The Maturity Model for Statistical Business Registers

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Outline

• How it was developed
• Maturity Model for Statistical Business Registers
• Additional tools
How it was developed

• The *Manual on the Maturity Model for Statistical Business Registers* was prepared by the UN Committee of Experts on Business and Trade Statistics. In particular:

  • **Task Team on Exhaustive Business registers** – Lead by Hank Hermans, Statistics Netherlands. Developing guidance for the development of Statistical Business Registers (SBR) to become more inclusive and exhaustive in a rapidly changing economy and to be better tailored to statistical production.

  • **Task Team on Capacity Building** – Lead by Saleh Al Kafri, Palestinian Central Bureau of Statistics. Develop and examine the best ways to reduce the gap between countries in utilizing administrative registers in producing business statistics and integration. The ultimate goal is to leave no one behind.

Challenges

• There is no standard situation, many difference between countries.
• How to create a guidance tool for all?
• How to make use of existing material and rich experiences across countries?
Maturity model for Statistical Business Registers

• Seven dimensions
  1. Legal and institutional framework
  2. Data sources for SBRs
  3. Maintenance and update of SBRs
  4. Coverage of a SBR
  5. Use of SBRs
  6. IT environment
  7. Interoperability

• Four maturity stages:
  • preliminary, early, mature, advanced
• For each dimension:
Dimension 1: Legal and institutional framework

This dimension refers to the legal and institutional framework relevant for establishing and maintaining a SBR.

The existence of such a framework can for example foster
- a regular Economic census
- the access and use of administrative data sources
- the use of an unique identifier for businesses
Dimension 2: Data sources for SBR

• This dimension of the maturity model refers to the characteristics of SBR in terms of the data sources used for establishing and maintaining an SBR
• What data sources are used to build and maintain the SBR?
• Availability of high-quality administrative data has clear benefits.

- Preliminary
  Data are limited or irregular. Scoping exercises may be underway.

- Early
  SBR established using economic census and survey data.

- Mature
  Maintenance primarily based on admin data (e.g. tax, Chamber of Commerce). Survey and profiling data used

- Advanced
  Maintenance uses multiple admin sources, surveys, big data, private sector data, web scraping. New sources support broader analysis.

Availability of high-quality administrative data has clear benefits.
Dimension 3: Maintenance and update of SBRs

- Covers the operational requirements to maintain a SBR - prerequisite function of NSOs
- Key objective - to update the coverage and content
- Digitalization and automatization of procedures
- Effort required for the maintenance - dependent on the main data source(s)
- Maintain a documented set of procedures

**Preliminary**
- Limited / irregular
  - SBR is not maintained or updated
  - or is updated irregularly with no agreed procedures

**Early**
- Being Developed
  - Update, procedures, methods, and change logs, are being developed
  - Irregular and manual validations

**Mature**
- Procedures in place
  - Procedures, method and documentation
  - Validation is regular
  - Use profiling to create statistical units
  - Update is sub-annual

**Advanced**
- Improvement
  - Procedures adjusted continuously
  - Gov unique identifier driven
  - Regular profiling and admin data used
  - Detailed unit record reports

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Covers the operational requirements to maintain a SBR - prerequisite function of NSOs

Key objective - to update the coverage and content

Digitalization and automatization of procedures

Effort required for the maintenance - dependent on the main data source(s)

Maintain a documented set of procedures
Dimension 4: Coverage of an SBR

- This dimension of the maturity model refers to the coverage of SBRs.
- There are three key aspects of SBR coverage:
  - Completeness is the extent to which the SBR includes all institutional units within the 2008 SNA production boundary.
  - Coverage is the proportion of total national economic production that the units represent.
  - Content is the set of characteristics (e.g., types of units, institutional sector, size, location and registration status) of the units contained in the SBR.

