6 months
☐ Overseas for 6 months to less than 12 months
☐ Overseas for 12 months or more
☐ Shifted out
☐ Deceased
☐ Unknown Person

SINGAPORE DEPARTMENT OF STATISTICS
CENSUS OF POPULATION 2020
(STATISTICS ACT, CHAPTER 317)
HOUSEHOLD FORM

CENSUS 2020
YOUR RESPONSE MATTERS. TOGETHER, WE SHAPE OUR FUTURE.

CONFIDENTIAL

HOUSEHOLD RELATIONSHIPS

Please select the household reference person and specify how each household member is related to the household reference person.

The household reference person may refer to the oldest member, the main income earner, the owner-occupier of the house or the person who manages the affairs of the household.

	Person No.							
	01	02	03	04	05	06	07	08
Household Reference Person	☐	☐	☐	☐	☐	☐	☐	☐
Spouse	☐	☐	☐	☐	☐	☐	☐	☐
Son/Daughter	☐	☐	☐	☐	☐	☐	☐	☐
Son-in-law/Daughter-in-law	☐	☐	☐	☐	☐	☐	☐	☐
Parent	☐	☐	☐	☐	☐	☐	☐	☐
Parent-in-law	☐	☐	☐	☐	☐	☐	☐	☐
Brother/Sister	☐	☐	☐	☐	☐	☐	☐	☐
Brother-in-law/Sister-in-law	☐	☐	☐	☐	☐	☐	☐	☐
Grandchild/Grandchild-in-law	☐	☐	☐	☐	☐	☐	☐	☐
Grandparent/Grandparent-in-law	☐	☐	☐	☐	☐	☐	☐	☐
Great Grandchild/Great Grandchild-in-law	☐	☐	☐	☐	☐	☐	☐	☐
Great Grandparent/Great Grandparent-in-law	☐	☐	☐	☐	☐	☐	☐	☐
Other Relatives, Same Generation as Household Reference Person	☐	☐	☐	☐	☐	☐	☐	☐
Other Relatives, One Generation Older than Household Reference Person	☐	☐	☐	☐	☐	☐	☐	☐
Other Relatives, Two Generations Older than Household Reference Person	☐	☐	☐	☐	☐	☐	☐	☐
Other Relatives, Three Generations Older than Household Reference Person	☐	☐	☐	☐	☐	☐	☐	☐
Other Relatives, One Generation Younger than Household Reference Person	☐	☐	☐	☐	☐	☐	☐	☐
Other Relatives, Two Generations Younger than Household Reference Person	☐	☐	☐	☐	☐	☐	☐	☐
Other Relatives, Three Generations Younger than Household Reference Person	☐	☐	☐	☐	☐	☐	☐	☐
Partner	☐	☐	☐	☐	☐	☐	☐	☐
Domestic Helper	☐	☐	☐	☐	☐	☐	☐	☐
Unrelated Person (e.g. tenant, friend, confinement lady, chauffeur)	☐	☐	☐	☐	☐	☐	☐	☐

PARENTS IDENTIFICATION

Please identify the parents of each household member.

Tip: If the person's father or mother is not living in the same household or is deceased, please select 'Not in Household/Not Applicable'.

	Person No.	Not in Household/ Not Applicable		Person No.	Not in Household/ Not Applicable
Mother of person 1 is		☐	Father of person 1 is		☐
Mother of person 2 is		☐	Father of person 2 is		☐
Mother of person 3 is		☐	Father of person 3 is		☐
Mother of person 4 is		☐	Father of person 4 is		☐
Mother of person 5 is		☐	Father of person 5 is		☐
Mother of person 6 is		☐	Father of person 6 is		☐
Mother of person 7 is		☐	Father of person 7 is		☐
Mother of person 8 is		☐	Father of person 8 is		☐

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SPOUSE IDENTIFICATION

Please identify the spouse/partner of each household member.

Tip: If the person's spouse is not living in the same household, please select 'Spouse Not in Household'. If the person's spouse has passed away, please select 'Spouse is Deceased (Widowed)'. If the person has never been married, please select 'Not Applicable (Single)'.

	Person No.	Spouse Not in Household	Spouse is Deceased (Widowed)	Divorced from Spouse	Separated from Spouse	Not Applicable (Single)
Spouse of person 1 is		☐	☐	☐	☐	☐
Spouse of person 2 is		☐	☐	☐	☐	☐
Spouse of person 3 is		☐	☐	☐	☐	☐
Spouse of person 4 is		☐	☐	☐	☐	☐
Spouse of person 5 is		☐	☐	☐	☐	☐
Spouse of person 6 is		☐	☐	☐	☐	☐
Spouse of person 7 is		☐	☐	☐	☐	☐
Spouse of person 8 is		☐	☐	☐	☐	☐

TENANCY

Does the **household reference person or any other member** in the household own this house/flat?

- ☐ Yes, owns and house/flat is fully paid for
- ☐ Yes, owns with outstanding housing loan
- ☐ No, rents whole house/flat
- ☐ No, rents room(s) within house/flat
- ☐ No, house/flat is provided free by employer
- ☐ No, house/flat is provided free by relatives/friends/others

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HOUSE ID: _____ **HOUSEHOLD NO.:** _____

This Individual Form must be filled in for every member listed in the Household Form who has Whereabouts 'Present in house', 'Overseas for less than 6 months', 'Overseas for 6 months or less than 12 months' or 'Overseas for 12 months or more'.

Person No.: _____

Name: _____

Age at last birthday: _____

Whereabouts:
- ☐ 1. Present in house
- ☐ 2. Overseas for less than 6 months
- ☐ 3. Overseas for 6 months to less than 12 months
- ☐ 4. Overseas for 12 months or more

- ➢ *If whereabouts of this person is 1, 2 or 3 and age at last birthday is 14 and above, proceed to Item 1.*
- ➢ *If whereabouts of this person is 1, 2 or 3 and age at last birthday is 1 to less than 14, proceed to Item 2.*
- ➢ *If whereabouts of this person is 1, 2 or 3 and age at last birthday is less than 1, proceed to Item 6.*
- ➢ *If whereabouts of this person is 4, proceed to Item 38.*

1.	For females, number of children this person has ever given birth to: *Tip: This should include the number of live-born children she has ever given birth to, including those who are currently staying with her, those who have set up their own homes and those who have passed away.* For Females: ☐ _____ Child(ren) For Males: ☐ Not applicable
2.	How many languages and dialects does this person usually speak at home? ☐ One ☐ Two or more ☐ Unable to speak/Too young to speak ➢ *If 'One', proceed to Item 3.* ➢ *If 'Two of more', proceed to Item 4.* ➢ *If 'Unable to speak/Too young to speak' and age at last birthday is 14 and above, proceed to Item 5.* ➢ *If 'Unable to speak/Too young to speak' and age at last birthday is 4 to less than 14, proceed to Item 7.* ➢ *If 'Unable to speak/Too young to speak' and age at last birthday is less than 4, proceed to Item 6.*
3.	What language or dialect does this person speak most frequently at home? ☐ English ☐ Cantonese ☐ Malay ☐ Hokkien ☐ Mandarin ☐ Teochew ☐ Tamil ☐ Others, please specify: _____ ➢ *If this person's age at last birthday is 14 and above, proceed to Item 5.* ➢ *If this person's age at last birthday is 4 to less than 14, proceed to Item 7.* ➢ *Otherwise, proceed to Item 6.*

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4.	What are this person's **first** and **second** most frequently spoken languages/dialects at home? **First** Most Frequently Spoken: ☐ English ☐ Cantonese ☐ Malay ☐ Hokkien ☐ Mandarin ☐ Teochew ☐ Tamil ☐ Others, please specify: _____ **Second** Most Frequently Spoken: ☐ English ☐ Cantonese ☐ Malay ☐ Hokkien ☐ Mandarin ☐ Teochew ☐ Tamil ☐ Others, please specify: _____ ➢ *If this person's age at last birthday is 14 and above, proceed to Item 5.* ➢ *If this person's age at last birthday is 4 to less than 14, proceed to Item 7.* ➢ *Otherwise, proceed to Item 6.*
5.	What language(s) is this person able to read in? *Tip: Person should be able to read, with understanding, materials such as newspapers in the selected language(s).* ☐ Able to read at least one language *Please specify all that is applicable, up to a maximum of 8 languages.* ☐ English ☐ Chinese ☐ Malay ☐ Tamil ☐ Others, please specify: _____ ☐ Unable to read in any language ➢ *Proceed to Item 7.*
6.	Is this child attending pre-school (including child-care/infant-care)? ☐ Yes ☐ No ➢ *If this person is attending pre-school and whereabouts is 1 or 2, proceed to Item 27.* ➢ *Otherwise, end and proceed to the next member.*
7.	What is this person's current activity status? ☐ Fully engaged in work (including serving National Service) *– Go to Item 9* ☐ Schooling but currently working in a vacation job or undergoing paid internship ☐ Working while awaiting examination results or NS call-up *– Go to Item 9* ☐ Engaged in work while schooling ☐ Full-time student ☐ Not working and not full-time student *– Go to Item 9* ➢ *If this person is schooling, proceed to Item 8.* ➢ *Otherwise, proceed to Item 9.*

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8.	What level of formal education is this person currently attending? ☐ Pre-Primary ☐ Primary ☐ Secondary (e.g. Sec 1-5, ITE Skills Certificate Courses) ☐ Post-Secondary (Non-tertiary) (e.g. Pre-U, JC, Nitec/Higher Nitec/Master Nitec Courses) ☐ Polytechnic Diploma Courses ☐ Courses Leading to Professional Qualification and Other Diploma (e.g. ITE Diploma, ACCA, CFA, SIM Diploma) ☐ Bachelor's Degree or equivalent ☐ Postgraduate Diploma/Certificate (excluding Master's and Doctorate) ☐ Master's/Doctorate or equivalent ➢ *If this person is a full-time student and age at last birthday is 14 and above, proceed to Item 19.* ➢ *If this person is a full-time student, whereabouts is 1 or 2 and age at last birthday is less than 14, proceed to Item 27.* ➢ *If this person is full-time student, whereabouts is 3 and age at last birthday is less than 14, proceed to Item 32.* ➢ *Otherwise, proceed to Item 9.*
9.	What is this person's highest qualification attained? ☐ No formal qualification (Did not pass PSLE) ☐ Primary, passed PSLE or equivalent ☐ Secondary, without any GCE 'N'/'O' level pass ☐ Secondary, with at least 1 GCE 'N'/'O' level pass, ITE Certificate of Competency, NTC Grade 3 or equivalent ☐ Post-Secondary (Non-tertiary), with at least 1 GCE 'A' level pass, ITE Certificate in Office Skills, ITE Certificate in Business Studies, NTC Grade 1, NTC Grade 2, ITC, Nitec/Higher Nitec/Master Nitec or equivalent ☐ Polytechnic Diploma ☐ Professional Qualification or Other Diploma (e.g. ITE Diploma, ACCA, CFA, SIM Diploma, NIE Diploma) ☐ Bachelor's Degree or equivalent ☐ Postgraduate Diploma/Certificate (excluding Master's and Doctorate) ☐ Master's/Doctorate or equivalent ➢ *If this person is a Polytechnic Diploma/Professional Qualification or Other Diploma/Bachelor's Degree/Postgraduate Diploma or Certificate/Master's/Doctorate or equivalent graduate, proceed to Item 10.* ➢ *Otherwise, if this person is working, proceed to Item 11.* ➢ *Otherwise, if this person is not working and age at last birthday is 14 and above, proceed to Item 19.* ➢ *Otherwise, proceed to Item 32.*
10.	a) What is the major field of study of this person's highest qualification? *Tip: If this person has 2 or more equivalent qualifications, indicate the one most recently obtained.* _____ b) Where did this person study to obtain his/her highest qualification? *Tip: If this person has 2 or more equivalent qualifications, indicate the one most recently obtained.* _____ ➢ *If this person is working, proceed to Item 11.* ➢ *If this person is not working and age at last birthday is 14 and above, proceed to Item 19.* ➢ *Otherwise, proceed to Item 32.*

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11.	What was this person's employment status last week? *Tip: If this person was holding more than 1 job last week, answer based on the job that he/she worked the longest hours.* ☐ Employee (i.e. works for an employer in return for regular wages or salaries, including serving full-time National Service) ☐ Employer (i.e. operates own business or trade and engages paid employee(s)) ☐ Own Account Worker (i.e. operates own business or trade without paid employee(s)) ☐ Contributing Family Worker (i.e. helping in family business without receiving regular pay)
12.	What industry was this person working in last week? *Tip: If this person was holding more than 1 job last week, answer based on the job that he/she worked the longest hours.* Firm/Organisation: *Tip: Please provide the main business/activity and products/services based on the specific industry that the person was engaged in. For example:* - *Details for a person who worked in Resorts World Sentosa as a hotel operations manager should be based on the hotel industry.* - *Details for a person who worked in Resorts World Sentosa as a theme park operations manager should be based on the amusement and recreation industry.* Main business/activity this person's firm/organisation engaged in: *e.g. Manufacturing of Electronic Products* Main products/services this person's firm/organisation produced or provided: *e.g. Electronic audio and video equipment for home entertainment*
13.	What was this person's job title last week? *e.g. Teacher* What were this person's main tasks/duties at work last week? *e.g. Teach English and Math in primary school*

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14.	What is the address of this person's workplace (for the main job and where he/she usually works most of the time)? *Tips:* - *For those who report to different places on different days, please indicate the place where this person reported most frequently to during the last week.* - *For those who move around in their job, please indicate the place where this person reports to work daily (e.g. taxi/bus drivers who report to a depot should indicate the address of the depot).* - *For those who do not report daily in person to a fixed address, please indicate 'No fixed location for work' (e.g. taxi/private-hire car drivers who park their vehicles and start work from home; travelling salespersons who do not report to a fixed location).* ☐ Address Postal Code: _____ Block and Street Name: _____ Building Name: _____ ☐ No fixed location for work ☐ Works from home
15.	Was this person working full-time, part-time or serving full-time National Service last week? *Tips:* - *For employees, normal hours of work refers to the hours of work that are fixed under legal, collective or contractual agreements. It excludes overtime hours (whether paid or unpaid) and meal breaks.* - *If this person was holding more than 1 job last week, answer based on the job that he/she worked the longest hours.* ☐ Working Full-time (i.e. where normal hours of work are **at least** 35 hours a week) ☐ Working Part-time (i.e. where normal hours of work are **less than** 35 hours a week) ☐ Serving Full-time National Service
16.	How many hours does this person usually work per week (including paid and unpaid hours and excluding meal breaks)? *Tip: If this person holds more than 1 job, answer based on the total number of hours he/she usually works for all jobs.* _____ . _____ Hour(s)
17.	What was this person's gross monthly income from work last month (**excluding** bonus/13th month Annual Wage Supplement)? *Tips:* - *Gross monthly income from work refers to income earned from employment from all jobs.* - *For employees, this refers to the gross monthly wages/salaries before deduction of employee CPF contributions and personal income tax. It comprises basic wages, overtime pay, commissions, tips and other allowances, but excludes employer CPF contribution.* - *For self-employed persons, this refers to the average monthly profits from their business, trade or profession (i.e. total receipts less business expenses incurred) before deduction of income tax.* S$_____.00

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18.	How much bonus did this person receive during the last 12 months (including 13th month Annual Wage Supplement)? *Tip: This refers to the total amount of bonus received from all jobs.* S$_____.00 OR _____ . _____ Month(s) ➢ *If whereabouts of this person is 1 or 2, proceed to Item 29.* ➢ *If whereabouts of this person is 3 and age at last birthday is 14 and above, proceed to Item 31.* ➢ *Otherwise, proceed to Item 32.*
19.	Was this person actively looking for work in the **last 4 weeks**? ☐ Yes ☐ No ➢ *If yes, proceed to Item 23.* ➢ *If no, proceed to Item 20.*
20.	At present, does this person want to work? ☐ Yes ☐ No ➢ *If yes, proceed to Item 21.* ➢ *If no, proceed to Item 23.*
21.	Is this person waiting to start a new job he/she had already obtained? ☐ Yes ☐ No ➢ *If yes, proceed to Item 22.* ➢ *If no, proceed to Item 23.*
22.	How soon does this person expect to start working in this new job? ☐ 2 weeks or less from now ☐ More than 2 weeks and up to 1 month from now ☐ More than 1 month and up to 3 months from now ☐ More than 3 months from now ➢ *If 2 weeks or less from now, proceed to Item 25.* ➢ *If more than 2 weeks from now, proceed to Item 23.*
23.	Is this person available to work in the **next 2 weeks**? ☐ Yes ☐ No ➢ *If this person is actively looking for work in the last 4 weeks and available to work in the next 2 weeks, proceed to Item 24.* ➢ *If this person is not actively looking for work in the last 4 weeks, is available to work in the next 2 weeks and is expecting to start working in a new job he/she had already obtained within the next 3 months, proceed to Item 25.* ➢ *Otherwise, proceed to Item 26*

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24.	What was the **main** step this person took to look for work in the last 4 weeks? ☐ Answered advertisements (excluding online job advertisements)/wrote to firms ☐ Placed or answered online job advertisements ☐ Placed or updated resumes on professional or social networking sites online (e.g. LinkedIn) ☐ Asked friends or relatives ☐ Registered for jobs at job fairs ☐ Registered with Career Centres run by Workforce Singapore or NTUC Employment and Employability Institute (e2i), Community Development Councils (CDCs), and/or Union ☐ Sought help from self-help groups (e.g. CDAC, MENDAKI, SINDA) ☐ Registered with private employment agency, executive search firm and/or head-hunter ☐ Went for walk-in interviews ☐ Contacted referrals from previous employers ☐ Made preparations to start own business ☐ Others, please specify: _____ ➢ *If this person is a full-time student and whereabouts is 1 or 2, proceed to Item 27.* ➢ *Otherwise, proceed to Item 31.*
25.	What was the **main** step this person took to look for work during his/her latest period of job search? ☐ Answered advertisements (excluding online job advertisements)/wrote to firms ☐ Placed or answered online job advertisements ☐ Placed or updated resumes on professional or social networking sites online (e.g. LinkedIn) ☐ Asked friends or relatives ☐ Registered for jobs at job fairs ☐ Registered with Career Centres run by Workforce Singapore or NTUC Employment and Employability Institute (e2i), Community Development Councils (CDCs), and/or Union ☐ Sought help from self-help groups (e.g. CDAC, MENDAKI, SINDA) ☐ Registered with private employment agency, executive search firm and/or head-hunter ☐ Went for walk-in interviews ☐ Contacted referrals from previous employers ☐ Made preparations to start own business ☐ Others, please specify: _____ ➢ *If this person is a full-time student and whereabouts is 1 or 2, proceed to Item 27.* ➢ *Otherwise, proceed to Item 31.*

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26. What is this person's **main** reason for not working or not looking for a job?

