Regional Course on Statistical Business Registers:
Making a Business Case for an Operational
Statistical Business Register

26 – 30 January 2015
Sungkai, Perak, Malaysia

Errors in SBRs

UNITED NATIONS
SIAP
Statistical Institute for Asia and the Pacific

Changes in SBRs

Changes to information (statistical units and characteristics) in SBRs are--

* **Updates**-- reflection of real world events

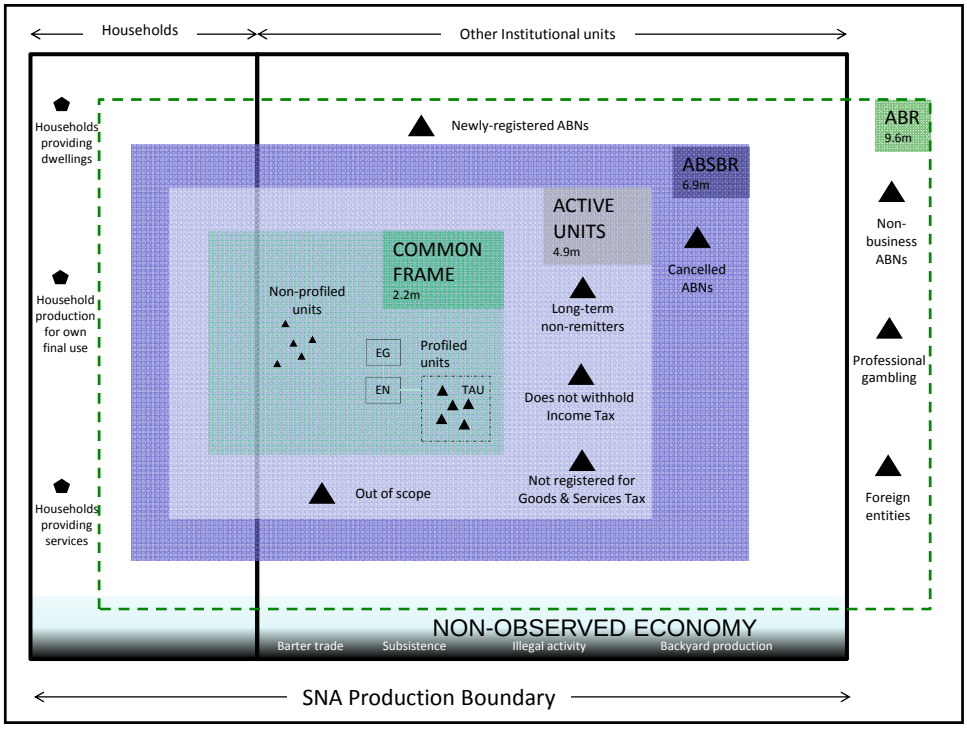
or

* **Corrections--** amend information that was previously wrong

Corrections are applied to Errors

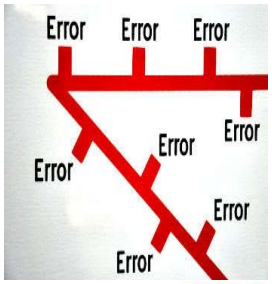
An error in a statistical business register is a

* Difference in the information presented in the register and the information as it should be,
* According to a chosen image of the real world produced and maintained by an accepted instrument and documented procedures.



Sources of Errors in SBRs?

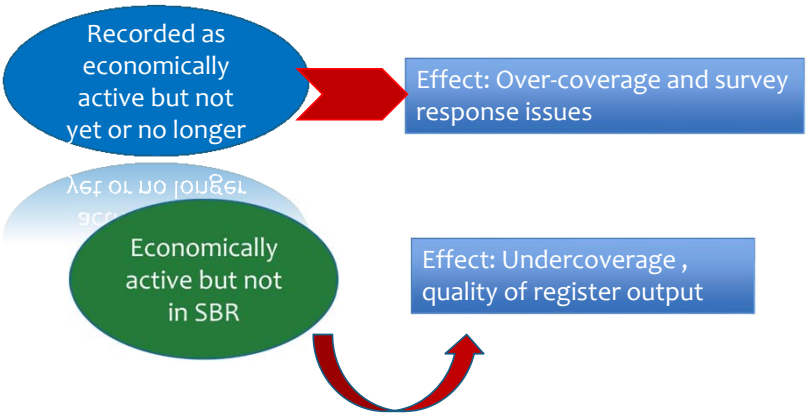
* Irregularities in source
* Lags in recording information due to limitations of data sources
* *Note: Acceptable distortions by users of SBR are not errors.*



Types of Errors

Errors in Existence

False information of demographic characteristics (creation and cessation dates)