**Preliminary**
- Very limited
- Limited institutional sectors and characteristics of the units
- Difficult to make an assessment

**Early**
- Fairly good
- Institutional sectors, minimum content
- Covers units in the source data
- Good proportion of total national production

**Mature**
- All institutional sectors included
- Multiple types of units
- More characteristics
- Significant proportion of total national production

**Advanced**
- Expansion
- Additional efforts to expand the coverage of the SBR include - geo-spatial, informal, global identifiers and additional variables
Dimension 5: Use of SBR

- Covers uses of the SBR
- Considerations for use
  - quality
  - Confidentiality
- Internal uses
  - Survey frames
  - Survey estimation
  - Survey response and provider burden measures
- External uses
  - Business demography
  - List releases of business characteristics
  - Micro data linking outputs
    - Aggregate data
    - Anonymised unit record data
    - International registers / exchange

Preliminary
Siloed surveys
- Ad hoc support to business surveys. No co-ordination

Early
Stove pipe
- Register supplements frames compiled by survey teams

Mature
Backbone
- Common frame used to create survey frames
- SBR supports surveys co-ord and statistical processing
- Business demography

Advanced
Micro data linking
- Micro-data linking
- Release of anonymised unit record data
- Data exchange with International or regional group registers
Dimension 6: IT Environment

- Covers IT infrastructure that supports data storage, maintenance, updates and dissemination of SBRs
- Fundamental element for efficient SBRs - not possible to efficiently maintain without an IT environment
- Should be part of the NSO integrated production system

**Preliminary**
- None
- No (integrated) SBR IT infrastructure
- E.g. Excel spreadsheets
- Basic maintenance strategy

**Early**
- Simple database
- Simple database structure with Essential information
- Separate applications
- Limited organization of IT infrastructure

**Mature**
- Developed & scalable
- Managed as a project - phased
- Developed and scalable - many tasks and user requirements
- Continuous maintenance procedures and dedicated staff

**Advanced**
- Integrated production system
- Part of the NSO integrated production system
Dimension 7: Interoperability

- Interoperability refers to the ability of an SBR to communicate and exchange standardized data with other registers, be they domestic, regional, or global.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
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<tbody>
<tr>
<td>Preliminary</td>
<td>No consideration for the interoperability with other registers</td>
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<tr>
<td>Early</td>
<td>Limited interoperability with other systems which are mainly confined to administrative sources</td>
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<tr>
<td>Mature</td>
<td>Common ID to identify people and enterprises across admin &amp; statistical registers</td>
</tr>
<tr>
<td>Advanced</td>
<td>Can be linked</td>
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- Common ID to identify people and enterprises across administrative & statistical registers
- Compliant with international standards and classifications
- Micro-data linking
- Can link with other statistical registers
- Regional cross-country analysis possible
- Exchange information at enterprise level
Additional tools: Maturity model toolkit

- to help NSOs identify gaps in their SBRs' level of maturity in each dimension and to provide resources and training material to NSOs to facilitate efforts to improve in these areas.

- The maturity model toolkit consists of the following:
  - Interactive Self-assessment questionnaire
  - Link to existing manuals handbooks and training material
  - Regular global assessment on the implementation of SBR in countries
Interactive Self-assessment questionnaire

• An online tool to assess the status of implementation of the SBR
• Seven modules, each corresponding to a specific dimension
• Each module contains several questions and based on the answers, the stage of maturity for that dimension can be derived

• The SBR Maturity model:
  • can be used to evaluate the maturity of the national SBR; and
  • can be used to develop a roadmap towards maturity
Link to existing manuals handbooks and training material

• Stocktaking of existing manuals, training material, tools, best practices etc.
• Mapping of list of materials to dimensions and stages of maturity

• UNSD-SIAP-ADB E-Learning course Foundational course on Statistical Business Registers was developed with the UNCEBTS Task teams taking into account the maturity model for SBRs
Global assessment on the implementation of the SBR in countries

• The maturity model and the self-assessment questionnaire will be the basis for the development of a regular global assessment on the implementation of SBR in countries.
• The global assessment is intended to be conducted on a regular basis, say every 5 years.
• The main objectives of the global assessment are to:
  • monitor the implementation of SBRs in countries, and
  • identify priority areas to develop technical assistance programmes and further guidance and training materials
• It will be coordinated with the country progress reports of the Wiesbaden Group on SBR and the Expert Group on SBRs
Thank you!
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