- ☐ Foreigner without work pass
- ☐ Pursuing full-time study (e.g. Secondary, JC, ITE, Polytechnic, Private Institution or University)
- ☐ Pursuing part-time study
- ☐ Awaiting the start of academic year
- ☐ Awaiting NS call-up
- ☐ Awaiting examination results
- ☐ Attending courses/training
- ☐ Housework
- ☐ Care-giving to own children aged 12 and below
- ☐ Care-giving to families (including own children aged above 12 and grandchildren)/relatives
- ☐ Care-giving to persons who are not family/relatives
- ☐ Doing voluntary/community work
- ☐ Poor health
- ☐ Permanently ill/disabled
- ☐ Retired/No desire to work due to old age
- ☐ Has sufficient financial support/means
- ☐ Believes no suitable work available
- ☐ Employers' discrimination (e.g. prefer younger workers)
- ☐ Lacks necessary qualification, training, skills or experience
- ☐ Taking a break
- ☐ Others, please specify: _____

➢ *Proceed to Item 31.*

27. How does this person usually travel **to school**?

☐ Transport required (Please select the mode(s) of transport usually taken **in each journey**. You may select up to a maximum of 4 modes.)

Bus/Van:
- ☐ Public Bus
- ☐ On-demand Bus Services (e.g. GrabShuttle, On-demand public bus)
- ☐ Private Chartered Bus/Van (including private van)

Train:
- ☐ MRT
- ☐ LRT

Taxi/Private Hire:
- ☐ Taxi
- ☐ Private Hire Car (via Grab, GrabHitch, Ryde, Go-Jek etc.)

Others:
- ☐ Car (including car-sharing such as Blue SG, CarClub etc.)
- ☐ Lorry/Pickup
- ☐ Motorcycle/Scooter
- ☐ Bicycle (including bike-sharing and power-assisted bicycles)
- ☐ Personal Mobility Device/Aid (e.g. E-scooter, hoverboards, unicycles, wheelchairs)
- ☐ Other modes

☐ Walk only
☐ Study from home

➢ *If <u>not</u> 'Study from home', proceed to Item 28.*
➢ *If 'Study from home' and age at last birthday is 14 and above, proceed to Item 31.*
➢ *If 'Study from home' and age at last birthday is 4 to less than 14, proceed to Item 32.*
➢ *Otherwise, end and proceed to next member.*

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28.	What is this person's usual travelling time to school? *Tip: Please include the total travelling time, including time spent walking and waiting.* _____ Minutes ➢ *If this person's age at last birthday is 14 and above, proceed to Item 31.* ➢ *If this person's age at last birthday is 4 to less than 14, proceed to Item 32.* ➢ *Otherwise, end and proceed to the next member.*
29.	How does this person usually travel **to work**? ☐ Transport required (Please select the mode(s) of transport usually taken **in each journey**. You may select up to a maximum of 4 modes.) Bus/Van: ☐ Public Bus ☐ On-demand Bus Services (e.g. GrabShuttle, On-demand public bus) ☐ Private Chartered Bus/Van (including private van) Train: ☐ MRT ☐ LRT Taxi/Private Hire: ☐ Taxi ☐ Private Hire Car (via Grab, GrabHitch, Ryde, Go-Jek etc.) Others: ☐ Car (including car-sharing such as Blue SG, CarClub etc.) ☐ Lorry/Pickup ☐ Motorcycle/Scooter ☐ Bicycle (including bike-sharing and power-assisted bicycles) ☐ Personal Mobility Device/Aid (e.g. E-scooter, hoverboards, unicycles, wheelchairs) ☐ Other modes ☐ Walk only ☐ Work from home ➢ *If <u>not</u> 'Work from home', proceed to Item 30.* ➢ *If 'Work from home' and age at last birthday is 14 and above, proceed to Item 31.* ➢ *Otherwise, proceed to Item 32.*
30.	What is this person's usual travelling time to work? *Tip: Please include the total travelling time, including time spent walking and waiting.* _____ Minutes ➢ *If this person's age at last birthday is 14 and above, proceed to Item 31.* ➢ *Otherwise, proceed to Item 32.*

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31.	What is this person's religion? ☐ No religion ☐ Buddhism ☐ Taoism/Chinese Traditional Beliefs ☐ Islam ☐ Hinduism ☐ Sikhism ☐ Christianity, Roman Catholic ☐ Christianity, Other Denomination, Please specify: _____ ☐ Others, Please specify: _____
32.	The next few questions ask about difficulties this person may have doing certain activities because of a **health problem**. Does this person have difficulty **seeing**, even if wearing glasses? ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all
33.	Does this person have difficulty **hearing**, even if using a hearing aid? ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all
34.	Does this person have difficulty with **body movement** activities such as walking or climbing steps or transferring from bed to chair/wheelchair (and vice versa)? ☐ No - no difficulty ☐ Yes - with difficulty ☐ Cannot do at all *If "Yes – with difficulty" is selected* i) Walking or climbing steps: ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all ii) Transferring from bed to chair/wheelchair (and vice versa): ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all

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35.	Does this person have difficulty **remembering** or **concentrating**? ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all
36.	Does this person have difficulty with **self-care** activities such as washing all over (bath/shower) or dressing, feeding, or using the toilet? ☐ No - no difficulty ☐ Yes - with difficulty ☐ Cannot do at all *If "Yes – with difficulty" is selected* i) Washing all over (bath/shower) or dressing: ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all ii) Feeding: ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all iii) Using the toilet: ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all
37.	Using this person's usual (customary) language, does he/she have difficulty **communicating**, for example understanding or being understood? ☐ No - no difficulty ☐ Yes - some difficulty ☐ Yes - a lot of difficulty ☐ Cannot do at all ➢ *End and proceed to the next member.*

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FOR ABSENTEE MEMBER *This section must be filled in for persons whose location of employment or course of study is overseas. The duration of the overseas job or course should be 12 months or more. It also includes persons who are not working or studying but have been staying or intend to stay abroad for at least 12 months.*	
38.	Where is this person currently residing in? _____
39.	What is this person's reason for living abroad? ☐ Studying ☐ Working ☐ Others (e.g. staying with related persons overseas) ➢ *If this person is not studying and age at last birthday is 14 and above, proceed to Item 40.* ➢ *Otherwise, end and proceed to the next member.*
40.	What is this person's highest qualification attained? ☐ No formal qualification (Did not pass PSLE) ☐ Primary, passed PSLE or equivalent ☐ Secondary, without any GCE 'N'/'O' level pass ☐ Secondary, with at least 1 GCE 'N'/'O' level pass, ITE Certificate of Competency, NTC Grade 3 or equivalent ☐ Post-Secondary (Non-tertiary), with at least 1 GCE 'A' level pass, ITE Certificate in Office Skills, ITE Certificate in Business Studies, NTC Grade 1, NTC Grade 2, ITC, Nitec/Higher Nitec/Master Nitec or equivalent ☐ Polytechnic Diploma ☐ Professional Qualification or Other Diploma (e.g. ITE Diploma, ACCA, CFA, SIM Diploma, NIE Diploma) ☐ Bachelor's Degree or equivalent ☐ Postgraduate Diploma/Certificate (excluding Master's and Doctorate) ☐ Master's/Doctorate or equivalent ➢ *End and proceed to the next member.*

SAMPLE

IDENTIFICATION BADGE FOR SURVEY OFFICER

GOVERNMENT OF THE REPUBLIC OF SINGAPORE
SINGAPORE DEPARTMENT OF STATISTICS
Census of Population 2020

Survey Officer

SAMPLE

Name :
NRIC :

Photo

LETTER OF AUTHORISATION FOR SURVEY OFFICER

GOVERNMENT OF SINGAPORE

CENSUS OF POPULATION 2020

LETTER OF AUTHORISATION

The Singapore Department of Statistics, Ministry of Trade & Industry is conducting the Census of Population 2020.

XXX (NRIC No. **XXX**) is a Survey Officer with the Department.

He/She is hereby authorised to collect and verify information relating to Census of Population 2020. We would like to assure you that all information provided will be kept in confidence in accordance with the Statistics Act (Chapter 317).

Date issued: DD MM 2020

SALLY LIM
for CHIEF STATISTICIAN
SINGAPORE

SAMPLE

FIELDWORK VISITATION CARD

SINGAPORE DEPARTMENT OF STATISTICS

109 North Bridge Road #08-01 Funan

Singapore 179097

House ID						

Dear Sir/Madam

CENSUS OF POPULATION 2020

(Statistics Act, Chapter 317)

The Singapore Department of Statistics is currently conducting the Census of Population 2020.

Our survey officer visited your house on_____ at _____ to interview you or your household members but could not contact any adult member. Please contact Mr/Ms _____ at Tel / Hp No. _____ between _____ to _____ before _____ to arrange for an appointment.

We would like to assure you that all information provided for the Census 2020 will be kept in confidence in accordance with the Statistics Act (Chapter 317).

Thank you for your co-operation.

Yours faithfully

< Name of Senior Supervisor >

for CHIEF STATISTICIAN

SINGAPORE

For enquiries, please contact us at 1800-236-2020 during our hotline operating hours from Mondays to Sundays, 9am to 10.30pm or census2020@singstat.gov.sg.

SAMPLE

LETTER OF APPOINTMENT FOR CENSUS OFFICER

SINGAPORE DEPARTMENT OF STATISTICS

109 North Bridge Road #08-01 Funan

Singapore 179097

Our Ref:

3 Feb 2020

Ms/Mr XXX
Census Supervisor

Appointment of Census Supervisor for the Census of Population 2020

Please be informed that you have been apointed as Census Supervisor with effect from 4 Feb 2020.

WONG WEE KIM
CHIEF STATISTICIAN
SINGAPORE

SAMPLE

CENSUS 2020 CERTIFICATE OF SERVICE

CENSUS OF POPULATION 2020

CERTIFICATE OF SERVICE

presented to

in recognition of dedicated service

WONG WEE KIM
CHIEF STATISTICIAN
DEPARTMENT OF STATISTICS
SINGAPORE

Date: Dec 2020

SAMPLE

ACRONYMS USED IN CENSUS 2020 RELEASES

Acronym (in alphabetical order)	Description
ACCA	Association of Chartered Certified Accountants
ACD	Assistant Census Director
AOD	Automatic Outbound Dialler
BC	Birth Certificate
BEST	Basic Education for Skills Training
CATI	Computer-Assisted Telephone Interviewing
CB	Circuit Breaker
CENSUS 2020	Census of Population 2020
CET	Continuing Education and Training
CFA	Chartered Financial Analyst
CPF	Central Provident Fund
CLFS	Comprehensive Labour Force Survey
DCD	Deputy Census Director
DEFT	Design Effect
DORSCON	Disease Outbreak Response System Condition
DOS	Singapore Department of Statistics
DPO	Data Processing Operators
ESM	Electronic Submission Module
FAQ	Frequently Asked Questions
FIN	Foreign Identification Number
FWM	Fieldwork Management
GCE	General Certificate of Education
GEBIZ	Government Electronic Business
GHS	General Household Survey
GPC	Government Private Cloud
HDB	Housing and Development Board
HRD	Household Registration Database
ISC	ITE Skills Certificate
ISCED	International Standard Classification of Education
ISCED-F	ISCED Fields of Education and Training
ISCO-08	International Standard Classification of Occupations 2008
ISIC Rev. 4	International Standard Industrial Classification Revision 4
IT	Information Technology
ITC	Industrial Technician Certificate
ITE	Institute of Technical Education
ITT	Invitation to Tender
JC	Junior College

ML	Machine Learning
MRT	Mass Rapid Transit
MOM	Ministry of Manpower
NAFA	Nanyang Academy of Fine Arts
NIE	National Institute of Education
NITEC	National ITE Certificate
NLB	National Library Board
NRIC	National Registration Identity Card
NS	National Service
NTC	National Technical Certificate
OTP	One Time Password
PSLE	Primary School Leaving Examination
QA	Quality Assurance
QR	Quick Response
RO	Regional Office
RSE	Relative Standard Error
SE	Standard Error
SIM	Singapore Institute of Management
SINGPASS	Singapore Personal Access
SLHH	Survey of Large Households
SMS	Short Message Service
SPF	Singapore Police Force
SR	Statistical Releases
SSEC	Singapore Standard Educational Classification
SSIC	Singapore Standard Industrial Classification
SSN	Statistics Singapore Newsletter
SSOC	Singapore Standard Occupational Classification
UIS	UNESCO Institute for Statistics
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WISE	Worker Improvement through Secondary Education
WSQ	Workforce Skills Qualifications
WPLN	Workplace Literacy and Numeracy
2FA	Two-Factor Authentication

CENSUS 2020 PRESS RELEASE

PRESS STATEMENT

Launch of Census of Population 2020

The Singapore Department of Statistics (DOS) will conduct the Census of Population 2020 (C2020) from 4 February 2020, over a period of about six to nine months.

About the Census

The Census of Population is the largest national survey undertaken in Singapore and is conducted once in 10 years. The last Census of Population was conducted in 2010. Information collected on key characteristics of the population and households are important inputs for policy formulation and review, and for planning of programmes and services for the community.

Basic characteristics of the population such as age, sex and ethnic group are obtained from official administrative records. Additional information such as language literacy, language spoken at home and economic and employment details will be collected in the C2020 survey. Data on individuals with difficulties performing basic activities will also be collected for the first time for the compilation of disability-related statistics.

Some 150,000 households have been selected to participate in C2020. Of these, 33,000 households will be surveyed via the Comprehensive Labour Force Survey (CLFS) conducted by the Ministry of Manpower (MOM) in mid-2020. The CLFS will include C2020 questions so as to reduce overall response burden and minimise duplication of efforts by DOS and MOM.

Participation from Households

Between February and July 2020, the selected households will receive a notification letter from DOS, together with an information pamphlet on C2020 and a token of appreciation for their participation. The selected households may submit their C2020 returns via Internet, telephone or face-to-face interview.

(a) Internet Submission

Households may submit their C2020 returns via the Internet through the Census Online Submission Form, which is available 24 hours a day, 7 days a week and on-the-go via internet-accessible devices such as mobile devices and laptops. Households may refer to the online User Guide, pose queries to the Virtual Assistant or call the toll-free C2020 Hotline at 1800-236-2020 for further assistance.

(b) Telephone Interview

Alternatively, households may call the toll-free C2020 Hotline at 1800-236-2020 to complete their returns via a telephone interview. An appointment can also be scheduled over the phone for an interview at a later date.

C2020 interviewers may call households who have not submitted their returns by the due date indicated in their letter. They will identify themselves as C2020 officers and quote the unique House ID for each house.

(c) Face-to-Face Interview

C2020 field interviewers will visit the selected households who have not submitted their returns via the Internet or telephone by the submission deadline. These field interviewers will carry official identification cards and letters of authorisation. Some of these interviewers may visit households in the evenings. Households who wish to verify the identity of C2020 interviewers may call the C2020 Hotline at 1800-236-2020.

C2020 Hotline and Email Address

The toll-free C2020 Hotline (1800-236-2020) operates daily (including public holidays), from 9am to 10.30pm. C2020 officers will answer enquiries and provide assistance on the submission of C2020 survey returns.

Enquiries on the survey may also be sent to: census2020@singstat.gov.sg.

Cooperation from Respondents

The cooperation of households in submitting their completed survey returns is crucial to the successful conduct of C2020. DOS looks forward to the participation of all selected households.

Confidentiality of Data Assured

C2020 is conducted under the Statistics Act (Chapter 317). Participation is compulsory. All information provided will be kept in confidence in accordance with the Statistics Act.

General Information

For an introduction on C2020 and information on how the conduct of Censuses have improved over the years, read the article on *Census of Population 2020* at www.singstat.gov.sg/-/media/files/publications/population/ssn219-pg14.pdf (**Annex**).

