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Insights from the 2021 Pilot CBMS Paradata

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Utilization of Administrative Data and Registers: Community-Based Monitoring System
Crowne Plaza Galleria Manila
3:00 - 5:00 PM | 04 October 2022



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Presentation Outline

I. Background

- a) What are paradata?
- b) Data items in the 2021 Pilot CBMS

II. Findings

- a) Duration of interview per item and per section
- b) Daily average number of household interviews conducted
- c) Weekly average number of household interviews conducted

I. Recommendations and Actions Taken

I. Background

What are paradata?

- These are automatic data collected about the survey data collection process captured during computer assisted data collection and include call records, interviewer observations, time stamps, keystroke data, travel and expense information, and other data captured during the process. (Kreuter, Couper, & Lyberg, 2010)
- In CSPro, these paradata are collected and stored as .cslog file. They contain information such as on fields and entries, error messages generated, and information on the data collection device (US Census Bureau, 2022).



I. Background

Scope of the Study

- The study looks at the tablet data files of 53 enumerators (5.6%) randomly selected from 945 enumerators hired to implement the 2021 Pilot CBMS in the nine (9) pilot areas.
- It covers the paradata of the CBMS Form 2 (Household Profile Questionnaire) of regular households and special cases (vacant housing units, non-usual residents, etc.), as well as the CBMS Form 3 (Consent Form/Waiver).





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I. Background

Table 1. Data Items Accomplished by the EN, By Section

Section	Number of data items
A - Demographic Characteristics	22
B - Migration	22
C - Education and Literacy	14
D - Community and Political Participation	11
E - Economic Characteristics	34
F - Family Income	5
G - Food Consumption	2
H - Entrepreneurial and Family Sustenance Activities	15
I - Financial Inclusion	25
J - Health	49
K - Food Security	8

Section	Number of data items
L - Agricultural Activities	131
M - Climate Change and Disaster Risk Management	56
N - E-Commerce and Digital Economy	12
O - Crime Victimization	53
P - Government Programs	20
Q - Water, Sanitation and Hygiene	43
R - Housing	30
S - Questions asked in case of refusal	10
Geographic Identification and Waiver/Consent Form	17
TOTAL	561



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II. Findings

Figure 1. Average duration of interview (in minutes) per section



Top 3 sections that took the longest time to implement:

1. L - Agricultural Activities (131 data items)
2. O - Crime Victimization (53 data items)
3. E - Economic Characteristics (34 items)

On the average, it took

1.89 hours

(113.31 minutes) to conduct an HPQ interview.



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II. Findings

Table 2. Top 12 data items with highest average duration of interview time

Data item No.	Question	Average Duration of Interview in Minutes	Average Duration of Interview in Seconds
F1A	In the past twelve (12) months from October 2020 to September 2021, how much was your family's total income? (Amount in PhP)	1.98	119.08
G1_A	In the past twelve months (12) months from October 2020 to September 2021, how much was your family's average weekly consumption? (Amount in PhP)	1.67	100.15
CONTACTNO1	Household respondent's contact number	1.32	78.9
O8_C	What was the main reason why psychological violence crime was not reported to authorities?	0.89	53.68
A132LGUIDNO	What is (NAME)'s LGU ID number?	0.87	52.18
C09	What skills development training have (NAME) attended including the current one?	0.63	37.65



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II. Findings

Table 2. Top 12 data items with highest average duration of interview time

Data item No.	Question	Average Duration of Interview in Minutes	Average Duration of Interview in Seconds
E08PSOC	What was (NAME)'s primary occupation during the past week? (Enter PSOC Code)	0.61	36.37
SITIO_PUROK	Sitio/Purok	0.59	35.45
R16_A	How many of each of the following items does the household own? (Household conveniences, ICT devices, Vehicles)	0.57	34.27
F2_A	In the past twelve (12) months from October 2020 to September 2021, what are the sources of your family's income? (Salaries and wages from regular and seasonal employment)	0.56	33.87
A06DATEBORN	In what month, day and year was (NAME) born?	0.52	31.39
A123PSN	What is (NAME)'s PhilSys Number (PSN)?	0.5	29.8



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III. Recommendations and Actions Taken

