DEPARTMENT OF STATISTICS SINGAPORE

Planning and Implementing a Census during the Covid19 pandemic: Challenges and Approaches

Singapore's Census 2020

Asia-Pacific Stats Café, 29 Jun 2020

CENSUS 2020

YOUR RESPONSE MATTERS.
TOGETHER, WE SHAPE OUR FUTURE.

www.singstat.gov.sg

Approach for Census-Taking in Singapore

Background

- Census in Singapore is conducted once in every 10 years, in years ending '0'
- For Census of Population 2020,
  - Census Reference date is 30 Jun 2020
  - Data collection launched on 4 Feb 2020

Register-based Approach using Admin Data from Different Sources, Supplemented by Survey

- To reduce response burden, Singapore has been using administrative registers with data from multiple sources to produce Census data since 2000
  - Basic population count and demographic characteristics such as age, sex and ethnicity for the population compiled from register – full coverage
  - In-depth information not already available in administrative register but deemed important, e.g., occupation, language literate in, language spoken, disability, captured from large-scale sample survey. For 2020, the size of this sample survey is about 150,000 dwellings.

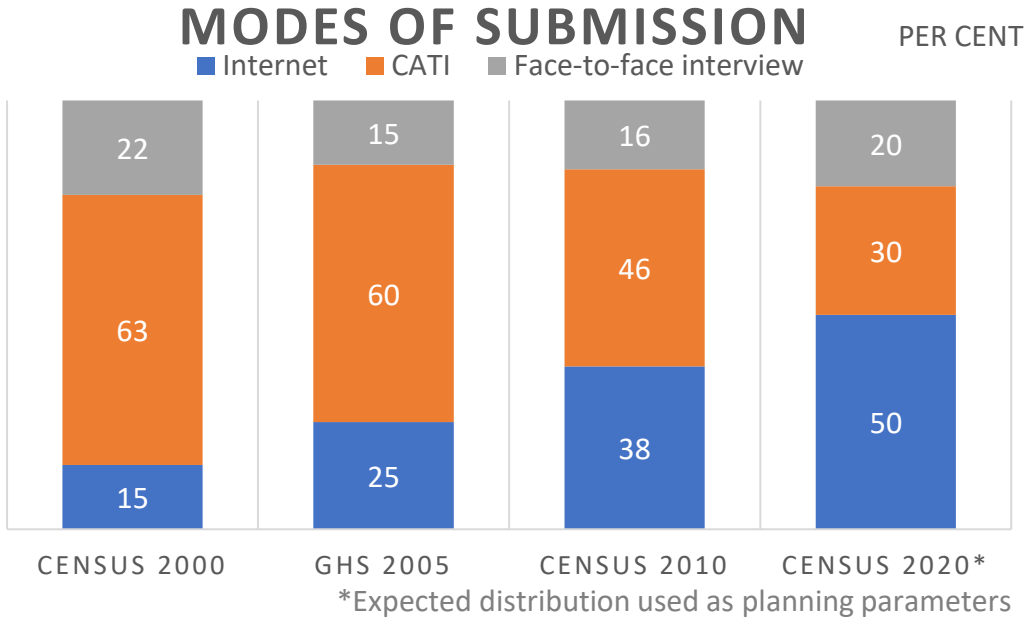
Tri-Modal Data Collection

Data Collected via 3 Modes

- Tri-modal data collection strategy adopted since 2000
- Cater to varied profile and needs of population while balancing resources considerations
  - Online Submission via Self-Enumeration
  - Phone Interview through Hotline using Computer-Assisted Telephone Interview (CATI)
  - Face-to-face Interview with field interviewers using Tablets

Adoption Rate by Mode of Submission

- Response via Online Submission increased steadily with higher internet penetration rate and computer literacy
- Online submission is expected to reach about half of all responses for 2020
- Nonetheless, proportion who needs fieldwork follow-up remained at about 15-20%