More information and resources on C2020 are available on the SingStat Website at www.singstat.gov.sg/census2020.

Singapore Department of Statistics
4 February 2020

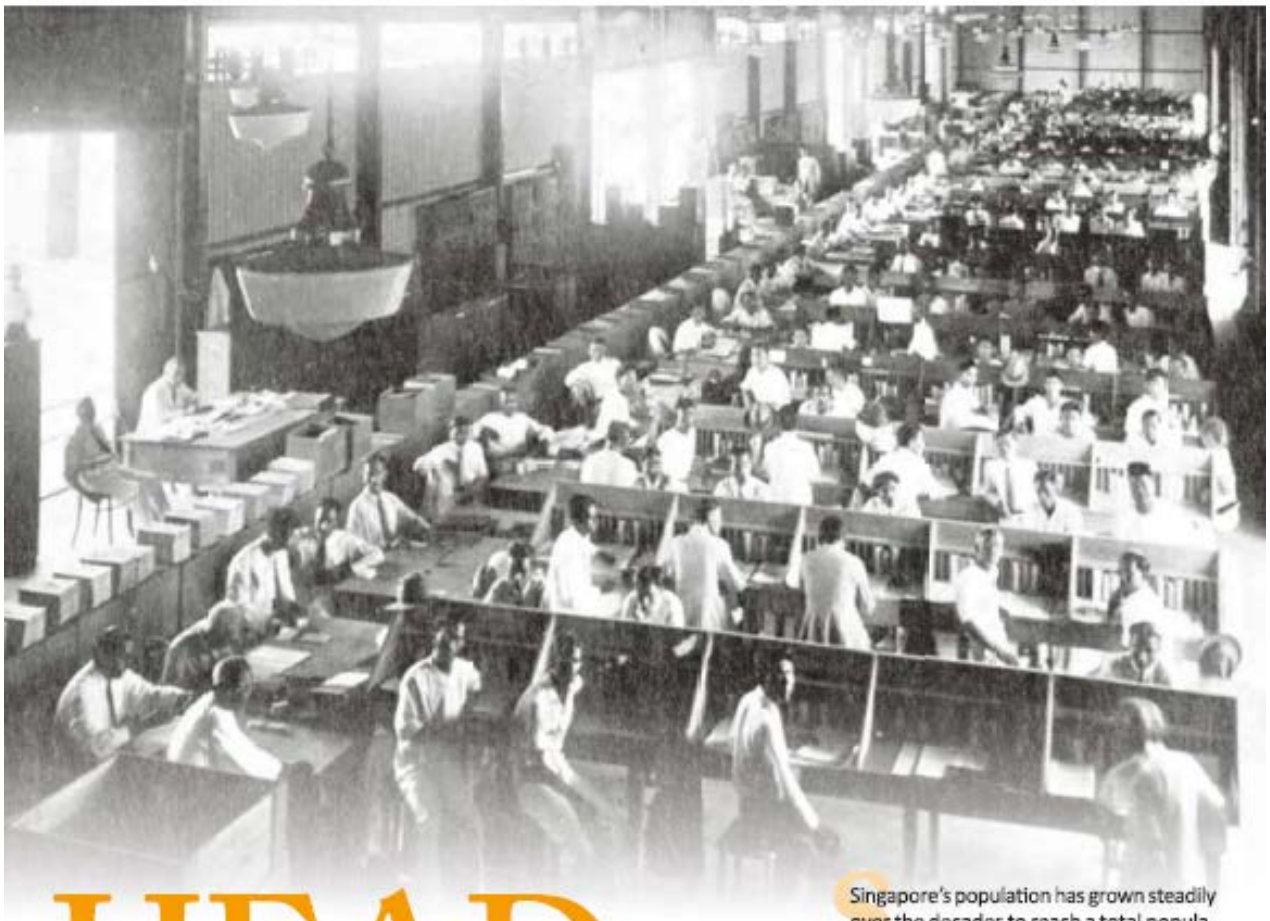
For enquiries, please contact:

Ms Teo Wan Choo **T** 6332 7185 **E** teo_wan_choo@singstat.gov.sg

Mrs Sally LIM **T** 6332 8219 **E** sally_lim@singstat.gov.sg

HEAD COUNT: THE HISTORY OF CENSUS TAKING IN SINGAPORE

BIBLIOASIA | JAN - MAR 2020



HEAD COUNT

The History of Census-taking in Singapore

The very first census here was conducted in 1824. Ang Seow Leng reveals how doing a headcount has evolved over the last 200 years.

Ang Seow Leng is a Senior Librarian with the National Library, Singapore. Her responsibilities include managing the National Library's collections, developing content as well as providing reference and research services.

Singapore's population has grown steadily over the decades to reach a total population of 5.7 million as at June 2019.[1]

Population censuses provide vital surveys of individuals in order to understand the basic demographic composition and trends of a society. They are also useful for developing evidence-based policies in strategic planning and decision-making. In the case of Singapore, figures on population distribution by areas, for instance, are studied to plan the requirements for schools, markets, hospitals and other public amenities.

The *Handbook on the Management of Population and Housing Censuses*, published by the United Nations Department of Economic and Social Affairs in 2016, defines a population census as "the total process of planning, collecting, compiling, evaluating, disseminating and analysing demographic, economic and social data at the smallest geographical level pertaining, at a specific time, to all persons in a country or in a well-delimited part of a country".[2]

While huge amounts of resources are required to conduct a massive census exercise, the methods used in collecting

data are equally important as these affect the quality and accuracy of the final results.

Censuses are conducted on either a *de facto* or *de jure* basis. The *de facto* population "consists of all persons who are physically present in the country or area at the reference date, whether or not they are usual residents", while the *de jure* population is defined as "all usual residents, whether or not they are present at the time of the enumeration".[3]

Patterns of global migration and settlements shape the demographic, social and economic histories of a country. For instance, Adam McKeown's research showed that major long-distance migration flows in the years between 1846 and 1940 from India and southern China, and to a much lesser extent from Africa, Europe, North Eastern Asia and Middle East to Southeast Asia, the Indian Ocean Rim and the South Pacific, numbered around 48 to 52 million.[4] These migration patterns make for interesting analyses and studies.

Early Censuses in Singapore

According to then Acting Colonial Secretary of the Straits Settlements Hayes Marriott, when Stamford Raffles arrived in Singapore in 1819, the estimated population size was around 150, including 30 Chinese and the Malays who had accompanied Temenggung Abdul Rahman when he settled in Singapore in 1811.[5] The number of inhabitants soon grew exponentially. Raffles, writing to Henry Petty-Fitzmaurice, the 3rd Marquess of Lansdowne, on 15 April 1820 claimed:

> "When I hoisted the British flag the population scarcely amounted to 200 souls, in three months the number was not less than 3,000 and it now exceeds 10,000 principally Chinese..."[6]

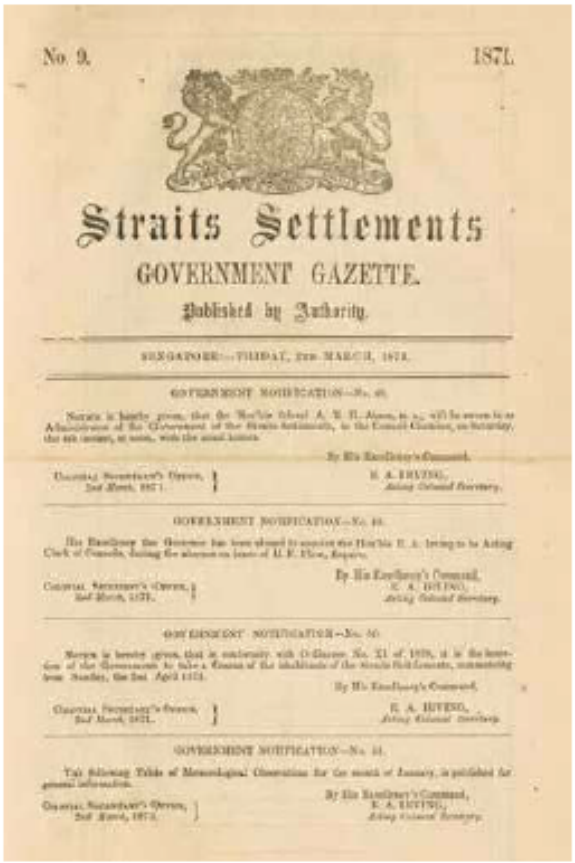
Although primary records of the early censuses of Singapore are no longer available, they can be found in secondary sources such as newspapers and books. According to Charles Burton Buckley, one of Singapore's earliest newspaper columnists, Singapore's first census took place in January 1824. It recorded a population of 10,683, comprising 74 Europeans, 16 Armenians, 15 Arabs, 4,580 Malays, 3,317 Chinese, 756 Indians, and 1,925 Bugis, and others.[7]

Marriott reported that censuses were taken almost every year, from 1825 to 1860,[8] but noted that the figures for these earlier censuses were unreliable. He pointed out that, in 1833, the census was carried out by two constables who were deployed to the settlement and had to attend to their primary duties on top of census-taking.[9] Thomas John Newbold, a lieutenant with the Madras Light Infantry who moved to Melaka in 1832,[10] also recorded the censuses of Singapore from 1824 to 1836, noting that a census was not taken in 1835. He did not list any figures for 1831.[11]

It was only on 2 April 1871 that the first systematic census of Singapore as part of the Straits Settlements was conducted.[12] The Census Bill had been passed in October 1870 to collect more reliable data, conferred power on the Governor and Executive Council to formulate rules for taking the census and to impose punishments on those who refuse to cooperate.[13] This bill was introduced at a time when the practice of taking a census once every 10 years was adopted throughout the British Empire. In 1871, the Singapore census took place around the same time that Great Britain and Ireland conducted theirs.[14]

The 1871 landmark census was different from the 1860 census, which Governor Harry Ord had dismissed. He wrote that "no great reliance can be placed upon the returns of the population stated to have been taken in that year [1860], so that for any purposes of comparison now, they are of little or no value".[15] The 1871 census, on the other hand, had trained enumerators to handle the census. The categories of data collected were also expanded from sex and race to include information on age, occupation, town-country divisions and the type of dwellings. The total population of Singapore at the time was 97,111.[16]

Successive censuses were carried out once every 10 years until 1931. It was observed during the 1931 census that all the non-Malay immigrants in Malaya were mainly sojourners who arrived here to seek a fortune without any intention of residing here permanently, and that the increase in the formation of a settled population of non-Malay origin had been very slow.[17] The first pan-Malayan census began in 1921.[18] Although preparations for the 1941 census had been underway, the onset of World War II derailed plans.



No. 9. 1871.

Straits Settlements

GOVERNMENT GAZETTE.

Published by Authority.

SINGAPORE—FRIDAY, 2nd MARCH, 1871.

GOVERNMENT NOTIFICATION—No. 49.

GOVERNMENT NOTIFICATION—No. 50.

GOVERNMENT NOTIFICATION—No. 51.

(Facing page) Staff sorting records of the census conducted in 1931. *Image reproduced from Vileland, C.A. (1932). British Malaya (the Colony of the Straits Settlements and the Malay States under British protection, namely the Federated states of Perak, Selangor, Negri Sembilan and Pahang and the States of Johore, Kedah, Kelantan, Trengganu, Perlis and Brunei): A Report on the 1931 Census and on Certain Problems of Vital Statistics (between pp. 28 and 29). London: Crown Agents for the Colonies. (Microfilm no.: NL3005).*

(Left) Government Notification—No. 50 "Notice is hereby given, that in conformity with Ordinance No. XI of 1870, it is the intention of the Government to take a Census of the inhabitants of the Straits Settlements, commencing from Sunday, the 2nd of April 1871." *Image reproduced from Straits Settlements. Government gazette. (1871, March 3). Government Notification No. 50 (p. 93). Singapore: Mission Press. Retrieved from BookSG.*

BITING DOGS, CAPSIZED BOATS AND STRIKING WORKERS: STORIES FROM THE 1947 CENSUS

By Jimmy Yap

In general, carrying out a census is no easy task. However, back when Singapore was not as urbanised as it is now, counting its inhabitants was particularly challenging. Newspaper accounts of how the 1947 census was conducted give a good sense of the issues faced by census takers (or enumerators as they are more properly known).

The 1947 census was an important one, being the first undertaken after the war. It was a massive exercise that included all towns, villages, people living in the jungles and on boats and houses built out at sea, and even passengers on trains.[1]

To incentivise enumerators, the Malayan Census Headquarters introduced a prize scheme under which $40,000 were given out in Singapore and the Malayan Union to the most efficient enumerators on the recommendation of the local headquarters.[2]

Besides using government department staff and teachers for census work, hundreds of schoolboys in Singapore were also recruited as enumerators and were each paid $40 for their efforts.[3] About 80 scouts from the 10th Singapore Troop of St Andrew's School also volunteered to assist in the taking of the census in the rural areas of Singapore.[4]

According to one news report, enumerators in the rural areas were frequently regarded with "extreme suspicion":

> "The country population, especially farmers are not always willing to open their doors. It takes a good five minutes to convince the occupants of some houses that census officers are not policemen, detectives or gangsters, but just people assigned by the Government to find out the number of people living in a house.
>
> "This information must be obtained from the principal occupier of the house and if he does not happen to be in, as is often the case, the census officer has to make the long trek back at a time when his informant is likely to be home."[5]

Another problem faced in the rural districts was that many houses were not marked on maps. "The census officer covers a district, then climbs up a hill for the house on top. When he reaches it and looks round the surrounding country he is almost always sure to spot a hut that he had overlooked because it was not marked. He is then obliged to go down again to fulfil his task."[6]

In addition to swamps, rivers, jungles and suspicious tenants, the enumerators had to deal with dogs. The same news report said that "two of the men returned with dog bites while several others have been chased by dogs found in almost every house in the country".[7]

Another challenge was to count those who lived off the main island of Singapore. In some cases, the government relied on the people who knew the area best – the fishermen. One man, Penghulu Awang Chik, described as a "weather-beaten, 41-years'-old fisherman who has spent more than a score [of] years on Singapore's fishing ground", was roped in to be an enumerator. In one week in May, he visited eight small islands and "accounted for 188 lonely island homesteads".[8]

Because of the weather, travelling by sea could be challenging. Census supervisor T. Cordeiro had to carry out census work on Pulau Tekong. Unfortunately, just as he was about to leave the island, he was hit by a storm and his boat capsized. Fortunately, Cordeiro and five others in the party managed to hang on to their boat and they made their way safely back to Pulau Tekong.[9]

Counting the people living aboard vessels in the harbour required census officials to carry out their task between midnight and dawn. The enumerators – each supplied with a torchlight, a pencil, census forms, passes, and a set of instructions – were protected in the course of their duties by the police.

Malaya Tribune reporter Harry Fang accompanied the enumerators as they boarded the various vessels in the harbour and on the rivers. The night did not begin well for them though. The first vessel they boarded was the steamer *Giang Ann*. Fang said: "[W]e were half way through when a European member of the crew, apparently awaked in his sleep by the commotion, appeared in his pyjamas and created a small argument. Finally, we learned that the steamer's crew had [already] been censused."[10]

Naturally, most crew members did not react well to the appearance of Fang and company, given that they were awakened by enumerators "armed with torchlight, and escorted by policemen".

Fang added that the "first reaction was always one of fear but after our explanation, the men became assured and readily supplied us with required information". That said, getting the truth took time. "False names and ages were often given at first and after much gentle persuasion, the truth was finally told."[11]

Conducting a census at sea had unexpected hazards as well, namely hard-working fisherman. "An old disinterested

A rural kampong in Singapore, c. 1960s. In the early days, census takers had to go to kampongs, jungles and even reach out to those living on boats and houses built out at sea. *Photo by K.F. Wong. Courtesy of National Archives of Singapore.*

Chinese with his son fishing in a sampan off Beach Road nearly snared the Marine Police Chief, Mr J.W. Chiltern, when he cast his prawn net at the moment Mr Chiltern passed in one of his branch's fast new launches."[12]

This is not to say that census officials working in the city had an easy time. Some had to be given police escorts because as the Deputy Superintendent of the Census put it, in some parts of Singapore, "they would knock you on the head if you asked them their names".[13]

Sometimes the census officials would get help from unexpected sources, as one newspaper story reported. "The Singapore Rubber Workers' Union yesterday took time off from conducting a strike and a 'squat' to help the Deputy Superintendent of Census, Mr R.H. Oakeley, get census particulars from 120 recalcitrant workers."[14]

The official report of the 1947 census – released in October 1949 – gave Singapore's population as 940,824, which was almost double the figure for the 1931 census.[15]

NOTES

1 Census count tomorrow. (1947, September 23). *The Straits Times*, p. 4. Retrieved from NewspaperSG.
2 Prizes for census enumerators. (1947, July 24). *The Malaya Tribune*, p. 3. Retrieved from NewspaperSG.
3 Schoolboys to do S'pore census work. (1947, June 5). *The Malaya Tribune*, p. 1. Retrieved from NewspaperSG.
4 Scouts to help census. (1947, August 16). *The Singapore Free Press*, p. 5. Retrieved from NewspaperSG.
5 Four-fifths of rural Singapore already counted. (1947, May 25). *The Sunday Tribune*, p. 3. Retrieved from NewspaperSG.
6 *The Sunday Tribune*, 25 May 1947, p. 3.
7 *The Sunday Tribune*, 25 May 1947, p. 3.
8 Fisherman checks isles for census. (1947, May 11). *The Straits Times*, p. 7. Retrieved from NewspaperSG.
9 *The Straits Times*, 11 May 1947, p. 7.
10 Fang, H. (1947, September 24). Census men were asked: "Is this a raid?" *The Malaya Tribune*, p. 8. Retrieved from NewspaperSG.
11 *The Malaya Tribune*, 24 Sep 1947, p. 8.
12 Census finds 1,000 homeless. (1947, September 25). *The Straits Times*, p. 1. Retrieved from NewspaperSG.
13 Police escorts for census workers. (1947, September 24). *The Straits Times*, p. 1. Retrieved from NewspaperSG.
14 Singapore census winding up today. (1947, September 26). *The Straits Times*, p. 5. Retrieved from NewspaperSG.
15 S'pore doubles population in sixteen years. (1949, October 10). *The Malaya Tribune*, p. 1. Retrieved from NewspaperSG.