What takes time during interview?	Actions Taken/Recommendations in 2022 CBMS
1. Need for enumerators to thresh out/probe for specific information from the respondent:	
a. Write specific occupation and industry in Section E (Economic Characteristics) and find the appropriate PSOC/PSIC codes.	Inclusion of code "0000 - For further verification" which can be selected by EN during interview so that he/she will not take time finding the PSOC/PSIC codes. However, data validation specifications included these as prerequisites so that the EN should be required to edit the PSOC/PSIC codes before submission to PSA server.
b. Probe for specific dates of birth, LGU ID number, courses/programs.	<p>Calendar entry in the CAPI application for the date of birth. Inclusion of the age calculator in CBMS Resources application (cbmsr.app).</p> <p>Additional instruction for Head CBMS Area Supervisor to determine presence of LGU IDs in the city/municipality so that the data item will be skipped already if there really is no LGU ID being offered in the city/municipality.</p> <p>Improvements were implemented in the searchability of the programs/courses and reference lists.</p>



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III. Recommendations and Actions Taken

What takes time during interview?	Actions Taken/Recommendations in 2022 CBMS
c. Enumerate all categories in household conveniences, etc.	Specific items were separated to lessen confusion on how to count items.
d. Recall previous trainings and experiences.	Code reference list on TVET programs were included.
2. Need for enumerators to collect sensitive personal information	Evaluate need for personal information.
a. Experience of households victimised by crime	Reduction of data item categories to lessen personal information collected and rationalize based on nature of crimes (household/individual).
b. Family income (amount and sources)	Printing and use of computation sheet were promoted to facilitate recording of information by EN.
c. Food consumption (amount and sources)	
d. Address	No change
e. Phone number	No change
f. PhilSys Number	Use QR code to record PhilSys Card Number instead to avoid erroneous entries in typing the PCN.



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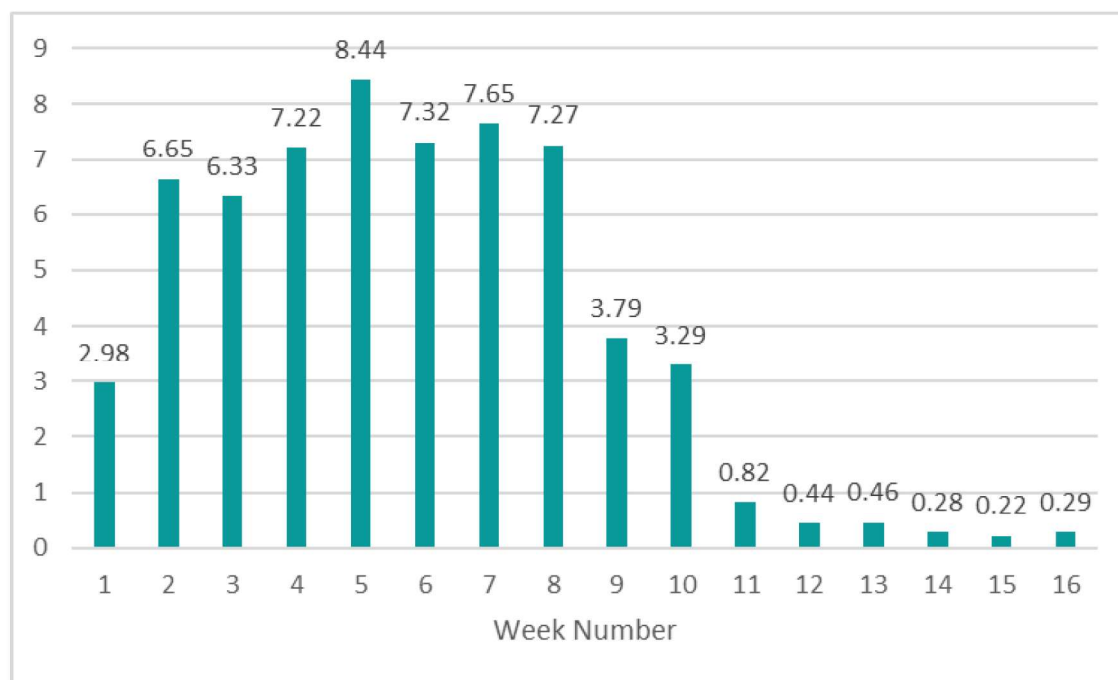
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II. Findings

Figure 3. Average number of HPQs administered per week



Duration of data collection per schedule:
15 October to 14 December 2021
(52 working days)

On the average,

6.48 HPQs

were administered per week for each
enumerator from 15 Oct to 14 Dec 2021.

