Regional Course on
Statistical Business Registers:
Data sources, maintenance and
quality assurance
Perak, Malaysia
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4.1

Survey frame methodology

REVIEW

For sampling purposes, a snapshot of the live register at a particular point in time is needed. The collection of active statistical units in the snapshot is referred to as a **frozen frame**.

REVIEW

A sampling frame for a survey is a subset of the frozen frame that includes units and characteristics needed for the survey. A single frozen frame should be used for all surveys in a given reference period

Creating sampling frames

SPECIFICATIONS

Three main things need to be specified to draw appropriate sampling frames:

- ▸ Target population (which units?)
- ▸ Variables of interest
- ▸ Reference period

CHOICE OF STATISTICAL UNIT

Financial data
Enterprises are typically the most appropriate units to use for financial data.

Production data
Establishments or kind-of-activity units are typically the most appropriate for production data.

Regional data
Establishments or local units should be used if regional disaggregation is necessary.

Typically a single type of unit is used for each survey, but there are exceptions where target populations include multiple unit types.

CHOICE OF STATISTICAL UNIT

Enterprise groups are useful for financial analyses and for studying company strategies, but they are not normally the target populations for surveys because they are too diverse and unstable.

SURVEYS OF EMPLOYMENT

The sampling frames for these include all active units that are employers.

SECTOR-SPECIFIC SURVEYS

E.g., manufacturing surveys. The sampling frames for these include all active units with an ISIC code in the specified group.

CAPITAL EXPENDITURE SURVEYS

The sampling frames for these may include all active units above a certain size.

BASIC STEPS

| Step 1 | Step 2 |

Step 1

At specified times (monthly, quarterly, yearly), **snapshots** are extracted from the live register containing all units and their characteristics.

Step 2

A **frozen frame** is created, typically containing all statistical units that have been active in the past 12 months.

BASIC STEPS

Step 3 | Step 4

Frame populations are the complete sets of each statistical unit type from the frozen frame.

A sampling frame is typically selected from a single frame population.

UNITED NATIONS
SIAP
Statistical Institute for
Asia and the Pacific

FRAME GENERATION FREQUENCY

Annual

Some countries generate frozen frames annually, and the annual frozen frame is used for all monthly, quarterly and annual survey frames.

Quarterly or monthly

If SBR frozen frames are generated quarterly or monthly, a relationship will need to be established between survey frames for different periods (keeping in mind characteristics will likely not be additive over time).

FRAME ERRORS: UNDERCOVERAGE

Undercoverage, when the frame population does not include all units in the target population for the survey, can occur for many reasons, including:
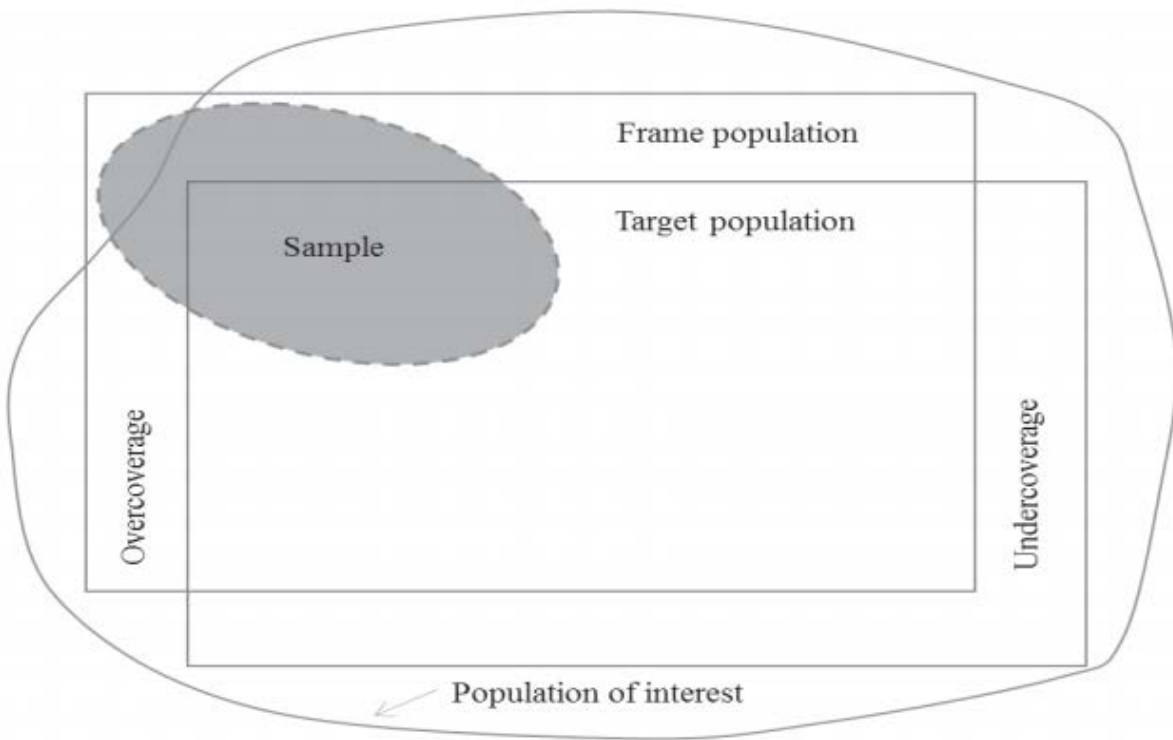
▸ A size threshold for inclusion in administrative sources