Errors in Identification Characteristics

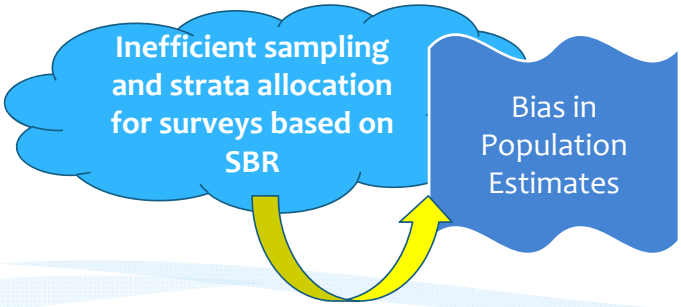
- Duplication and incorrect links (more later)
- Names, addresses, telephone number

Effects

- ❖ Data collection difficulties in tracing units
- ❖ Impede SBR as tool to link with other sources

Errors in Economic/Stratification Characteristics

* Activity codes; size (employment, turnover); institutional sector; location



Errors in Units

* Delineation of statistical units especially enterprise
  * Leads to duplication
  * Errors in data on number and size of units
  * Affect measurement and allocation variables

Errors in links and relationship data

* SBR role: accessing and using data from administrative sources for statistical purposes
  * How: information on links between administrative and statistical units
* Lack of unique identifiers leads to errors in identifying and linking units

Handling of Errors

Macro approach

Micro approach

Micro Approach

Focuses on errors at the level of the individual business.

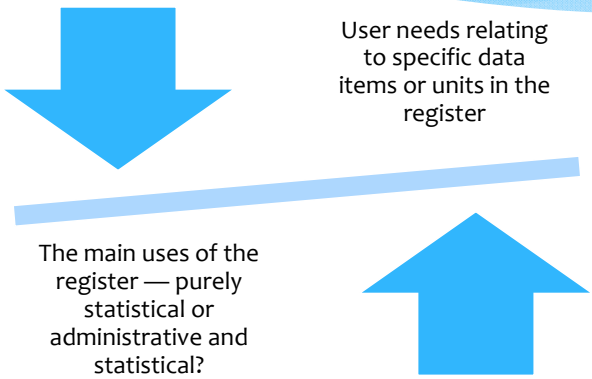
* Correction takes place according to fixed procedures.
* Detection of errors can be based on feedback from register users, or a specific survey of certain types of businesses in the register
* *Note*: The micro approach is often **expensive**, especially when applied to the full scope of the register, but the **improvement** in the total **quality** of the register is **substantial**.

Macro Approach

Entails the detection and handling of errors at the aggregate level.

* For example, estimates of the total number of non-active businesses may be derived from samples.
* Note: **Cheaper** to implement than the micro approach, but the **improvement in quality for individual units is much lower**. Only the units included in the sample are checked.

Solution



Availability of human and financial resources

Three Steps: Handling Errors

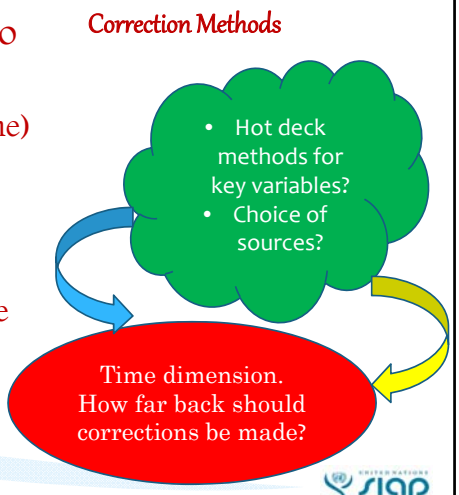
* Decide whether errors have occurred
* Decide whether they should be corrected
* Decide how and when to correct them

Handling Errors

* Consideration of user (survey) needs
* Different solutions for different surveys
* Develop database to record errors:

Corrections and Database

* Database closely linked to the SBR
  * Original value (wrong one)
  * Date of detection
  * Date of occurrence
  * Date of correction
  * Source of corrected value
  * Record of the corrector



Error Correction Policy Elements

- Inventory of SBR users and uses and the consequences of the various types of errors for the various groups of users.
- Structure and maintain SBR so that the correction of errors has a minimal impact on statistical surveys.
- Systematically monitor SBR inputs, processes outputs to detect potential errors
- Analyse periodically detected errors to monitor changes in the pattern of errors over time
- Record the history of errors to facilitate error handling in complex situations.

Error Correction Policy Elements

- Fully document:
  - SBR processes so that the handling of changes or errors in the values of characteristics is clear to all concerned. This helps in detecting errors and avoiding discussions on the quality of individual records.
  - (and audit periodically) Policies regarding handling of errors
  - Responsibilities regarding handling of errors (Identify who has the final say in difficult cases)
  - (and coordinate) Handling of corrected values in statistics based on the SBR
- Take legal precautions to guard against possible consequences of errors.