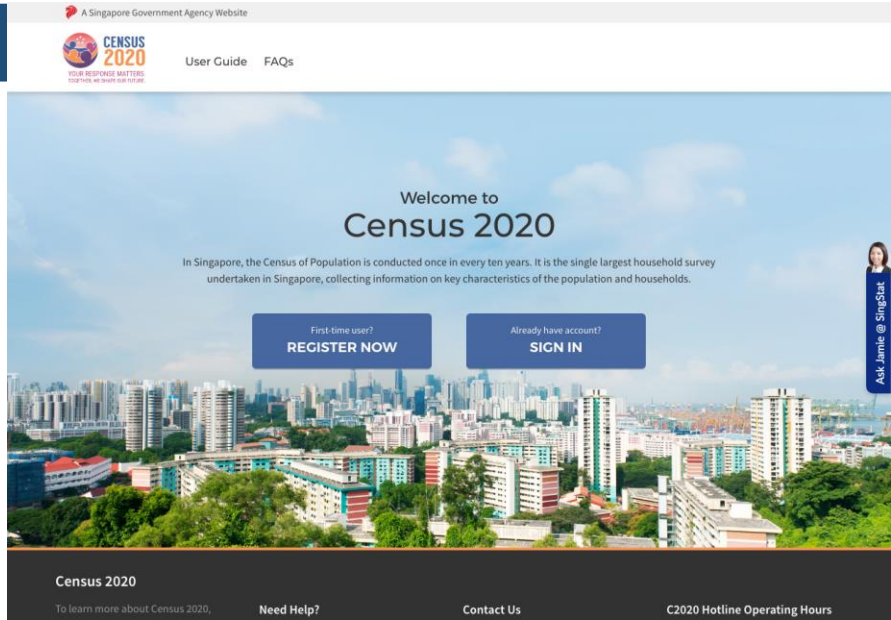
Online Submission

Benefits for the Census Office and Respondents

- Reduce reliance on manpower intensive data collection processes
- Reach out to respondents who are increasingly difficult to contact at homes
- Allow respondents who may not be physically present at their homes, e.g. overseas members, to provide their returns
- Available 24/7, flexibility to respond anytime, anywhere, using any device
- More privacy as information are provided directly without going through a third party interviewer

Key Features

- User Experience Design test for more user-friendly form with enhanced concept design and improved usability
- Government-wide login credentials for consistent delivery and legitimacy
- Self-help features, creation/reset of password
- Opt-in SMS/email reminders
- Option for Individual member submission
- Online Virtual Assistant



Beyond Online Submission

Computer Assisted Telephone Interviews via Call Centre

- Provide returns over the phone with assistance of telephone interviewers
- Accessible, lower barriers and particularly useful for those who are illiterate/less internet savvy
- Flexible in catering to different languages and dialects
- Increase response rate by contacting households who did not complete their returns online by a stipulated date
- Support online submission and as a channel for feedback

Face-to-Face Interviews

- Provide returns with assistance of field interviewers
- Important for selected groups who prefer in-person authentication
- Reach out to respondents who do not respond via Internet and cannot be contacted by phone
- Web-based form to:
  - Implement automatic branching of questions and simple completeness checks built in
  - Reduce back-end data processing efforts with electronically coded data
- Very limited extent for Census 2020 thus far due to measures put in place due to COVID-19