▸ Active units that are erroneously marked inactive

▸ Lag time before an active unit is included in the SBR

FRAME ERRORS: OVERCOVERAGE

The opposite, overcoverage, is when the frame population includes units not in the target population for the survey. Reasons include:

- ▸ Mistakenly keeping inactive units in the SBR
- ▸ Double counting when combining multiple data sources
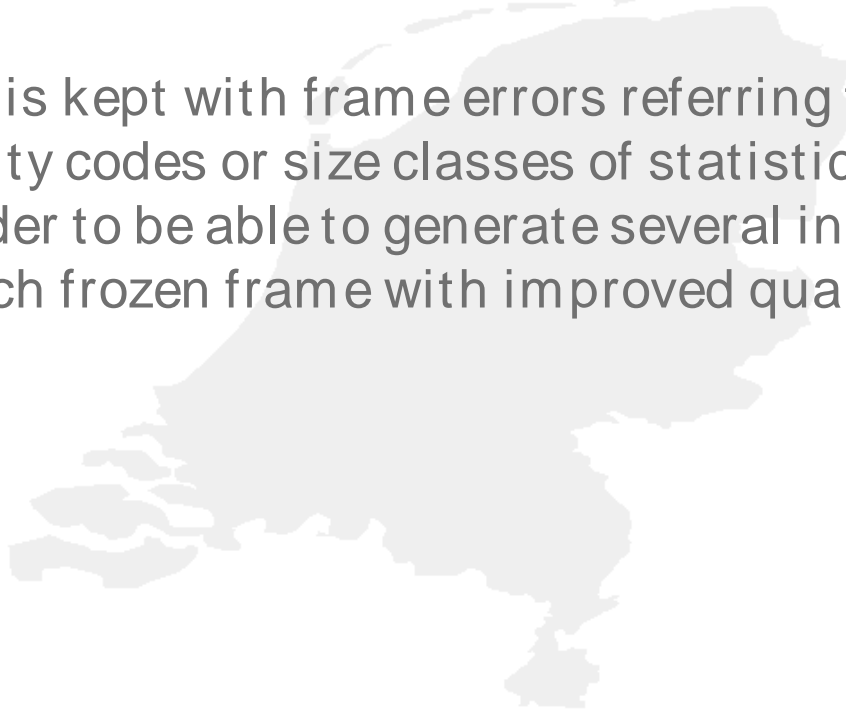
FRAME DIAGRAM

REDUCING FRAME ERRORS

While frame errors cannot be entirely avoided, there are ways to reduce them. One method is to extract tables from the live register and compare them with the current frozen frame in order to check for errors before the next frozen frame is generated.

CASE STUDY: THE DUTCH SBR

In the Netherlands, a frozen frame is created from the live register each month, consisting of enterprise groups, enterprises and local units and their main characteristics. In addition the statistical units are linked to the legal and the administrative units valid for that month.

CASE STUDY: THE DUTCH SBR

A list is kept with frame errors referring to activity codes or size classes of statistical units in order to be able to generate several instances of each frozen frame with improved quality each time.

REFERENCES

This presentation was primarily based on UNECE's Guidelines on Statistical Business Registers, in particular Chapter 8. Other material used:

▸ The African Development Bank's Guidelines for Building Statistical Business Registers in Africa

▸ Eurostat's Business registers: Recommendations manual

Country maps based on Natural Earth data. Presentation template by SlidesCarnival