GENERAL HOUSEHOLD SURVEY 2005 (GHS05)

Innovations in Fieldwork Operations

Singapore Department of Statistics

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Overview

- General Household Survey 2005 (GHS05)

- Data Collection Approach

- Innovations and Lessons Learned

- Demonstration on Personal Digital Assistant (PDA) Enumeration

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What is the General Household Survey (GHS)?

- Mid-decade national survey

- Conducted in years ending in '5', between Population Censuses
  - GHS05 is the second in the series

- Covered some 10% of total houses in Singapore

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How was GHS05 conducted?

- ## Register-based
  - ➢ Basic information on everyone e.g. name, age are available from administrative records

- ## Tri-modal data collection
  - ➢ Additional information collected from about 90,000 houses using 3 data collection modes

- ## Staggered workflow
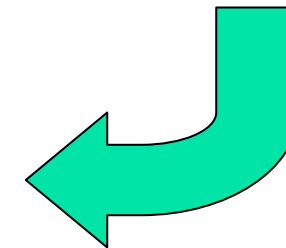 - ➢ Survey conducted in batches over 12-15 weeks

Tri-modal Data Collection System

Internet
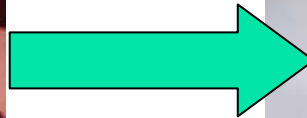
Telephone Interview

Face-to face Interview

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Staggered Workflow

- Optimize use of time and scarce resources

- Notification letters sent out over 8-10 weeks in 15 batches

- 2 weeks given to submit via Internet, another 2-3 weeks via Computer-Assisted Telephone Interviewing (CATI), after which field interviewers visit for face-to-face interview (FW)

- 2 reminders sent before FW for each batch

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Internet Submission

Key Features

- Online password registration

- Automated branching of questions

- User-friendly interface, facilitates data-entry and navigation

- Online completeness checks

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Internet Submission

Security features

- Data transmission

- Verification of identity for registration and for re-setting of passwords

- Application hosted on government hosting service with appropriate security measures

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Telephone Interview

- Inbound/Outbound blending
  - ➢ Inbound calls, Outbound calls, Capacity Overflow Messaging

- Automated dialing system

- Call management system for online supervision & assistance

- Automated branching of questions

- Online completeness checks

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Telephone Interview : CATI

Face to Face Interview

- Key innovation for GHS05 fieldwork:
  - ➤ Use of PDA

- Used for the 1st time in the field to improve survey operational efficiency

- Data security ensured through various IT security measures

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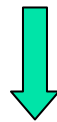# PDA Fieldwork Enumeration System

Fieldwork Server

↓ ↑

PDA Supervisor Module

↓ ↑

PDA Enumeration Module

Three Levels of Data Back-Up

1) <u>Everyday</u>

   Fieldworkers do a data back-up into a back-up memory card

2) <u>Twice-Weekly</u>

   Fieldworkers back-up data into Supervisor's PDA

3) <u>Weekly</u>

   Enumerated records transferred onto Server for data processing

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Features of PDA

- Automated branching of questions in PDA

- On-line completeness checks in PDA

- Security and data protection features

- Automated Short Message Service (SMS) alerts

Security Features of PDA

- Access to PDA revoked if invalid User ID or password entered 3 consecutive times

- Logged out of current session after 30 minutes of inactivity

- If 7-day period of inactivity, access to PDA revoked

Benefits of using PDA

- Improved flow of face-to-face interview

  ➢ Automatic branching of questions ensure that respondents answer only the relevant questions

  ➢ On-line completeness checks reduces accidental omission during field interviews, respondents are therefore less likely to be called or visited again

Benefits of using PDA

- Improved logistics in field operations

  ➢ Eliminate need for printing of voluminous hardcopy survey questionnaires and secured transportation of completed forms

  ➢ PDA more portable than piles of paper forms for field interviewers

Benefits of using PDA

- Reduced back-end data processing

  ➢ Data directly entered into the PDA and electronically coded, minimise need for back-end data entry and coding

  ➢ On-line checks on data performed during interview ensure that quality of information collected was reasonably good, reduce time and effort to process data in the office

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Benefits of using PDA

- Data security ensured through various IT security measures

  - ➢ Risk of data loss minimized as data captured from face-to-face interviews encrypted when stored

  - ➢ Prevent unauthorized access to data

Automated SMS Alerts

- SMS alert sent automatically to field supervisors' mobile phone when household provides updates to survey return through CATI.

- Supervisors inform fieldworkers of appropriate follow up.

Benefits of Automated SMS Alerts

• Ensure timely communication of updates

• Reduce incidents of visits after surveys had been completed
➢ If household completed survey, fieldworker need not visit house.

• Shorten time for face-to-face interviews
➢ If survey is still incomplete, fieldworker update data in PDA before visiting house to collect data on outstanding items.

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Demonstration on

PDA Enumeration

General Comments on Use of PDA

- Encrypted data ensures confidentiality

- Slightly longer time for enumeration due to descriptive text fields

- No adverse feedback concerning costs of using a PDA instead of paper forms

Some Learning Points

- Ease and speed of enumeration is crucial

- Design and flow of PDA application

- Fieldworkers must be well-trained

- PDA Usability Test plays an important role

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General Household Survey 2005

Technological advancements can be exploited to benefit survey respondents and improve operational efficiency

General Household Survey 2005

Thank You