This is a bound volume of census slips for households on Fraser Street, c. 1945. The National Library received this donation during the 2008 Heritage Roadshow. *Collection of the National Library, Singapore (Accession no.: B20026490A).*

The Japanese Occupation Years

After Singapore fell to the Japanese in February 1942, the island became known as Syonan-to. During the Japanese Occupation (1942–45), the Chosabu (Department of Research) recruited Japanese academics and civil servants, and sent them to Southeast Asia to research Southeast Asian economies and societies for Japan's administrators.[19] One of the reports produced by the Chosabu in Singapore was "Population by Occupation in Syonan Municipality" in December 1943.

The Chosabu noted that the last population census had taken place in Singapore in 1931, and that the police stations on the island had conducted a census survey in April 1943. The same report recorded the approximate population as being around 855,679. This figure was derived from the category that recorded occupations in the April 1943 census survey. The information was used to "identify the circumstances among the population in regard to rationing and other matters".[20]

The Chinese viewed the information-gathering with suspicion as they had suffered greatly during Operation Sook Ching from February to March 1942 when Chinese males between the ages of 18 and 50 were summoned to report at mass screening centres; anyone who was suspected of being anti-Japanese was executed. Hence, the report also noted that "for nationality, most Chinese responded with their home region but a few identified themselves only as Chinese. There was no consistency. The same is true of occupation".[21]

Post-war Censuses

The first post-war census was conducted in 1947, after a lapse of 16 years. M.V. Del Tufo, Superintendent of the Census, wrote in the Foreword of the *Report on the 1947 Census of Population* that the Japanese Occupation had resulted in loss or destruction of records, and the lack of manpower and frequent strikes added to the challenges of carrying out the census.

To quell fear and distrust among people after the war, the British authorities explained that the "census had nothing to do with income tax or rice cards, nor would it be used as a check on individuals".[22] They also assured the people that "all the information with regard to individuals [would be] treated as confidential, and may not be used for any purpose other than preparing tables of statistics about the community

as a whole".[23] At the time, there were thousands of squatters, mostly Chinese, who were living on lands that did not belong to them and they feared eviction if discovered during the census taking.[24]

Compared with the labour-intensive manual method of processing earlier censuses, the 1947 census used a mechanical method of punched cards to speed up the tabulation of the results. Deputy Superintendents of Census were appointed in the states of the Federation of Malaya, except in Perak where the Census Headquarters undertook the Deputy's functions, and in Singapore. The Singapore census also included the populations residing in offshore islands such as Pulau Ubin, Pulau Tekong Besar and St John's Island as well as those on Christmas Island and Cocos (Keeling) Islands. (The Cocos Islands and Christmas Island were transferred to Australia in 1955 and 1958 respectively.[25])

The next census was conducted on 17 June 1957, with the Singapore Department of Statistics handling the census for the first time. It also marked the first time that the census was conducted only for Singapore.[26]

Post-independence Population Censuses

Singapore gained independence in 1965 and the first post-independence population census was conducted in 1970, 13 years after the 1957 census. This was based on recommendation by the United Nations (UN) that each country undertakes a population census during the year ending in "0" or as near to those years as possible. The UN held the view that "the census data of any country are of greater value nationally, regionally and internationally if they can be compared with the results of other countries which were taken at approximately the same time".[27] Subsequent censuses in Singapore saw a constant improvement in the coverage of data, fieldwork, method in collecting data and an increasing reliance on technology.

The 1970 census adopted the *de facto* concept and counted all persons present in Singapore at the time of the census enumeration. Then Minister for Finance Goh Keng Swee was the Chairman of the Census Planning Committee. The Superintendent of this census was P. Arunmainathan, and he was supported by 3,000 field workers comprising mainly teachers and students. The census involved the use of computer-generated data as well as a wider coverage of the types of data collected and the use of sampling population. A two-volume report was published in 1973.[28]

The census in 1980 saw new data collected, for instance, income from work, address of work place or school, and usual mode of transport to work and school. Then Minister for Trade and Industry Goh Chok Tong was the Chairman of the Census Planning Committee, while the Superintendent of Census was Khoo Chian Kim. About 2,600 people were employed for this exercise.[29] Between 1981 and 1986, nine statistical releases and five census monographs on demographic trends, trends in language, literacy and education, labour force, household and housing, as well as geographic analysis, were published.

The Census (Amendment) Bill that was passed on 28 March 1990 allowed for the exchange of information between government bodies in order to facilitate data gathering during population census exercises, and thus avoid duplication of efforts. To preserve confidentiality and prevent the misuse of information, only the Superintendent of Census is able to obtain and share information.[30]

Then Minister for Trade and Industry Mah Bow Tan chaired the 1990 Census Planning Committee, with Lau Kak En as Superintendent. With the support of more than 2,000 people employed to conduct

Census takers hard at work during the 1957 census. This was the first time that the census was conducted by Singapore's Department of Statistics. *Source: © Singapore Press Holdings Limited. Reprinted with permission.*

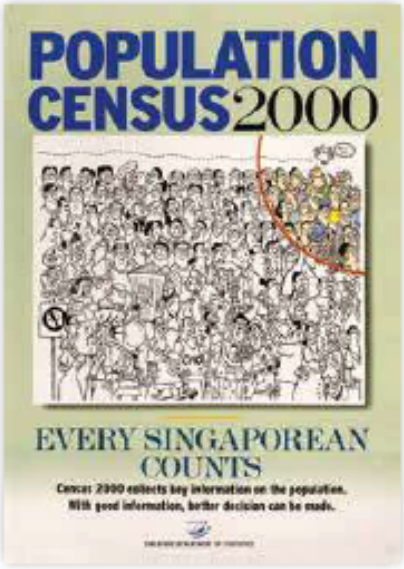
the census exercise during the peak period, it was the first time when details of Singaporeans and permanent residents abroad were included. This was also the first time a country used a census form that had been pre-printed with relevant particulars from various government databases.[31] Six statistical releases and six census monographs were published between 1991 and 1996, covering almost the same topics as the 1980 census.

Singapore became one of the first countries in the world to submit census returns through the internet for the 2000 population census. In this census, Singapore adopted a register-based approach to census-taking for the first time, in which basic data from existing government databases were utilised, thus greatly reducing the need for data entry.[32] With the adoption of a register-based census, the *de jure* concept based on a person's usual place of residence was used instead.

In 1996, the Department of Statistics developed an integrated database system known as the Household Registration Database, which captured the basic count of individuals and the overall profile of the population, including information like age group, sex, ethnic group, citizenship and house-type.[33] Only 20 percent of all households were surveyed in order to verify the accuracy of data.[34] For these participating households, the census adopted a tri-modal data collection strategy that allowed residents to choose one out of three options to provide information: internet enumeration, computer-assisted telephone interview or the traditional face-to-face interview.[35] This resulted in greater efficiency in data collecting and was less labour-intensive.

(Below) A handheld computer used by assistant census superintendents to update their work progress, c. 1990. *Ministry of Information and the Arts Collection, courtesy of National Archives of Singapore.*

(Below right) Publicity poster for Census 2000. *Courtesy of Singapore Department of Statistics.*



The Chairman for the Census 2000 Planning Committee was then Permanent Secretary of the Ministry of Trade and Industry Khaw Boon Wan, and the Superintendent was Leow Bee Geok. Five statistical releases and nine advance data releases were published between 2000 and 2001. These covered topics such as education, religion, literacy and language, economic characteristics, mode of transport, households and housing, household income growth and distribution, and marriage and fertility.

As the fifth census since independence, the exercise in 2010 also adopted

NOTES

1 Department of Statistics Singapore. (2019, October 1). *Singapore Population*. Retrieved from Department of Statistics Singapore website.

2 United Nations. Department of Economic and Social Affairs, Statistics Division. (2016). *Handbook on the Management of Population and Housing Censuses*. Retrieved from United Nations website.

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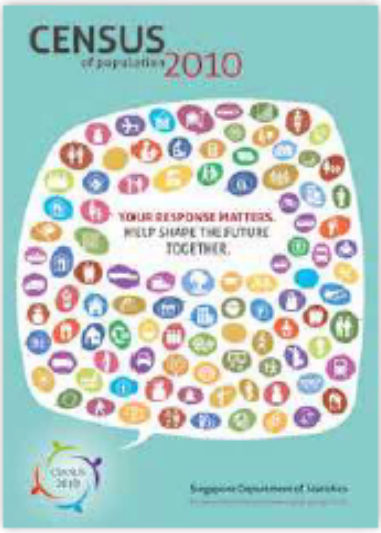
a register-based approach in which the basic population count and characteristics were compiled from administrative sources. Hence, there was a reduction of field interviewers to only 140, with 20 field supervisors across 10 regional offices in the country. These interviewers also made use of mobile personal computers to carry out their enumeration on the go, thus removing the need for hardcopy survey forms. Another 400 daily-rated staff were recruited to support day-to-day operations. Ravi Menon, then Permanent Secretary of the Ministry of Trade and Industry, was the Chairman of the 2010 Census Planning Committee, with Chief Statistician Wong Wee Kim as Superintendent.[36] In 2011, three statistical releases were published on demographic characteristics, education, language and religion, households and housing, and geographic distribution and transport.

Publicity poster for Census 2010. *Courtesy of Singapore Department of Statistics.*



The Future of Census

Censuses allow a country to collect data on the demographic and socioeconomic characteristics of its population. Singapore has gone through 14 censuses since 1871, and each one has seen an increasing reliance on technology, especially in the recent censuses.

Emerging global trends have influenced the manner in which a census exercise is designed and undertaken, especially in developed countries. While the purpose of a census has evolved from its early days as a means for implementing taxation policies, and conscription into military service or forced labour, it has become a useful tool for social analysis and understanding as can be seen in the increasing number of census questions to gather more social statistics for successive censuses.[37]

Data collected during a census is crucial for any government for the purposes of long-term planning, decision-making and policy formulation. A thorough and detailed analysis of any census typically takes two years or more to complete, by which time the efficacy of the results might be called into question. One of the challenges in census-taking is the timely analysis of the findings so that these remain relevant and useful for the aforementioned purposes. Another challenge is the difficulty in capturing accurate demographic characteristics due to increasing migration and human mobility for work and study.

In a digital age where linked data and sophisticated data analysis tools are readily available, countries like Denmark, Sweden, Norway, Finland and Slovenia have moved away from traditional approaches in conducting a census. They now rely on centralised databases administered by the government such as tax records, electoral lists and school rolls, and also engage in periodic polling of a sample population size.[38]

Census data derived completely from administrative register-based sources do not require citizens to fill in census questionnaires. However, such a method is not without its drawbacks. The administrative sources may not be appropriate for census use as the information gathered is not meant for statistical purposes. Certain information may also not be available or complete in administrative databases.

It is common for countries, therefore, to adopt a combination of a register-based survey with enumeration or survey data, similar to what Singapore did in the 2000 and 2010 censuses; this will also be the case in the upcoming 2020 census.[39] It will be interesting to see how Singapore's future censuses keep up with evolving demographics and trends. ♦

The author wishes to thank the Singapore Department of Statistics for reviewing the essay. The National Library's latest exhibition "On Paper: Singapore Before 1867", held at level 10 of the National Library Building until 22 March 2020, features a scribal copy of the 1827 census of Singapore.

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Statistics Singapore Newsletter Issue 2, 2019

CENSUS 2020
YOUR RESPONSE MATTERS.
TOGETHER, WE SHAPE OUR FUTURE.

Census of Population 2020

About the Census

Conducted once in ten years, the Census of Population is the largest national survey undertaken in Singapore. Census of Population 2020 (C2020) will be the sixth Census after Singapore's Independence and the 15th since the first Census taken in 1871.

Objective

The Census collects information on key characteristics of the population and households. The information is used by government agencies for policy formulation and review, and planning of programmes and services for the community. It is also used for research and understanding of the Singapore population by members of the public, academia and the international community.

Conduct of C2020

C2020 will adopt a register-based approach, similar to the Censuses conducted in 2000 and 2010, where the basic population count and characteristics such as age, sex and ethnicity will be compiled from administrative sources.

To collect the data on detailed socio-economic and household characteristics, a large-scale sample survey will be conducted. An improved sampling design has been adopted, which reduces sample size by 25%, from 200,000 household addresses in C2010 to 150,000 in C2020.

Survey information required from households relate to housing, socio-economic characteristics (including occupation, industry, income), education, language and literacy, transport, religion and difficulty in performing basic activities. Households can submit their survey returns through various modes (Internet, telephone or face-to-face interview).

Improvements

With the increased usage of mobile devices and growing demand from respondents to enumerate online, the C2020 will provide a mobile-friendly interface for online submission of survey returns. Respondents will use SingPass for login, and undergo two-factor authentication for added security.

Field interviewers will be using tablets in face-to-face interviews. Information collected from the online survey, telephone and face-to-face interviews can thus be updated directly in the backend server to allow a consistent set of the information provided through the different modes of submission.

CENSUS TIMELINE

First Census in Singapore — 1871

First Census After Independence — 1970
- Introduction of sample enumeration with main census
- Used computer for preparation of tables

Second Census After Independence — 1980
- Introduction of systematic computer editing and "cleaning" of data

Last Traditional Census — 1990
- Surveyed all households in Singapore
- Trialled the use of administrative records for basic particulars in Census
- Used paper-and-pen approach for data collection

First Register-Based Census — 2000
- Used administrative data for basic population count and profile
- Enumerated 20% sample to supplement data not available from administrative sources
- Introduced tri-modal data collection strategy with Internet self-enumeration, telephone interviews via Call Centre, paper-and-pen approach for face-to-face interviews, and optical character recognition form scanning

Second Register-Based Census — 2010
- Used more administrative data for population profile
- Adopted tri-modal data collection strategy, with Internet self-enumeration, Call Centre interviews, and paperless Census
- Deployed ultra mobile personal computers for face-to-face interviews

Third Register-Based Census — 2020
- Use administrative data in a more integrated manner
- Improvements will be made on each mode of the tri-modal data collection strategy:
  - ◊ Mobile-friendly web-design
  - ◊ Tablets with secured wireless real-time data transmissions
  - ◊ Artificial Intelligence (AI)-assisted data processing

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STATISTICS SINGAPORE NEWSLETTER

ISSUE 2, 2020

Conducting Census of Population 2020 in Singapore amidst COVID-19

by Chia Wai Yin and Wong Wei Lin
Census Office
Singapore Department of Statistics

About the Census of Population

Singapore carries out the Census of Population once in ten years. Conducted by the Singapore Department of Statistics (DOS), the Census is the largest national survey undertaken to collect and compile information on detailed characteristics and the profile of the population and households. Since 2000, Singapore has adopted a register-based approach for Census-taking, using administrative data from different sources to provide basic demographic information such as age, sex and ethnicity for the whole population. In-depth information on socio-economic and household characteristics that are not already available from administrative sources are then captured through a large-scale sample survey.

To raise public awareness of the Census of Population 2020 (C2020) in general and to reach out to survey respondents in particular, relevant information about the C2020 was made available through the mass media (e.g. radio and newspaper ads), posters (e.g. in community centres, MRT trains, neighbourhood police posts etc.) and the SingStat Website (www.singstat.gov.sg/census2020). The Census webpage includes a video on the conduct of C2020 and its purpose as well as access to the Census Online Submission Form.

Even though Censuses have been conducted regularly about once in 10 years since 1871 in Singapore, the impact of the COVID-19 pandemic posed unprecedented challenges for the conduct of C2020 and presented valuable lessons for the planning and implementation of future household surveys.

Adjustments to C2020 Data Collection Strategy

The C2020 sample survey covering some 150,000 households, was launched on 4 Feb 2020. A tri-modal data collection strategy is implemented to cater to the varied profile and needs of the population while balancing resource considerations. Based on the experience of C2010, data collection for a Census was expected to take about 6 months to complete. However, the COVID-19 outbreak and the ensuing measures implemented nationwide to control its spread severely impact the timeline for the conduct of C2020. The Census Office in DOS swiftly made adjustments and adapted to the new operating environment for the C2020 operations.

Online Self-Enumeration

In C2020, respondents are able to submit their survey returns directly through the Internet. This provides flexibility for respondents as the online submission platform is available round the clock for them to provide their returns at their convenience. Through online enumeration, the manpower required to reach out to respondents is reduced. Despite the COVID-19 outbreak, the online submission mode allows for the C2020 data collection to continue as respondents could complete and submit their returns themselves in the convenience of their homes any time of the day. To encourage online self-enumeration, respondents who did not complete and submit their survey returns by the deadline would receive up to three reminder letters, one more compared to the two reminder letters that were sent in C2010.