Among the weeks when there were field
operations, most number of HPQs (8.44)
were recorded in Week 5
(11-18 November 2021), the week when the
DOH recorded the lowest numbers of daily
COVID-19 positive cases after 8 months pr
since 22 February 2021.

Even after 14 December 2021, there were
HPQs administered to keep up with the
misses in quota and saturate areas.



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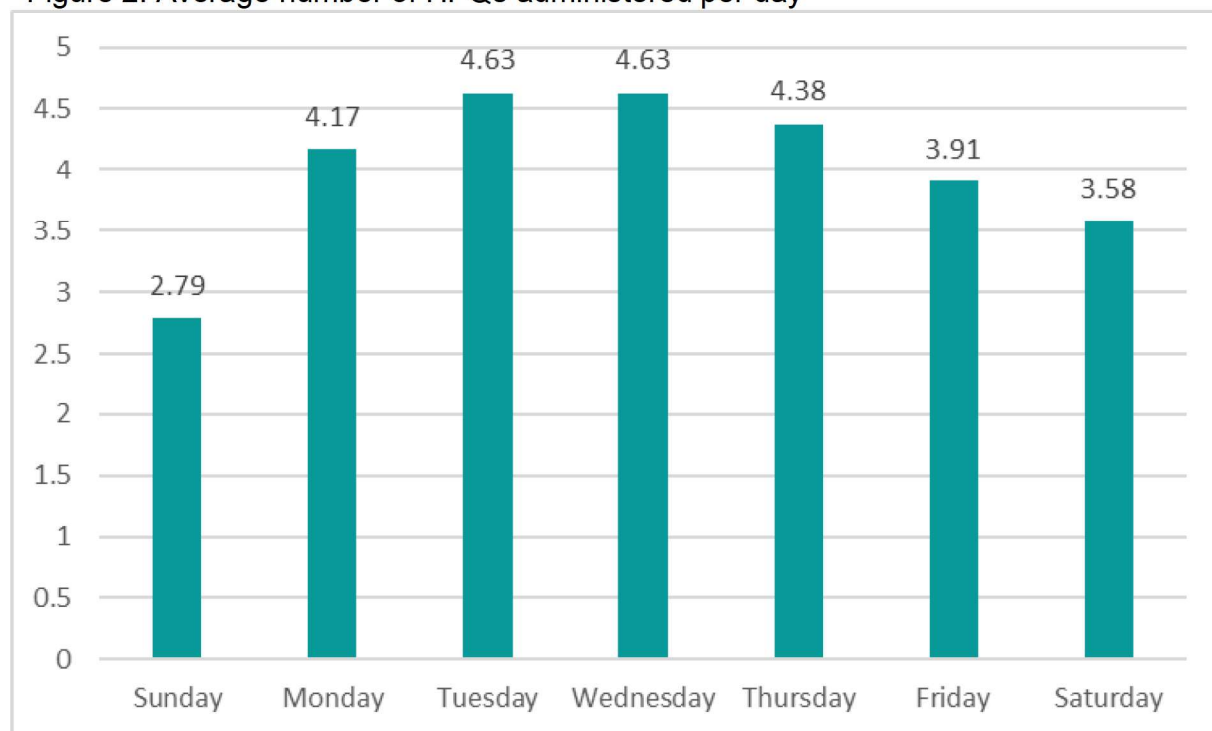
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II. Findings

Figure 2. Average number of HPQs administered per day



Daily quota set for Monday-Saturday operations was **5 HPQs**.

On the average,

4.0 HPQs

(4 household interviews) was administered per day from 15 Oct 2021 to 07 Feb 2022.

Among the days of the week, most number of HPQs (4.63) were administered every **Tuesday and Wednesday**.

While not covered in working days, enumerators conducted **2-3 interviews** on a **Sunday**.



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III. Recommendations and Actions Taken

Recommendations	Actions Taken in 2022 CBMS
1. Revisit quota set.	No change. But PSA field offices were given the leeway to adjust based on the geographical location and conditions in the area.
2. Expect most number of field enumeration inquiries on Tuesday and Wednesday.	Dedicated CBSS and ITDS staff who will respond to field enumeration queries filed via the CBMS Management Information System (MIS) and FB GC.
3. Field support to ENs on weekends.	
4. Expect data submission traffic after Tuesday or Wednesday.	Redundancy servers were setup based on maximum expected connections to the PSA servers. Continued ICT support to ensure uninterrupted data submissions.