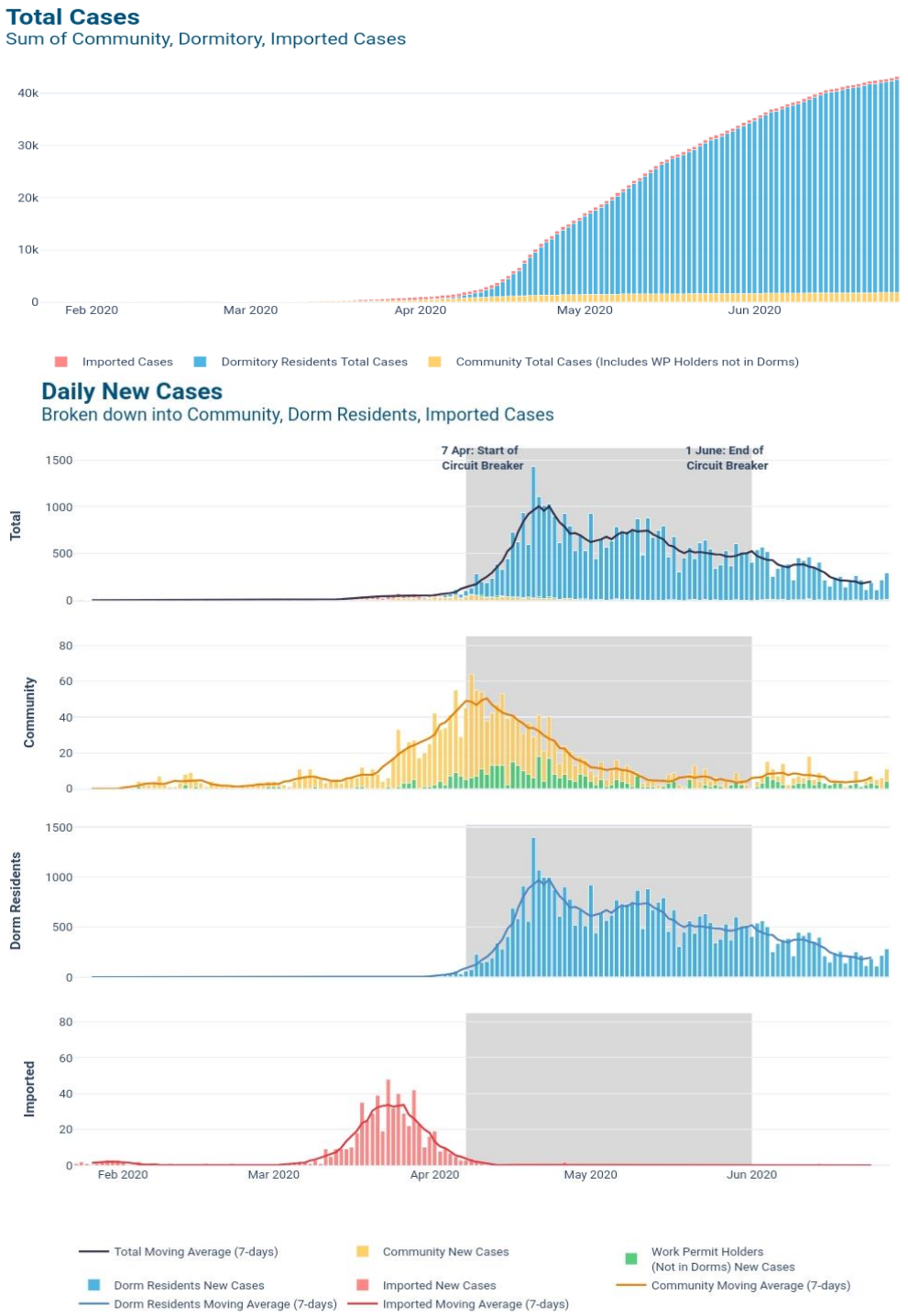
COVID-19 in Singapore

Timeline and Response

- Jan 23 First confirmed case
- Feb 4 First local cluster reported
- Feb 7 Disease Outbreak Response System Condition (DORSCON) Orange declared
- Mar 26 Entertainment venues closed, Social gatherings limited to 10, Mass gathering cancelled
- Apr 7 Circuit breaker starts
- Jun 1 Exit Circuit breaker, Phase 1
- Jun 19 Post Circuit breaker, Phase 2

- Current Situation* (as at 28 Jun 2020)
  - Total Cases 43,246
  - Active Cases 6,057
  - Demised 26