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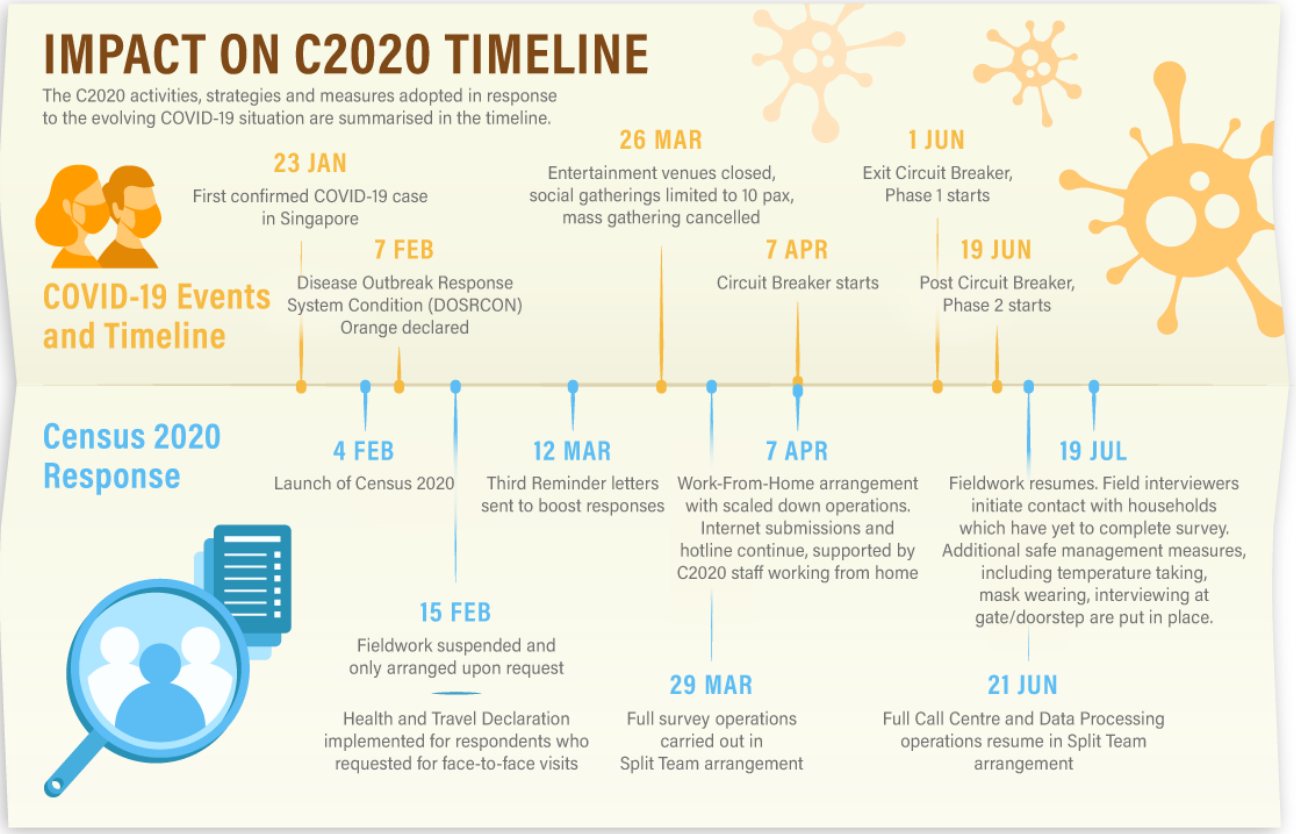
Computer-Assisted Telephone Interview

Respondents are able to complete the survey over the phone via a Census hotline. The Census Call Centre also reaches out to respondents who have not completed their returns online by a stipulated date. Besides providing assistance in the completion of survey over phone interviews, the Census hotline is critical in supporting respondents in completing their online submission and attending to other general enquiries and feedback on C2020. With work-from-home arrangements being in place during the Circuit Breaker period between April and June 2020, operations at the Census Call Centre were scaled down. Work processes were changed to allow for a smaller pool of C2020 staff to continue supporting the operation of certain scope of work over the telephone. This includes receiving incoming calls for phone interviews and survey enquiries. Calls made to respondents were cut down.

Face-to-Face Interview

Face-to-face interviews are conducted for respondents if they did not respond through the online survey and could not be contacted by phone. At the initial launch of C2020 in February, a small number of households were visited by C2020 interviewers. Due to the COVID-19 outbreak, face-to-face visits were only arranged upon request from mid February to early March, and face-to-face visits were only carried out after health and travel declarations were obtained from these households which had requested for face-to-face interviews. These additional precautionary measures were put in place to ensure the health and safety of both the C2020 respondents and C2020 staff. Field visits were suspended from April to mid July 2020 due to measures implemented nationwide to fight against COVID-19, and only resumed towards the second half of July, well into Phase 2 post Circuit Breaker.



Lessons Learnt

In reviewing the design of C2020 and reflecting on the adjustments made, the following areas were identified to have helped mitigate the impact of COVID-19, and will continue to be leveraged if needed.

Staggered Rollout

In the design of the Census workflow, the Census Office has adopted a staggered approach where the full Census sample is split into a number of smaller groups, which have survey start dates spread over

several weeks. This is to help manage the case load on the Internet server, call traffic to the Census hotline and minimise risk of data exposure for individual households on the Internet.

This design provided flexibility for the dispatch dates and sizes of each batch to be adjusted in response to the evolving COVID-19 situation and measures. For example, when call operations were scaled back, we were able to release smaller batches in less frequent intervals to cushion the effect of reduced manpower.

Applying Analytics to Schedule Reminders and Optimise Response

Analytics were used to monitor the progress of individual batch and follow up with adjustments, in particular on the intensity of reminders to households. Due to the suspension of reminder letters being sent during the Circuit Breaker period, there was a drop in responses for selected groups (Chart 1). This demonstrates the effectiveness of reminder letters in boosting survey completion rates.

Earlier Census Launch Date

In C2010, contingency plans were discussed to provide for potential challenges that may arise due to the H1N1 outbreak between 2009 and 2010 ahead of the launch of the Census but these were not activated eventually. C2020 was launched one month ahead of schedule compared to the previous Census, to cater for unforeseen circumstances. The earlier launch provided some buffer time for Census operations to gradually resume after the main operations had to be scaled down for over two months due to the implementation of the Circuit Breaker measures between 7 April and 18 June 2020.

Online Submission

With more than half of the households submitting their returns via the Internet, a large proportion of responses continued to be received during the Circuit Breaker. The higher take-up rate for online mode compared to the previous Census was expected but still served as a critical factor in reducing the load that needs to be followed up on.

Register-Based Census

As data on population estimates are compiled from administrative records, top-line population data such as population count, sex ratio, age and ethnic composition for 2020 have been made available through the annual Population Trends report. This is despite the impact of COVID-19 measures and scaled-down Census operations over a protracted period.

Data Processing Enhancements

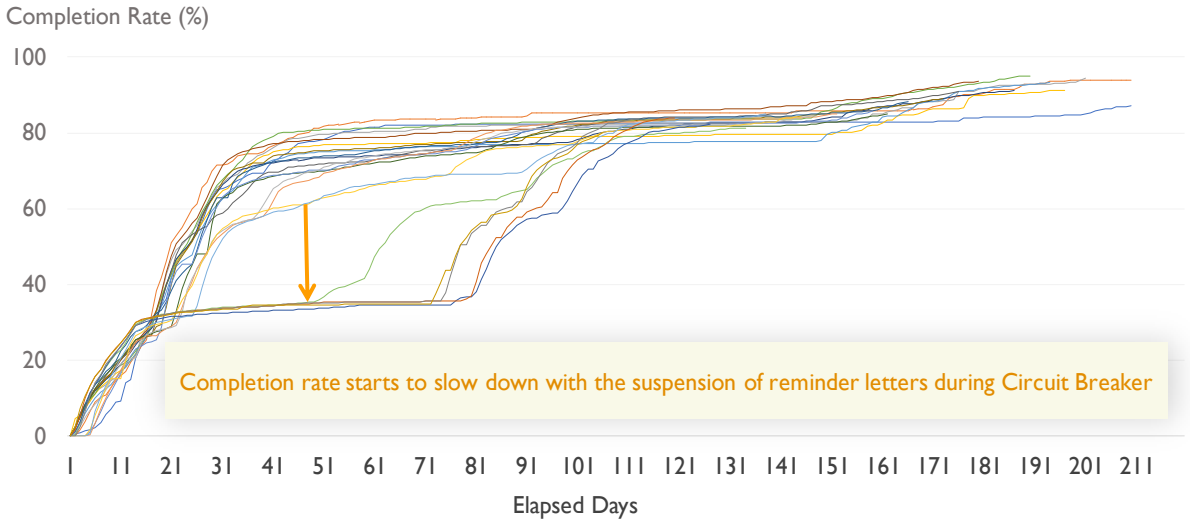
Using administrative data for consistency checks and implementing machine learning to the coding of selected data items mitigated resource constraints in data processing during the COVID-19 pandemic as work-from-home arrangements were put in place.

Current Progress

As of September 2020, the Census 2020 collection is still ongoing. The Census Office strives to complete the data collection as soon and safe as we can, while we adapt to the COVID-19 situation when required. Detailed statistical releases are expected to be released progressively from 1Q 2021.

CHART 1

COMPLETION RATE OF C2020 BATCHES



Statistics Singapore Newsletter Issue 1, 2021

Census of Population 2020 - Modes of Submission and Reminders Amidst COVID-19

by Russell Ong and Yap Yee Liong
Census Office
Singapore Department of Statistics

Introduction

The Singapore Department of Statistics (DOS) conducted the Census of Population 2020 (Census 2020) in 2020. While the main Census data collection period was from Feb to Oct 2020 when the Internet submission was open and outreach was done, returns from respondents continued to come in through the hotline and clarifications were made till end Dec 2020. Census 2020 adopted a register-based approach supplemented with a large-scale sample survey similar to the approach adopted in Census 2010. Under the register-based approach, the basic population count and characteristics[1] were obtained from administrative records from multiple sources. A sample survey of some 150,000 households was then conducted to obtain additional information[2] that was not available from administrative sources.

The Census 2020 sample survey was launched on 4 Feb 2020. A tri-modal data collection strategy comprising Internet self-enumeration, telephone interviews, and face-to-face interviews was implemented to cater to the varied profile and needs of the population while balancing resource considerations. While the tri-modal data collection approach had been undertaken since Census 2000, the COVID-19 pandemic and the ensuing Circuit Breaker measures implemented nationwide to control its spread invariably impacted how respondents chose to provide their Census 2020 submissions.

This article presents a summary analysis of the response modes used by households to submit their returns for the Census 2020 survey. The Internet mode of data collection played an important role in Census 2020, as it was found to be the most popular response mode in 2020, exceeding reception levels in the Censuses of 2000 and 2010. The impact of reminder letters, which were used to address the challenges posed by the pandemic, including limitations of face-to-face visits are also examined.

KEY FEATURES OF TRI-MODAL COLLECTION STRATEGY IN CENSUS 2020

Internet - Respondents submit their survey returns directly through the Internet. This provides flexibility and convenience to respondents as the online submission portal is available round-the-clock.

Census Hotline – Respondents complete the survey over the phone via the Census hotline. The daily operating hours for the Census hotline is from 9 am to 10.30 pm (including Saturdays, Sundays and Public Holidays).

Face-to-Face Interviews - For respondents who did not respond through the online survey and could not be contacted by phone, interviews are conducted. While it is labour-intensive, it is an essential mode to reach out to respondents, especially those who are not Internet-savvy or prefer an in-person validation before proceeding with the survey.

1 The basic population characteristics include age, sex, ethnic group, place of birth, type of dwelling, geographical distribution and other basic demographic statistics.

2 The additional data required for in-depth studies included marital status and fertility, education and language spoken, literacy, economic characteristics, housing and household characteristics, mode of transport, religion, and difficulty in performing basic activities.

Submission Modes in Census 2020 Compared with Earlier Censuses

The proportion of respondents who submitted their survey returns over the Internet surged to 64 per cent in Census 2020 (Chart 1) compared to 15 per cent in Census 2000 and 38 per cent in Census 2010.

While respondents who submitted their responses over the telephone constituted the majority during the Censuses of 2000 and 2010, the proportion of such respondents declined from 62 per cent in Census 2000 to just 25 per cent in Census 2020.

Profile of Responding Households

In Census 2020, households that submitted their returns over the Internet had a larger average household size of 3.3 persons (Table 1) compared with households who opted for the other two modes (2.5 persons for Telephone and 2.3 persons for Face-to-Face interviews).

Some 45 per cent of those who responded through the Internet had 4 or more members in their households compared to only 21 per cent for those responding through face-to-face interviews.

This trend in Census 2020 was generally consistent with that observed in Census 2010, where respondents from household of larger sizes were more likely to use the online submission mode. This could be due to the convenience the Internet option provided, since respondents could respond to the survey any time and over a number of sessions according to the availability of individual members.

CHART 1

SHIFTS IN USE OF MODES OF SUBMISSION, 2000 - 2020

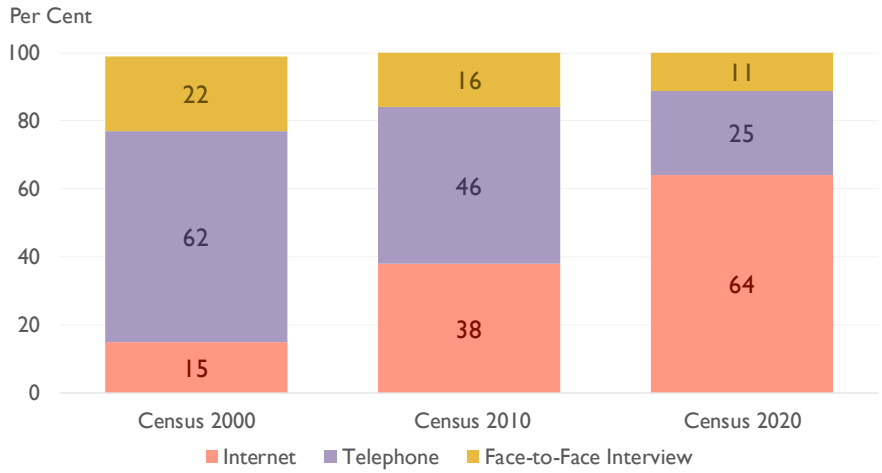


TABLE 1

DISTRIBUTION OF HOUSEHOLD SIZE BY MODE OF SUBMISSION, 2010 AND 2020

Per Cent

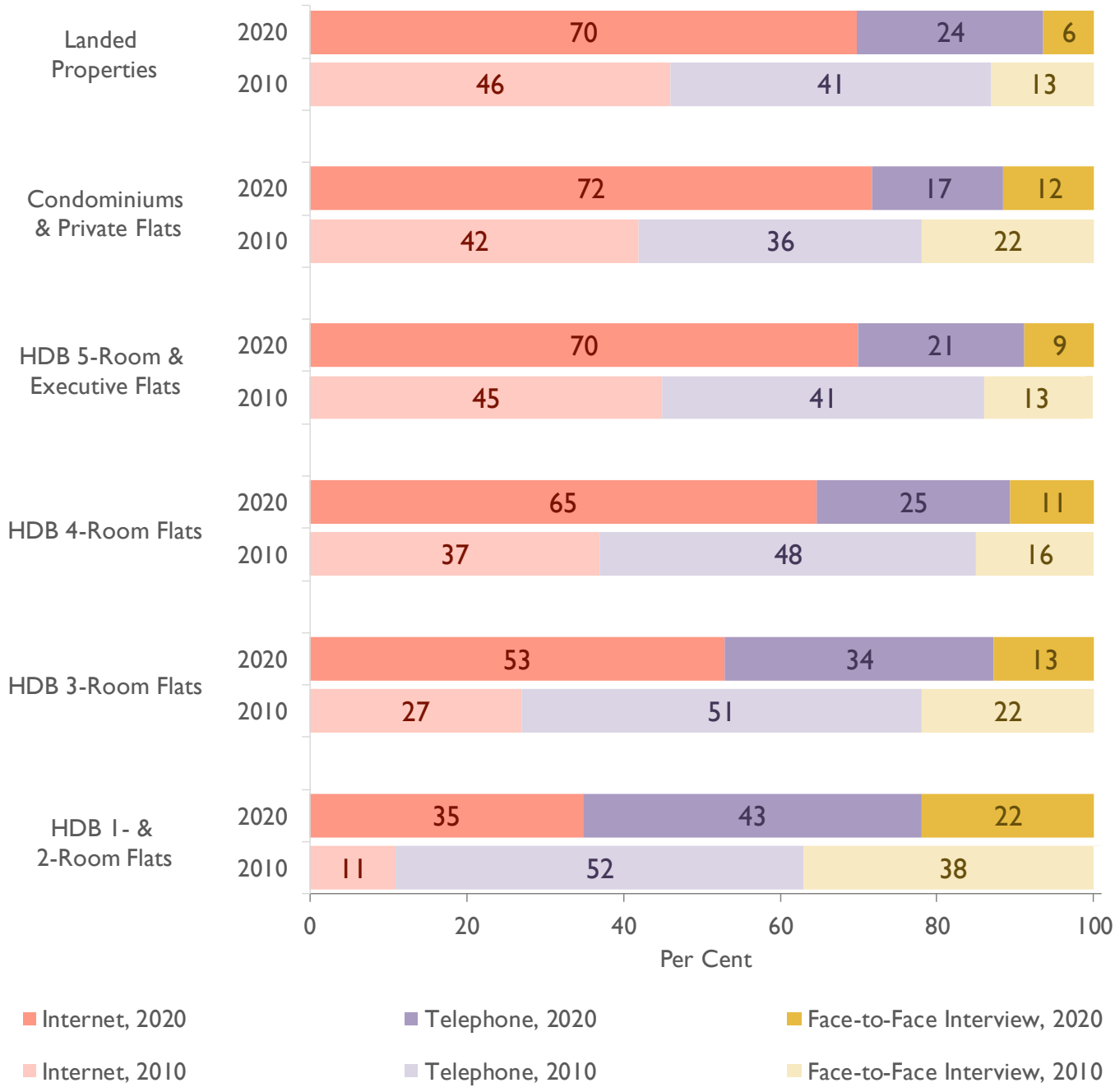
	Internet		Telephone		Face-to-Face Interview	
Household Size	C2010	**C2020**	C2010	**C2020**	C2010	**C2020**
1 Person	10.4	**16.6**	15.1	**31.2**	39.2	**46.6**
2 Persons	15.3	**19.5**	19.5	**27.6**	18.1	**19.8**
3 Persons	19.0	**19.4**	19.5	**17.0**	13.9	**12.5**
4 Persons	25.2	**21.3**	21.7	**12.3**	12.8	**10.1**
5 and More Persons	30.0	**23.3**	24.1	**11.9**	15.8	**10.9**
Average Household Size (Person)	3.7	**3.3**	3.4	**2.5**	2.6	**2.3**

More than 50 per cent of Households in HDB 3-Room and Larger Flats and Private Housing Used Internet Submission in Census 2020

More than 50 per cent of households residing in HDB 3-room or larger flats and private housing submitted their returns via the Internet in Census 2020 (Chart 2).