III. Recommendations

Use paradata to:

- Rationalize and revisit data items/questions with an objective to collect the needed information without or with minimal respondent burden.
- Check EN's use of functionalities of the CAPI application.
- Check data encoding speed (PAPI to CAPI) versus data encoding while in interview (CAPI).
- Check for unusual behaviors of enumerators (e.g. instances of short interview duration; nighttime encoding; large timestamp gaps between interviews; etc.) and remind/monitor them closely in field operations.

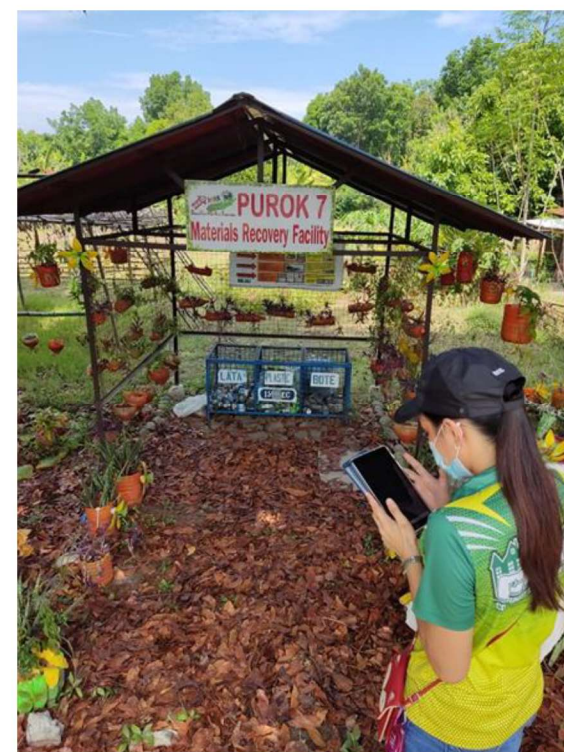


III. Recommendations

Use paradata to:

- Evaluate and recommend the cost per data item.
- Estimate additional budget needed for extra weeks and days for field enumeration beyond schedule of operations.
- Document audit trail and pursue accountability in data collection and field editing process.

Organize paradata structure and integrate paradata in monitoring of field operations





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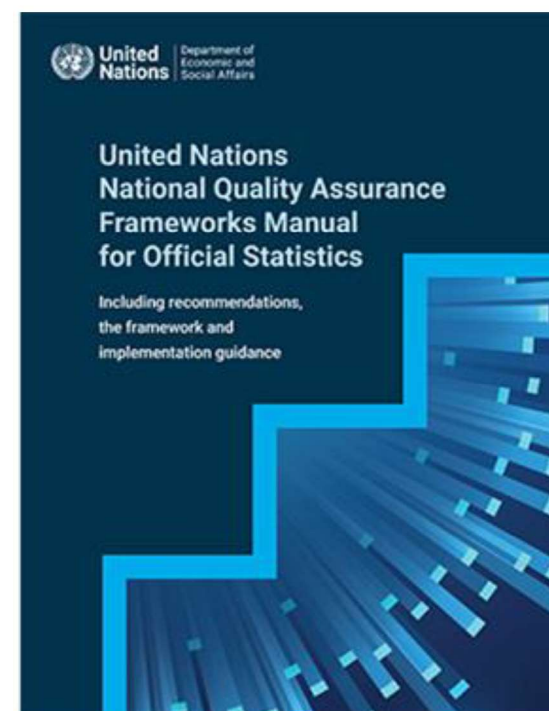
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III. Recommendations

Regular use of paradata as commitment to **UN NQAF**
Principle No. 12: Assuring soundness of implementation.

- Report quality measures to PSA management using data and paradata to identify causes of delay, confusion, respondent burden and data processing needs towards improved accuracy and timeliness of releases of statistical products.



References

- Kreuter, F., Couper, M., & Lyberg, L. (2010). The use of paradata to monitor and manage survey data collection. Section on Survey Research Methods - JSM, 282-296.
- UN Expert Group on National Quality Assurance Frameworks. (2012). Guidelines for the Template for a Generic National Quality Assurance Frameworks (NQAF). Background Document for Item (3) of the Forty-Third Session of the United Nations Statistical Commission (pp. 1-93). New York: United Nations.
- US Census Bureau. (2022, June 17). Paradata. Retrieved September 30, 2022, from Census and Survey Processing System (CSPRO) User's Guide: <https://www.csprusers.org/help/CSPRO/paradata.html>



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Thank you!



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