*Source: Ministry of Health, Singapore

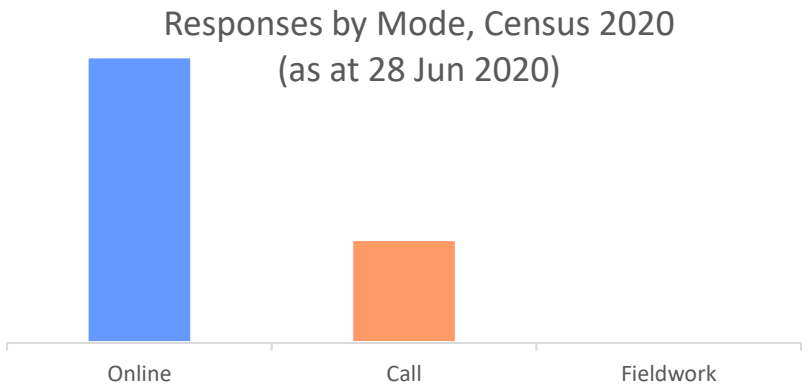


Census' Response to COVID

Impact on Resources and Mitigation

- Feb 15 Fieldwork suspended and arranged on request basis only
- Mar 6 Health and Travel Declaration implemented for Respondents who requested for face-to-face visits
- Mar 12 Third Reminder added to boast response on top of planned advance letter and 2 reminders
- Mar 29 Full operations in Split team
- Apr 7 Work from Home arrangement with scaled down operations. Internet submission and hotline continue, supported by officers working from home
- Jun 21 Full Call and Data Processing operations resumed in Split team

- To date,
  - About 70% completed
  - Internet responses estimated at about 55% overall
  - At steady state, about 20% needs to be followed up via face-to-face interviews

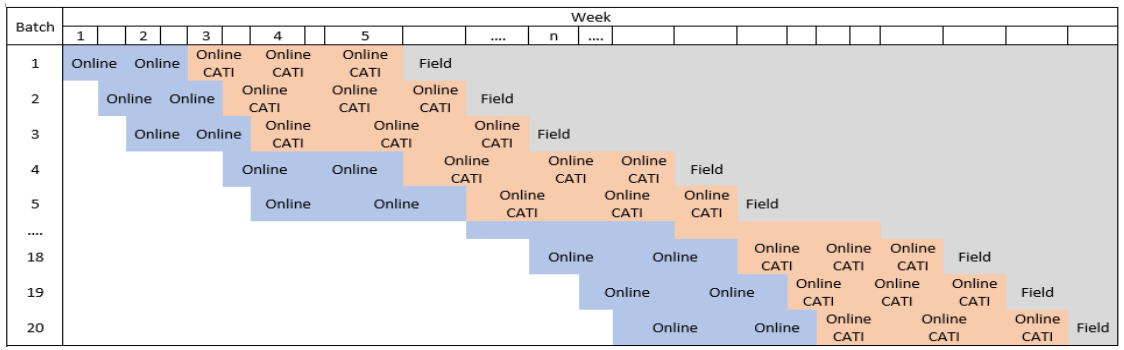


Key Lessons

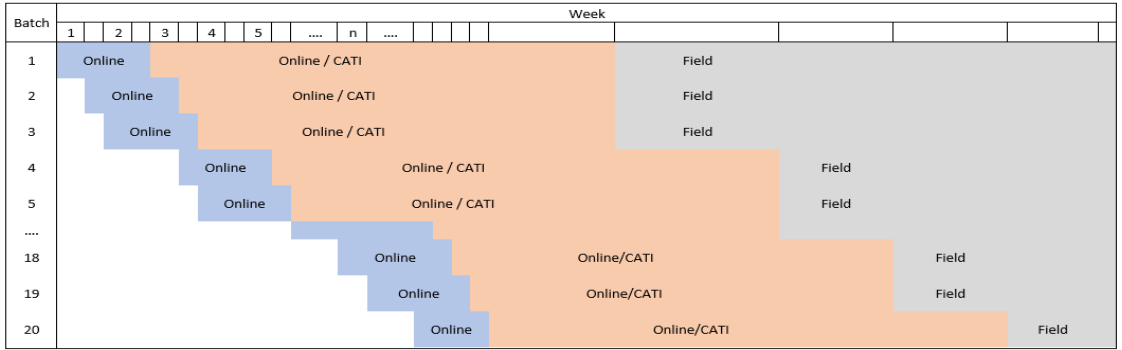
Progress Monitoring and Staggered Workflow