Submission of census returns over the Internet has also increased from Census 2010 among those residing in HDB 1- and 2-room flats. Within this group, 35 per cent of households had used the Internet for their Census 2020 submissions, more than three times the proportion in Census 2010. Nonetheless, households in this group remained more likely to use telephone and face-to-face survey submissions modes in Census 2020, at 43 per cent and 22 per cent respectively.

CHART 2
MODES OF SUBMISSION BY DWELLING TYPES, 2010 AND 2020



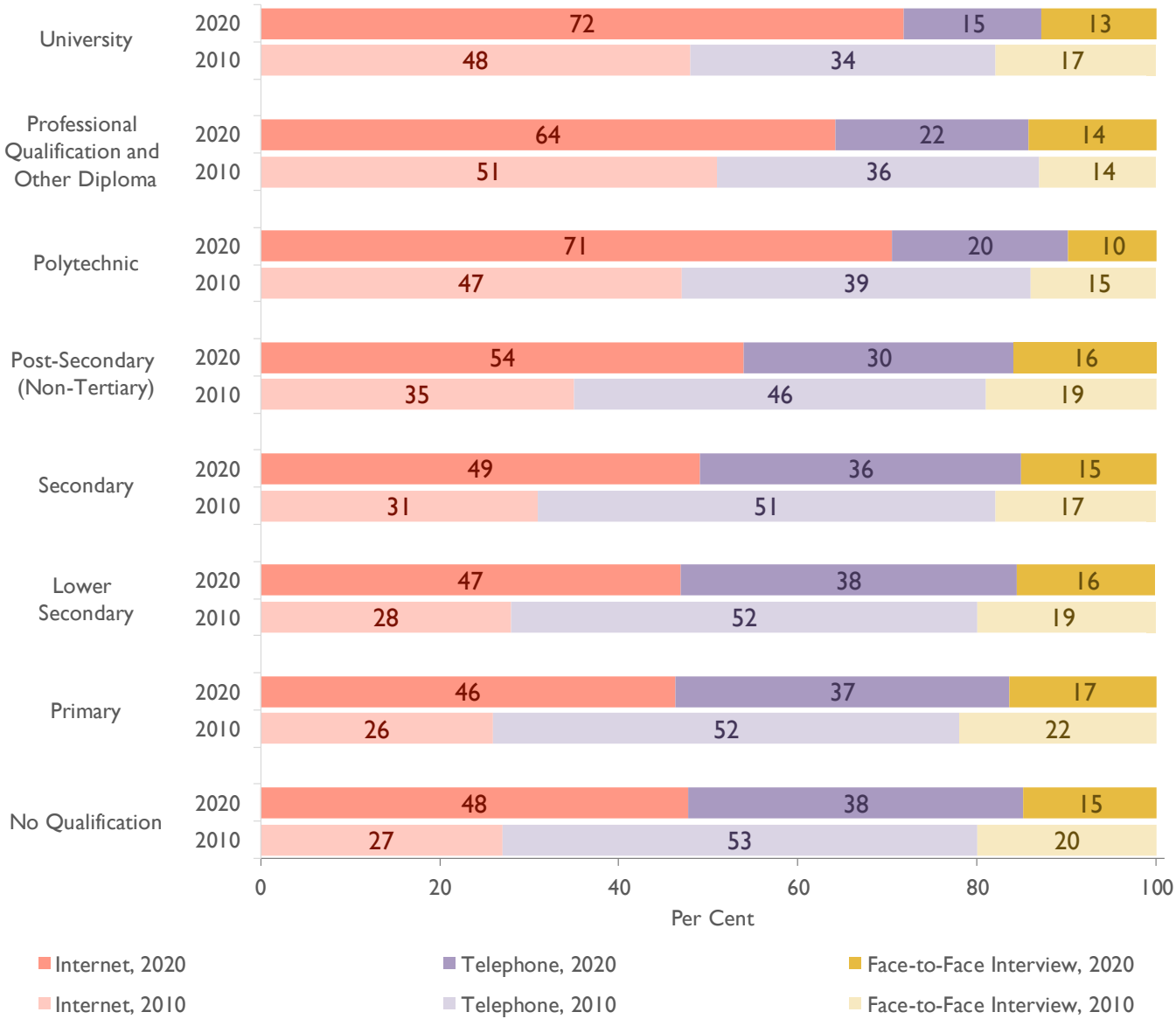
Internet Submission Remained the Most Popular Choice among Better-Educated

Households with reference persons[3] holding higher educational qualifications had greater propensity to use the Internet to submit their Census 2020 returns. Among households whose reference persons had University qualifications, 72 per cent submitted their returns through the Internet (Chart 3), an increase from 48 per cent in Census 2010.

The corresponding proportion was lower at slightly below 50 per cent among households with reference persons whose educational qualification is at Secondary level or lower, albeit a significant increase from 31 per cent in Census 2010.

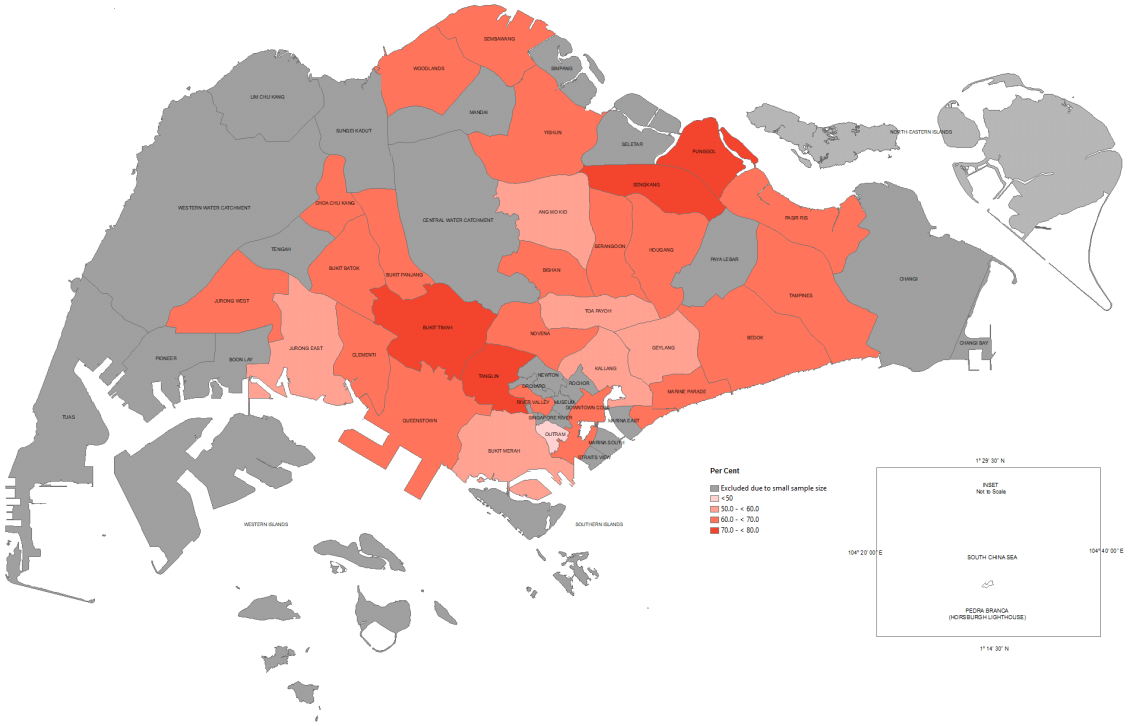
CHART 3

SUBMISSION MODES BY HIGHEST QUALIFICATION ATTAINED OF REFERENCE PERSON, 2010 AND 2020



3 Introduced in Census 2020, the term 'Household Reference Person' may refer to the oldest member, the main income earner, the owner-occupier of the house, the person who manages the affairs of the household, or the person who supplied the information pertaining to other members. Prior to Census 2020, survey respondents were asked to identify the 'head of household'. The identified person is used as the reference person to determine relationships between household members. In Census 2020, the term 'head of household' was replaced with 'household reference person'.

CHART 4
INTERNET SUBMISSION RATE BY PLANNING AREA, 2020



Internet Submission Remained as the More Popular Submission Mode among Households in Younger Estates

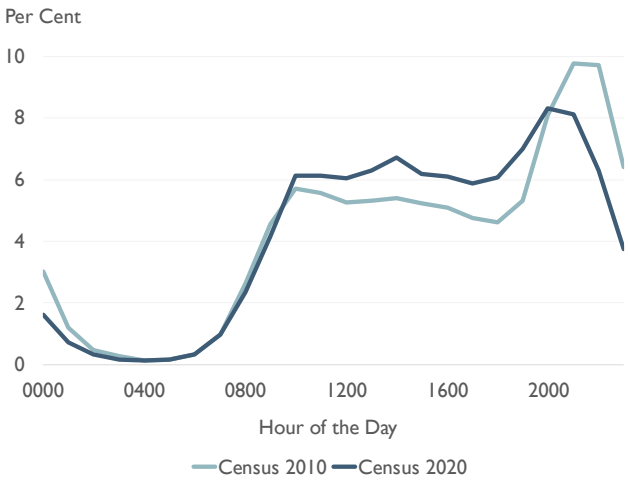
Among the planning areas[4] covered in Census 2020, Punggol and Sengkang remained the top two estates (Chart 4) with the highest Internet submission rates[5] of 73 – 74 per cent. In contrast, more mature estates such as Outram, Geylang, Kallang and Bukit Merah registered lower Internet submission rates of 48 – 55 per cent.

Usage Patterns of Respondents

Internet Responses were More Evenly Distributed Throughout the Day with Short Peak at Night

In both Census 2010 and Census 2020, most of the respondents who provided their Census submissions through the online submission platform logged in between 8 pm and 10 pm each day (Chart 5). In Census 2020, the distribution of logins was more evenly spread out from 9 am to 5 pm. In comparison, Census 2010 saw the peak period spread over shorter hours in the evenings from 8 pm to midnight and a lower proportion of logins during the day. This could be due to the increased accessibility of mobile devices to complete the Census Internet submission form for Census 2020.

CHART 5
SESSIONS LOGGED IN TO THE CENSUS ONLINE SUBMISSION PORTAL, 2010 AND 2020



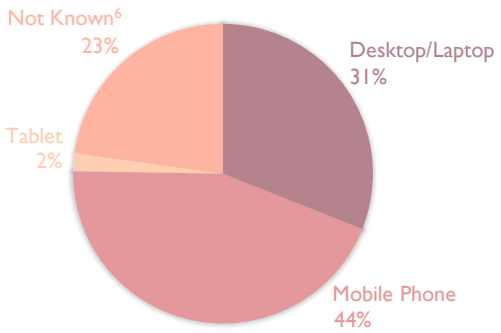
4 Refers to the planning areas for the physical development of Singapore as demarcated in the Urban Redevelopment Authority's Master Plan 2019.

5 Based on sample counts and refers to the proportion of households who submitted their returns through the Internet vis-à-vis the total submissions in the stated planning area.

Devices Used to Submit Census Returns

The Census online submission portal for Census 2020 was designed to be mobile-responsive, where the online questionnaires were optimized for better viewing on various screen sizes of devices, and according to the type of mobile device used by the respondent. Mobile phones were the most commonly used device at 44 per cent, with Desktop/Laptop at a close second in popularity at 31 per cent (Chart 6).

CHART 6
TYPE OF DEVICES USED TO SUBMIT CENSUS RETURNS, 2020



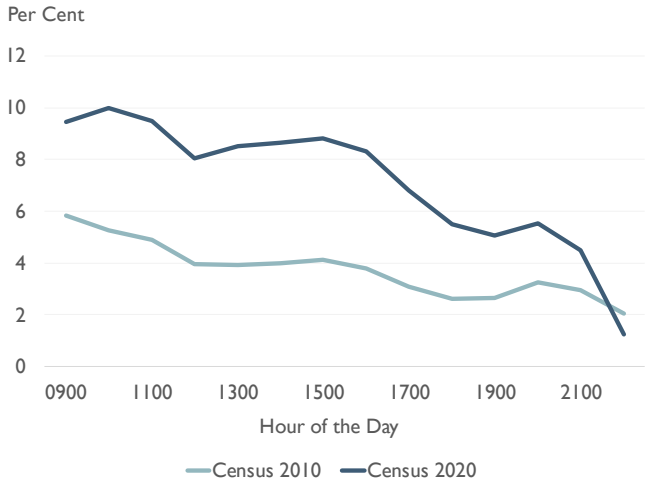
More Calls to Census Hotline in the Day

Some 25,300 calls were made to the Census 2020 hotline between Feb and Oct 2020[7]. These included calls from respondents who submitted their Census returns over the phone, respondents who required assistance while completing their survey over the Internet, and calls from the public who had general enquiries relating to the Census 2020. In contrast to the late-night peak period for respondents using the Internet, the Census hotline received the highest number of calls in the morning from 9 am and the call volume remained high throughout the day, until 4 pm (Chart 7). The trend in Census 2020 is similar to that registered for Census 2010.

Effectiveness of Reminder Letters

The sample of 150,000 households were divided into 21 batches and respondents were progressively notified by batch. Respondents first received

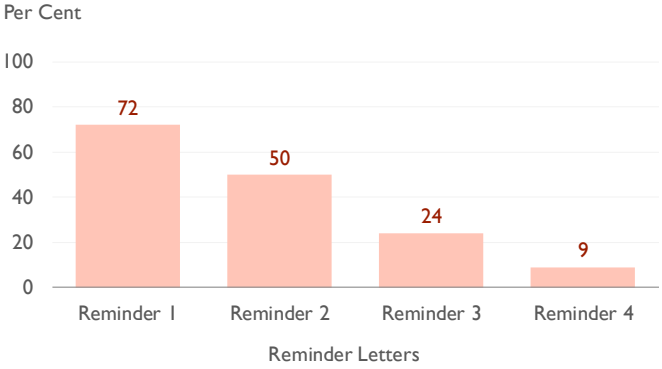
CHART 7
PROPORTION OF TOTAL CALLS RECEIVED BY THE CENSUS HOTLINE BY HOUR OF THE DAY, 2010 AND 2020



a notification letter, informing them that they had been selected to participate in the Census 2020, and that they were given two weeks to provide their survey returns. Thereafter, reminder letters to encourage participation were sent to respondents who had not completed their returns by the end of the second week and by the end of the fourth week. Reminder letters are necessary to prompt respondents to continue with uncompleted survey submissions.

In contrast to Census 2010 where two reminder letters were sent, a total of four reminders were sent in Census 2020 to encourage submissions through Internet and telephone, as face-to-face interviews were delayed due to the COVID-19 pandemic (Chart 8).

CHART 8
VOLUME OF REMINDER LETTERS AS A PROPORTION OF SURVEYED SAMPLE, 2020



6 Refers to device types that are not distinguishable from "Desktop/Laptop", "Mobile Phone" and "Tablet".

7 Includes calls received from Feb up till 31 Oct 2020 and excludes the Circuit Breaker period and up till the Phase 2 Re-opening from 7 Apr – 20 Jun 2020 when the call operation was managed by a team working from home.

Impact of First Reminder (R1)

Similar to the dispatch of notification letters, reminder letters were sent to respondents in batches. In order to manage the call volume arising from inbound traffic at the Census 2020 call centre during the Circuit Breaker period from Apr to Jun 2020 where only a small number of officers were managing the calls from the Census hotline, the dispatch of R1 for the last five Batches was delayed. The effect of the delayed R1 is distinct (Chart 9).

For a more in-depth view, a comparison between two Groups was made, with Groups 1 and 2 comprising the average completion rate of batches 1-16 and batches 17-21 respectively. A difference of 56 days in the average number of elapsed days between the date of notification letter and R1 of Group 1 (16 days) and Group 2 (72 days) was observed. From Chart 10, R1 is shown to be more effective in helping Group 1 to increase the survey completion rate by 36 per cent compared to Group 2 where R1 was delayed by 56 days.

Concluding Remarks

Amidst an uncertain pandemic environment, DOS responded swiftly to facilitate data collection for the Census 2020 under challenging conditions through adaptation or by delaying some of the survey operations. The continued support and co-operation of respondents who provided their survey responses was a key success factor for the completion of the Census 2020.

The Internet appeared to be the pivotal mode of data collection in the tri-modal survey strategy that allowed Census 2020 to be successfully completed. Nonetheless, all three modes of data collection remain relevant in Singapore's context. Reminder letters were also effective in nudging respondents into completing their survey submissions.

Moving forward, DOS will continue to review the most appropriate mode(s) to administer household surveys, while taking into consideration the nature of the survey and the changing lifestyle of the population.

The COVID-19 pandemic has underscored the importance of operational adaptability in a rapidly changing environment. While it invariably increased the challenges for the data collection process, it also provided opportunities to leverage technology to encourage self-help and self-enumeration through digital means.

CHART 9
OVERALL COMPLETION RATE BY BATCHES, 2020

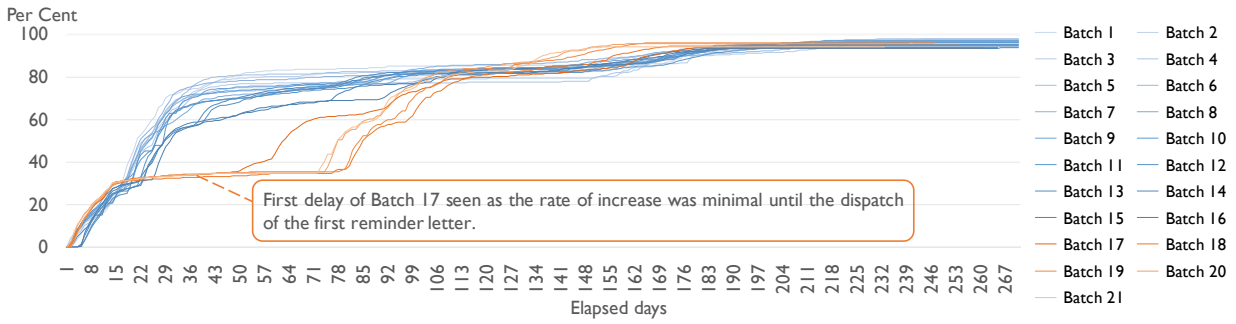
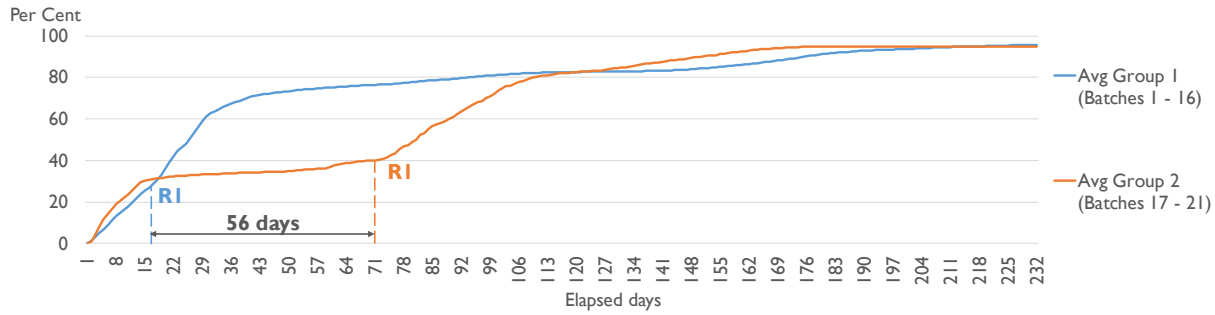


CHART 10
AVERAGE COMPLETION RATE OF GROUP 1 (BATCHES 1-16) AND GROUP 2 (BATCHES 17-21), 2020



GLOSSARY OF TERMS AND DEFINITIONS

DEMOGRAPHIC AND SOCIAL CHARACTERISTICS

Age

Age refers to the number of completed years between a person's date of birth and the Census reference date of 30 June 2020.

Ethnic / Detailed Ethnic Group

Ethnic group is obtained from administrative sources and as declared by the person. The population is classified into the following four categories:

Chinese	This refers to persons of Chinese origin such as Hokkiens, Teochews, Cantonese, Hakkas, Hainanese, Foochows, Henghuas, Shanghainese, Hockchias, etc.
Malays	This includes persons of Malay or Indonesian origin, such as Javanese, Boyanese, etc.
Indians	This includes persons of Indian, Pakistani, Bangladeshi or Sri Lankan origin such as Tamils, Malayalees, Hindis, Sikhs, etc.
Other Ethnic Groups	This comprises all persons other than Chinese, Malays and Indians. They include Eurasians, Caucasians, Fillipinos, Burmese, Arabs, Thais etc.

Residential Status

Singapore citizens and permanent residents are classified as Singapore residents or the resident population. Singapore permanent residents refer to non-citizens who have been granted permanent residence in Singapore. The non-resident population comprised foreigners who were working, studying or living in Singapore but not granted permanent residence, excluding tourists and short-term visitors.

Place of Birth

Place of birth refers to the geographical area in which the person was born.

Marital Status

Marital status refers to a person's conjugal status in relation to the marriage laws or customs in Singapore.

Single	This refers to persons who have never been married.
Married	This refers to persons who are legally married or married according to customary rites.
Widowed	This refers to persons whose spouses are deceased and have not remarried.
Divorced/Separated	This refers to persons whose marriages have been legally dissolved, or persons who have been legally separated or estranged from their spouses and who have not remarried.

Ever-Married Females

Ever-married females refer to females who have been married before and are currently married, widowed, or divorced/separated.

Number of Children Born

Number of children born refers to all the live-born children each woman has ever given birth to. It includes those children who are currently staying with her, those who have set up their own homes and those who are no longer living.

Religion

Religion refers to the religious faith or spiritual belief of a person regardless of whether he/she regularly attends religious ceremonies in a temple, mosque, church or other religious building. He/she may or may not practise his/her faith or belief. It is as declared by the person.

Sex Ratio

Sex ratio refers to the number of males per 1,000 females in the population.

Age Dependency Ratio

The old-age dependency ratio is defined as the number of elderly person aged 65 years and over for every 100 persons aged 20-64 years.

The child dependency ratio is defined as the number of persons aged below 20 years for every 100 persons aged 20-64 years.

EDUCATION, LITERACY AND LANGUAGE

Literacy (Language Literate In)

This refers to a person's ability to read with understanding, e.g. a newspaper, in the language(s) specified.

Language Most / Second Most Frequently Spoken at Home

Language most / second most frequently spoken at home refers to the language or dialect that a person uses most / second most frequently at home when speaking to other household member(s). For persons who are staying alone, it refers to the language(s)/dialect(s) he/she uses most / second most frequently.

Level of Education Attending

Level of education attending refers to the grade or standard of formal education which a student aged 5 years and over is attending. The classification of level of education attending into the following main categories is based on the Singapore Standard Educational Classification 2020 :

Pre-Primary	This refers to students attending nurseries, kindergartens or pre-primary classes.
Primary	This refers to students attending Primary 1 to 6 and special classes for the educationally sub-normal.
Secondary	This refers to students attending Secondary 1 to 5 or courses of secondary level offered in the vocational, technical and commercial education institutions, including Institute of Technical Education (ITE) Skills Certificate courses.

Post Secondary (Non-Tertiary)	This refers to students attending Pre-university classes and junior colleges or other courses at post-secondary level, including fifth or sixth year of the Integrated Programme, National ITE Certificate (Nitec), Higher Nitec and Master Nitec.
Polytechnic Diploma	This refers to students attending polytechnic diploma or polytechnic post/advanced/specialist/ management/graduate diploma courses offered by the local Polytechnics such as the Singapore Polytechnic, Ngee Ann Polytechnic, Temasek Polytechnic, Nanyang Polytechnic and Republic Polytechnic.
Professional Qualification and Other Diploma	This refers to students attending courses leading to the award of professional qualification and other diploma, including ITE diploma, National Institute of Education (NIE) diploma, Singapore Institute of Management (SIM) diploma, LASALLE diploma, Nanyang Academy of Fine Arts (NAFA) diploma, Association of Chartered Certified Accountants (ACCA), Chartered Financial Analyst (CFA).
University	This refers to students attending degree or post-graduate courses in universities.

Highest Qualification Attained

Highest qualification attained refers to the highest grade or standard a person has passed or the highest level where a vocational/skill certificate, diploma, or degree is awarded. The classification of highest qualification attained into the following main categories is based on the Singapore Standard Educational Classification 2020:

No Qualification	This refers to persons who have never attended school, have primary education but without Primary School Leaving Examination (PSLE) certificate or

	their equivalent, or have Certificate in Basic Education for Skills Training (BEST) 1 – 3.
Primary	This refers to persons who have PSLE or other certificate of equivalent standard, or have Certificate in BEST 4 or at least 3 achievements[2] for different Workplace Literacy or Numeracy (WPLN) skills at Level 1 or 2.
Lower Secondary	This refers to persons who have secondary education without any subject pass at General Certificate of Education (GCE) Normal ('N')/Ordinary ('O') Level or equivalent, or have Certificate in Worker Improvement through Secondary Education (WISE) 1-3, or basic vocational certificates (including ITE Basic Vocational Training), or at least 3 achievements for different WPLN skills at Level 3 or 4.
Secondary	This refers to persons who have at least 1 subject pass at GCE 'N' / 'O' Level, or have National ITE Certificate (Nitec) (Intermediate) or equivalent (including National Technical Certificate (NTC) Grade 3, Certificate of Vocational Training, BCA Builder Certificate), or have ITE Skills Certificate (ISC) or equivalent (including Certificate of Competency, Certificate in Service Skills) or at least 3 achievements for different WPLN skills at Level 5 and above.
Post-Secondary (Non-Tertiary)	This refers to persons who have at least 1 subject pass at GCE 'A'/'H2' Level or other certificates/ qualifications of equivalent standard. It also includes those who have Nitec (including Post Nitec Certificate, Specialist Nitec, Certificate in Office Skills, NTC Grade 2, National Certificate in Nursing, BCA Advanced Builder Certificate), or have Higher Nitec (including Certificate in Business Skills, Industrial Technician Certificate and other polytechnic certificates), or Master Nitec (including

[2] These refer to both WSQ Statement of Attainment and/or certification issued by SkillsFuture Singapore's appointed WPLN assessment partner.

	NTC Grade 1). This group also includes Workforce Skills Qualification (WSQ) Certificate/Higher Certificate/Advanced Certificate or equivalent, International Baccalaureate/NUS High School diploma or other post-secondary certificates/ qualifications (including SIM certificates).
Polytechnic Diploma	This refers to persons who have Polytechnic diploma or Polytechnic post diploma (including polytechnic advanced/specialist/management/ graduate diploma, diploma (conversion)).
Professional Qualification and Other Diploma	This refers to persons who have qualifications awarded by professional bodies (including ACCA, CFA), and other diploma qualifications (including ITE Diploma, NIE diploma, SIM diploma, LASALLE diploma, NAFA diploma, WSQ diploma, WSQ specialist diploma etc).
University	This refers to persons who have bachelor's degree or postgraduate diploma (including NIE postgraduate diploma), or master's degree, or doctorate.). It also includes persons with WSQ graduate certificate and WSQ graduate diploma.

Field of Study

Field of study refers to the principal discipline, branch or subject matter of study that leads to the award of the qualification attained at polytechnics or university levels. The classification of field of study is based on the Singapore Standard Educational Classification 2020.

ECONOMIC CHARACTERISTICS

Labour Force Status

Labour Force	Refers to persons who are either employed or unemployed during the reference period.

Employed	Refers to persons who during the reference period: (i) work for one hour or more either for pay or profit; or (ii) have a job or business to return to but are temporarily absent because of illness, injury, breakdown of machinery at workplace, labour management dispute or other reasons. Members of the Singapore Armed Forces including full-time National Servicemen are included, unless stated otherwise.
Unemployed	Refers to persons who are not working but are actively looking for a job and available for work during the reference period. They include persons who are not working but are taking steps to start their own business or taking up a new job after the reference period.
Outside the Labour Force	Refers to persons who are neither employed nor unemployed during the reference period.

Occupation

This refers to the type of work performed by workers during the reference period, which may not necessarily be related to their training, skill or professional qualification. In the case of workers who perform two or more kinds of work, their occupation would refer to the one in which they usually work the longest hours during the reference period. The classification of occupations is based on the Singapore Standard Occupational Classification 2020.

Industry

This refers to the major kind of economic activity or the nature of business of the firm, organisation, establishment or department in which the person is employed during the reference period. If the person is self-employed, this item refers to the kind of economic activity or nature of business he/she is operating. The classification of industries is based on the Singapore Standard Industrial Classification 2020.

Employment Status

This refers to the status of employed persons in relation to their employment. There are four types of employment status:

Employers	This refers to persons who hire one or more paid employees in their business or trade.
Own Account Workers	This refers to persons who operate their own business without employing any paid employee in the conduct of their business or trade.
Employees	This refers to persons who work for employers in return for regular wages or salaries.
Contributing Family Workers	This refers to persons who assist in the operation of family business without receiving regular wages or salaries.

Usual Hours Worked

This refers to the number of hours a person usually works on a typical week, regardless whether he/she is paid for it. For those who are temporarily not working (e.g. on leave), the most recent week of employment is used. For a person who has just started work during the reference period, usual hours of work refers to the number of hours per week he/she is expected to work in that job. For a multiple jobholder, it should be aggregated from the hours spent in all the jobs.

Monthly Income from Work

This refers to income received by a employed person from employment and business. It does not include other forms of income which are not derived from work.

For self-employed persons, gross monthly income refers to the average monthly profits from their business, trade or profession (total receipts less business expenses incurred) before deduction of income tax.

For employees, gross monthly income refers to the total gross monthly wages or salaries before deduction of employee CPF contributions and personal income tax. It comprises basic wages, commissions, overtime pay, National Wages Council (NWC) supplements, tips and other allowances. Payments in kind, reimbursement for transport and other expenses are excluded. If they have just started work, the monthly income refers to the wages they will be receiving for a full-month's work. It includes one-twelfth of the annual bonus.

Workplace Location

This refers to the address of the person's workplace where he/she usually works most of the time. For those who report to different places on different days, this refers to the address where this person reported most frequently to during the last week.

HOUSEHOLD AND HOUSING CHARACTERISTICS

Resident Household

A household refers to (i) a group of two or more persons living together in the same house and sharing common food or other essential arrangements for living; or (ii) a person living alone or a person living with others but having his own food or other essential arrangements for living. Although persons may be living in the same house, they may not be members of the same household. For example, a family renting out a room to a tenant – if the tenant does not share or have meals with the family, the tenant belongs to a separate household.

A resident household refers to a household where the household reference person is a resident (i.e. Singapore citizen or permanent resident).

Household Reference Person

The household reference person refers to the oldest member, the main income earner, the owner-occupier of the house, the person who manages the affairs of the household, or the person who supplied the information pertaining to other members.

Prior to Census of Population 2020, survey respondents were asked to identify the 'head of household'. The identified person is used as the reference person to determine relationships between household members. In Census of Population 2020, the term 'head of household' has been replaced with 'household reference person'.

Household Structure

Household structure refers to the classification of a household according to the number of family nuclei and the number of generations in the household.

A family nucleus in a household can be formed by:

(a) a married couple; or
(b) one parent with never-married child(ren).

Each nucleus comprises one or more generations.

A household can have one family nucleus, multiple family nuclei or none.

Household with no family nucleus refers to a household formed by a person living alone or living with others but does not constitute any family nucleus. This is further classified into one-person household or household with more than one person.

Household Living Arrangement

Household living arrangement refers to the classification of a household according to the household composition, age and marital status of household reference person and age group of the youngest child of the household reference person. Households are broadly classified into:

Married Couple-Based	Refers to households with a married household reference person and spouse. This category is further split into those living with child(ren) and without children.
Other Households With Family Nucleus	Includes lone parent households whose household reference person is never-married/widowed/ divorced/separated and living with child(ren) aged below 16 years or never-married children as well as other types of households with a family nucleus. For example, a divorced household reference person living with elderly parents only, or a widowed household reference person living with the son and daughter-in-law.
Households Without Family Nucleus	Refers to households without a family nucleus, including one-person households. For example, a never-married household reference person living

with never-married siblings, a household reference person living with unrelated persons only, and an ever-married person who is living alone as the children have grown up and moved out from the parental home.

Household Size

Household size refers to the total number of members in the household, including domestic workers.