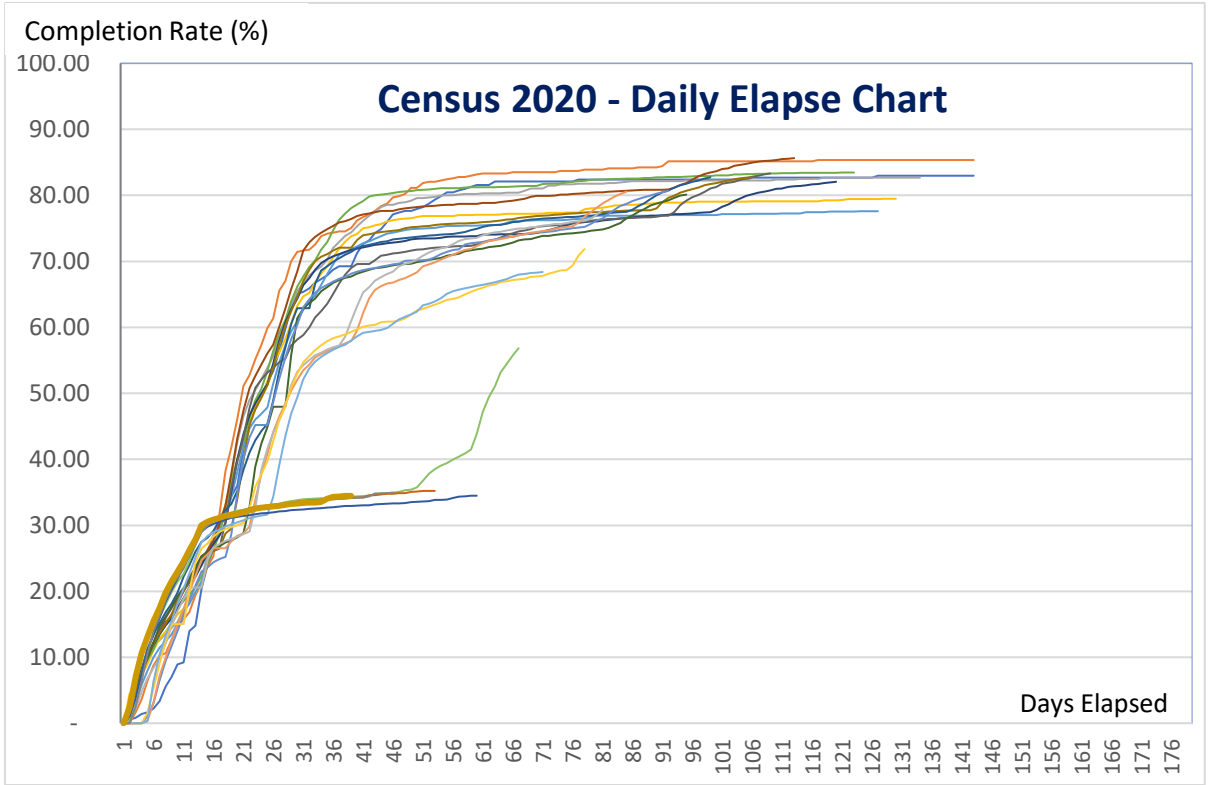
- Staggered workflow, with phased release of sample in batches, has been implemented since 2000. For Census 2020, number of batches and corresponding batch sizes are used as a response tool to make operational adjustments countering resource constraints.
- Progress of individual batch is being monitored closely and follow-up adjusted where relevant.

Planned Schedule



Revised Schedule





Key Lessons

Contingency Planning, Leveraging Technology and Moving Forward

- Census 2020 launch planned for 1 month ahead of schedule compared to Census 2010 to cater for unforeseen circumstances. This provided some time buffer to catch up after main operations were scaled down for more than 2 months.

- Relatively high online submission take-up rate allowed for majority of the responses to continue to flow in despite the scaled down operations. Much of the internet functions can also be accessed via self-help, e.g. password creation and reset.

- With basic data on population estimates compiled from population registered, top-line population data will continue to be produced on schedule though there is expected to be slight impact on release data for the detailed statistical releases.

- Use of administrative data for consistency checks and application of machine learning in coding of selected data help alleviate resource constraints in data processing, which were scaled down.

- Catch-up for data collection still needed as selected population groups are under-represented.

DEPARTMENT OF STATISTICS SINGAPORE

Thank You

Our Vision

National Statistical Service of Quality, Integrity and Expertise

Our Mission

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