Number of Employed Persons in Household

The number of employed persons in the household includes members of the same household who are employed. Domestic workers in the household are excluded.

Household Income from Work

Household income from work refers to the sum of income received by employed members of the household from employment and business. However, it does not include the income of domestic workers.

Household Income from Work Per Household Member

Household income from work per household member refers to the household income from work divided by the total number of members (household size) in the household. For example, if there is one person in a household of four is employed, his/her income is divided by four to derive the household income per household member.

Predominant Household Language

Predominant household language refers to the language or dialect spoken by the majority of household members to other members (excluding domestic workers and unrelated persons), taking into account the reported language most frequently spoken and language second most frequently spoken at home for each household member.

Type of Dwelling

A dwelling refers to a building or part of a building used or intended to be used by one or more persons as living quarters. Each dwelling has its own separate entrance(s) with direct access to a public road or pathway. A dwelling may be a residential building by

itself, or a unit in a residential building, or part of a non-residential building such as a shop or factory with space used as living quarters.

The dwellings covered are broadly classified into these three housing unit categories: Housing and Development Board (HDB) properties, condominiums and other apartments, and landed properties.

The Singapore Standard Classification of Type of Dwelling (Jan 2012) is used to classify the population and households by type of dwelling.

Tenancy

Tenancy refers to the tenure status of the household with respect to the dwelling in which the household members live. Tenancy is classified into the following three main categories:

Owner-Occupied	Refers to a household where the household reference person and/or any other member(s) in the household owns the dwelling unit. This includes those which are fully paid-up as well as those with outstanding housing loans.
Rented	Refers to a household where the household reference person and/or any other member(s) in the household rents whole or part of the dwelling unit.
Others	Refer to a household where the household reference person and/or any other member(s) in the household occupies whole or part of the dwelling unit without charge (provided free by other persons (e.g., employers, relatives, friends, or any other persons)).

GEOGRAPHIC DISTRIBUTION AND TRANSPORT CHARACTERISTICS

Planning Areas of Residence / Workplace

Planning areas refer to areas demarcated in the Urban Redevelopment Authority's Master Plan 2019.

Planning Regions of Residence

Planning regions refer to areas demarcated in the Urban Redevelopment Authority's Master Plan 2019.

Floor Area of Residence

Floor area of residence refers to the total floor area of the residential dwelling unit of which the resident is living in and may also include areas such as planter box and air-con ledge.

Mode of Transport to School / Work

Mode of transport to school or work refers to how a student or a employed resident usually travels from home to school or work respectively in each journey.

Travelling Time to School / Work

Travel time to school or work refers to the total number of minutes that it usually takes a student or an employed resident to travel from home to school or to work respectively. The travel time includes time spent waiting for public transportation and walking to the bus-stop or MRT/LRT station.

DIFFICULTY IN PERFORMING BASIC ACTIVITIES

Difficulty in performing basic activities refers to the difficulties a person may have as the result of physical or mental health problem(s) in performing one or more of the activities below. It excludes those caused by a lack of resources. Difficulty in performing basic activities adopts the guidelines from the Washington Group on disability statistics. The person may or may not be medically diagnosed with a disability. Difficulty in the following core functional domains refer to:

Seeing	Persons who have vision difficulties or problems seeing even when wearing glasses (if they wear glasses).
Hearing	Persons who have some hearing limitation or problems of any kind with their hearing even when using a hearing aid (if they wear a hearing aid).

Mobility	Persons who have some limitation or problems of any kind walking or climbing steps without the assistance of any device (wheelchair, crutches, walker etc.) or human.
Remembering	Persons who have some problems with remembering or focusing attention that contribute to difficulty in doing their daily activities.
Self-Care	Persons who have some problems with taking care of themselves independently by washing all over and dressing.
Communicating	Persons who have some problems with talking, listening or understanding speech such that it contributes to difficulty in making themselves understood to others or understanding others, using one's usual (customary) language.

Living Arrangement of Residents Aged 65 Years and Over

Residents aged 65 years and over are classified according to their co-residence with their spouse or children. Additional dimension on the labour force status of the children is incorporated into the classification.

With At Least One Employed Child	This refers to a resident aged 65 years and over living with his/her children in the same household, at least one of whom is employed.
With All Non-Employed Children	This refers to an elderly person living with his/her children in the same household, all of whom are not employed.

Residents aged 65 years and over who are not living with their spouse or children are classified according to whether they are living alone or with other elderly persons.

Residents aged 65 years and over living alone refer to those in one-person households, with or without other occupants in the same dwelling unit.

Sample Design and Sampling Variability

Sample Design and Selection

The sample for the Census of Population 2020 was selected from a sampling frame comprising all residential dwelling units in Singapore. As the sample survey of the Census 2020 covered only households in residential dwellings, institutions such as military camps, hostels and hotels were excluded from the frame.

The sample was selected based on a stratified design. Dwelling units in the sampling frame were divided into different groups. The groups are defined based on the planning areas demarcated by the Urban Redevelopment Authority and broad dwelling type groups. A random sample was then selected from the different groups by systematic sampling with a random start. The samples selected from each group were combined to form the required sample of about 150,000 dwelling units.

Sampling Variability

As the survey estimates are based on information obtained from a fraction of the population instead of the whole population, the precision of estimates derived from the sample survey are affected by sampling errors. Sampling errors refer to the difference between the estimate based on a sample and its 'true' population value that would result if the whole population has been surveyed.

The extent of sampling error of an estimate under a particular sample design is assessed by the variability of the estimate across all possible samples under the design. One common measure of this variability is given by the Standard Error (SE), which is the standard deviation of the sampling distribution of the estimate. Another measure is the Relative Standard Error (RSE), which is obtained by expressing the SE as a percentage to the estimate. The smaller the RSE, the more precise is the estimate.

Generalised Sampling Errors Tables

From Table A1, the DEFT[3] for most of the selected attributes (T_Y) is about 1. It is impractical to compute and display the sampling error for each and every of the possible estimates such as the total number of elements in the population with a given attribute Y from the Census 2020. Thus, generalized sampling errors tables are provided instead as a guide to data users for estimating the errors of any estimates.

Since most of the attributes in Table A1 have DEFT about 1, data users should generally use Table A2 (DEFT value of 1) to determine sampling errors for the attribute of interest. For attributes of individuals with larger DEFT, such as language most frequently spoken at home, data users can refer to Table A3 (DEFT value of 2).

The smaller the estimate, the larger is the RSE. This implies that sample estimates of a rare characteristic would have high RSEs and users would have to be careful in drawing inferences based on the sample estimates.

Table A1 Sampling Errors and DEFT of T_Y for Selected Attributes, Census 2020

	Sample Estimate	Standard Error	Relative Standard Error	95% Confidence Interval ('000)		DEFT
	('000)	(T_Y)	(T_Y)	Lower	Upper	(T_Y)
Residents Aged 15 Years & Over						
Single	1,090.7	3,885	0.4	1,083.1	1,098.3	1.22
Married	2,035.4	4,296	0.2	2,027.0	2,043.8	1.14
Widowed	183.2	1,429	0.8	180.4	186.0	0.98
Divorced/Separated	149.8	1,375	0.9	147.1	152.5	1.04
Ever-Married Resident Females Aged 15 Years & Over						
With No Children Born	164.3	1,387	0.8	161.6	167.0	1.00
With 1 Child Born	256.0	1,674	0.7	252.7	259.3	0.98
With 2 Children Born	462.6	2,034	0.4	458.7	466.6	0.90
With 3 Children Born	238.6	1,604	0.7	235.5	241.8	0.97
With 4 or More Children Born	136.5	1,266	0.9	134.0	139.0	1.00
Residents Aged 15 Years & Over*						
With Below Secondary Qualifications	765.9	3,162	0.4	759.7	772.1	1.13
With Secondary Qualifications	505.6	2,599	0.5	500.5	510.7	1.11
With Post-Secondary (Non-Tertiary) Qualifications	341.9	2,193	0.6	337.6	346.2	1.12
With Diploma and Professional Qualifications	519.9	2,623	0.5	514.8	525.1	1.11
With University Qualifications	1,007.2	3,493	0.3	1,000.3	1,014.0	1.12

* Data pertain to residents who were not attending educational institutions as full-time students and include those who were upgrading their qualifications through part-time courses.

[3] The DEFT is the ratio of the standard error of the estimate, under the sample design used, to that of a simple random sample. This ratio measures the effect of the complexity of the sample design on the standard error.

Table A1 Sampling Errors and DEFT of T_Y for Selected Attributes, Census 2020 (cont'd)

	Sample Estimate ('000)	Standard Error (T_Y)	Relative Standard Error (T_Y)	95% Confidence Interval ('000) Lower	95% Confidence Interval ('000) Upper	DEFT (T_Y)
Residents Aged 15 Years & Over						
Literate in English	2,852.0	5,428	0.2	2,841.3	2,862.6	1.44
Literate in Two or More Languages	2,497.8	5,504	0.2	2,487.0	2,508.6	1.44
Residents Aged 5 Years & Over						
Spoke English Most Frequently at Home	1,735.2	6,195	0.4	1,723.1	1,747.4	1.69
Spoke Mandarin Most Frequently at Home	1,075.2	5,270	0.5	1,064.8	1,085.5	1.66
Spoke Malay Most Frequently at Home	332.3	3,837	1.2	324.7	339.8	1.98
Spoke Tamil Most Frequently at Home	89.9	1,916	2.1	86.2	93.7	1.86
Residents Aged 15 Years & Over						
Buddhism	1,074.2	5,130	0.5	1,064.1	1,084.2	1.61
Taoism^	304.0	2,938	1.0	298.2	309.7	1.58
Christianity	654.4	3,948	0.6	646.6	662.1	1.51
Islam	539.3	4,669	0.9	530.1	548.4	1.94
Hinduism	173.0	2,474	1.4	168.1	177.8	1.74
Other Religions	21.9	833	3.8	20.2	23.5	1.62
No Religion	692.5	3,861	0.6	685.0	700.1	1.44
Resident Households						
With 1 Person	220.3	1,591	0.7	217.2	223.4	1.05
With 2 Persons	309.8	1,747	0.6	306.3	313.2	1.00
With 3 Persons	280.5	1,674	0.6	277.3	283.8	1.00
With 4 Persons	275.6	1,653	0.6	272.4	278.8	0.99
With 5 Persons	163.5	1,334	0.8	160.9	166.1	1.00
With 6 or more Persons	122.9	1,171	1.0	120.6	125.2	1.00
Employed Residents Aged 15 Years & Over						
Travelled to Work by Public Bus Only	325.8	2142	0.7	321.6	330.0	1.12
Travelled to Work by MRT/LRT Only	287.4	2055	0.7	283.4	291.5	1.14
Travelled to Work by MRT/LRT and Public Bus Only	559.3	2861	0.5	553.7	564.9	1.17
Travelled to Work by Car Only	459.8	2461	0.5	455.0	464.6	1.10
Residents Aged 5 Years & Over						
Unable to Perform/ with A Lot of Difficulty in At Least One Basic Activity	97.6	1145	1.2	95.4	99.9	1.06

^ 'Taoism' includes Chinese Traditional Beliefs.

Table A2 Sampling Errors for Square Root of Design Effect (DEFT) Equals 1

Size of Estimates	Proportion of Total Population (%)	Standard Error	Relative Standard Error (%)	95% Confidence Interval	
				Lower	Upper
PERSONS					
4,000,000	82.65	2,774	0.1	3,994,563	4,005,437
3,500,000	72.32	3,278	0.1	3,493,576	3,506,424
3,000,000	61.99	3,556	0.1	2,993,030	3,006,970
2,500,000	51.66	3,661	0.1	2,492,825	2,507,175
2,000,000	41.33	3,607	0.2	1,992,930	2,007,070
1,500,000	31.00	3,388	0.2	1,493,360	1,506,640
1,000,000	20.66	2,966	0.3	994,186	1,005,814
750,000	15.50	2,651	0.4	744,804	755,196
500,000	10.33	2,230	0.4	495,630	504,370
250,000	5.17	1,621	0.6	246,822	253,178
100,000	2.07	1,042	1.0	97,957	102,043
75,000	1.55	905	1.2	73,226	76,774
50,000	1.03	741	1.5	48,548	51,452
25,000	0.52	525	2.1	23,971	26,029
10,000	0.21	333	3.3	9,348	10,652
7,500	0.15	288	3.8	6,935	8,065
5,000	0.10	235	4.7	4,539	5,461
2,500	0.05	166	6.7	2,174	2,826
1,000	0.02	105	10.5	794	1,206
500	0.01	74	14.9	354	646
HOUSEHOLDS					
1,150,000	69.71	1,962	0.2	1,146,154	1,153,846
850,000	51.52	2,134	0.3	845,817	854,183
550,000	33.34	2,013	0.4	546,054	553,946
250,000	15.15	1,531	0.6	246,999	253,001
100,000	6.06	1,019	1.0	98,003	101,997
75,000	4.55	890	1.2	73,257	76,743
50,000	3.03	732	1.5	48,565	51,435
25,000	1.52	522	2.1	23,978	26,022
10,000	0.61	331	3.3	9,350	10,650
7,500	0.45	287	3.8	6,937	8,063
5,000	0.30	235	4.7	4,540	5,460
2,500	0.15	166	6.6	2,174	2,826
1,000	0.06	105	10.5	794	1,206
500	0.03	74	14.9	354	646

Table A3 Sampling Errors for Square Root of Design Effect (DEFT) Equals 2

Size of Estimates	Proportion of Total Population (%)	Standard Error	Relative Standard Error (%)	95% Confidence Interval	
				Lower	Upper
PERSONS					
4,000,000	82.65	5,548	0.1	3,989,126	4,010,874
3,500,000	72.32	6,555	0.2	3,487,152	3,512,848
3,000,000	61.99	7,112	0.2	2,986,060	3,013,940
2,500,000	51.66	7,322	0.3	2,485,649	2,514,351
2,000,000	41.33	7,215	0.4	1,985,859	2,014,141
1,500,000	31.00	6,776	0.5	1,486,719	1,513,281
1,000,000	20.66	5,932	0.6	988,373	1,011,627
750,000	15.50	5,302	0.7	739,608	760,392
500,000	10.33	4,460	0.9	491,259	508,741
250,000	5.17	3,243	1.3	243,644	256,356
100,000	2.07	2,084	2.1	95,915	104,085
75,000	1.55	1,810	2.4	71,453	78,547
50,000	1.03	1,482	3.0	47,096	52,904
25,000	0.52	1,050	4.2	22,941	27,059
10,000	0.21	665	6.7	8,696	11,304
7,500	0.15	576	7.7	6,370	8,630
5,000	0.10	471	9.4	4,077	5,923
2,500	0.05	333	13.3	1,847	3,153
1,000	0.02	211	21.1	587	1,413
500	0.01	149	29.8	208	792
HOUSEHOLDS					
1,150,000	69.71	3,924	0.3	1,142,308	1,157,692
850,000	51.52	4,268	0.5	841,634	858,366
550,000	33.34	4,026	0.7	542,109	557,891
250,000	15.15	3,062	1.2	243,998	256,002
100,000	6.06	2,038	2.0	96,006	103,994
75,000	4.55	1,779	2.4	71,513	78,487
50,000	3.03	1,464	2.9	47,130	52,870
25,000	1.52	1,043	4.2	22,955	27,045
10,000	0.61	663	6.6	8,701	11,299
7,500	0.45	575	7.7	6,374	8,626
5,000	0.30	469	9.4	4,080	5,920
2,500	0.15	332	13.3	1,849	3,151
1,000	0.06	210	21.0	588	1,412
500	0.03	149	29.7	209	791

Simple Guide on Using Relative Standard Error and Confidence Interval

To compute the 95% confidence interval of an estimate of persons with size 1,100,000 as below.

Step 1: From Table A2, the RSE of this estimate is close to 0.3%

Step 2: To compute 95% confidence interval of the estimate

Lower Confidence Interval = 1,100,000 – 1.96 x 0.3% x 1,100,000 = 1,093,532

Upper Confidence Interval = 1,100,000 + 1.96 x 0.3% x 1,100,000 = 1,106,468

95% Confidence Interval = (1,093,532 , 1,106,468)

There is a 95% chance that the 'true' population value is between 1,093,532 and 1,106,468.

Non-Sampling Errors

Apart from sampling errors, sample survey results are also subjected to non-sampling errors. Such errors could arise during data collection phase, e.g. varying interpretation of questions by respondents or interviewers, and the inability or unwillingness of respondents to provide correct or accurate information. They could also arise during data processing e.g. wrong codes entered or selected due to mis interpretation of descriptive text captured during data collection.

In the Census 2020, the following measures were taken to minimise the non-sampling errors:

a) Careful design and phrasing of the questionnaire across all modes of submission including online, CATI and fieldwork;
b) Careful planning of operational procedures in data collection, processing and tabulation;
c) Ensuring that concepts and terms are clearly defined and that all staff involved in the Census are adequately trained;
d) Close supervision of the CATI call centre and field interviewers;
e) Verifying the returns with respondents, whenever necessary; and
f) Stringent control and high standards set for data editing, coding and verification to ensure good data quality and high data consistency.

CENSUS 2020 CALL CENTRE AND DP CENTRE

Census 2020 Call Centre

CATI Interviewer

Census 2020 DP Centre

DP Operators