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The draft manual on the Statistical Business Register Maturity Model for Statistical Business Registers

Prepared by the Committee of Experts on Business and Trade Statistics



Draft Manual on the Statistical Business Register Maturity Model for Statistical Business Registers

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Preface

The maturity model for Statistical Business Registers (SBRs) was developed as a tool to assist countries to identify areas for improvements for their SBRs. It was prepared by the United Nations Committee of Experts on Business and Trade Statistics (UNCEBTS), which recognizes, in its strategic view for business and trade statistics¹, the fundamental role of the SBR in the production and compilation of business and trade statistics and in supporting the development of new statistics or improving the quality and granularity of existing ones.

To reflect this strategic view, the UNCEBTS established two ask teams to advance the conceptual and practical development of SBRs; namely, the Task Team on Exhaustive Business Registers and the Task Team on Capacity Building (no one left behind) on SBR. The discussion led to the formulation of a Maturity Model for SBRs in order to provide countries with a framework where they can more clearly see how to move toward the "dot on the horizon".

The Task Team on Exhaustive Business Registers defined its main goal as developing guidance for the SBRs to become more inclusive and exhaustive in a rapidly changing economy and to be better tailored to the needs of statistical production. The task team discussed the elements of an ideal SBR, in terms of the requirements and roles of an SBR, that would serve as a target (or "dot on the horizon") for future developments in the SBR regardless of the stage of implementation of the SBR in the country. The "dot on the horizon" represents the concept of an ideal SBR that should be aimed at being developed over time, but also reflects the fact that it is a moving target, meaning that with new developments in society, technology and economic activities, the dot on the horizon may have to reviewed and adapted in order to remain relevant and to meet the increasing demand for better integrated, coherent and comparable statistics across countries and statistical domains.

The Task Team on Capacity Building (no one left behind) focused its efforts on developing an assessment of the implementation of SBRs in countries in order to identify gaps and support the development of training material to address these gaps. The main objective of the work was to reduce the gap between advanced and less advanced countries in the implementation of SBRs.

Discussions between these two task teams of the UNCEBTS led to the formulation of a Maturity Model for SBRs in order to provide countries with a framework, built on the ideal view of the SBR, whereby they can assess the current status of implementation of the SBR in their country and more clearly see how to move toward the "dot on the horizon."

---Text will be added on the finalization process including the global consultation and the acknowledgements ----

¹ Stefano Menghinello and others (2020) A strategic and data production framework for the development of business statistics. Statistical Journal of the IAOS 36 (2020) 701–713. Retrieved from https://content.iospress.com/download/statistical-journal-of-the-iaos%2Fsji200687.

Chapter 1: Introduction

1.1 This chapter describes the vision of the UNCEBTS for an inclusive and exhaustive SBR. This vision, called a 'dot on –the horizon', represents a sketch of the ideal SBR in terms of its roles and requirements which can serve as a target for future developments in the SBR regardless of the current stage of implementation of the SBR in a country.

A. Roles of the Statistical Business Register

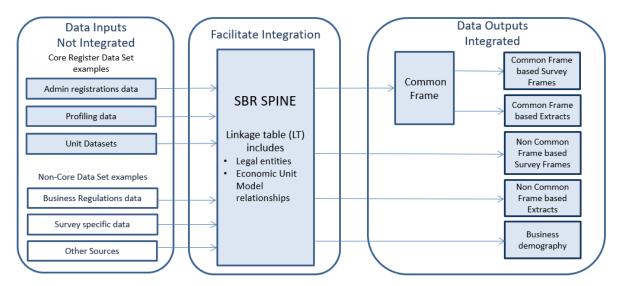
- 1.2 The SBR is often described as the backbone of economic statistics, as it provides the core infrastructure to support the collection of economic data and the production of economic statistics. Specifically, the SBR is the coordinating mechanism, as it provides a coherent set of units and classifications to collect and assemble data across all domains. The SBR also serves as the backbone for producing economic statistics that meet the increasing demand for better integrated, coherent and comparable statistics across countries and statistical domains. These statistics should also be able to describe new phenomena, such as globalization, digitalization, well-being, sustainability and the gig economy. With these new demands, an inclusive and exhaustive SBR becomes an increasingly more important element of the statistical infrastructure for maintaining the relevance, responsiveness and quality of economic statistics in order to measure the structure and dynamics of economic activity.
- 1.3 Moreover, as NSOs continuously respond to new and emerging user needs in terms of coverage, frequency and timeliness of business and trade statistics, they should do so in an efficient way, while keeping the response burden as low as possible. Therefore, efforts must be made to modernize production processes, to use administrative data to reduce survey burden, to redesign survey systems, to harmonize surveys and variables, to comprehensively link administrative data and survey sources, and to cooperate more closely with administrative authorities on a continuous basis to improve the quality of the SBR. Greater international dependencies and globalization of production also increasingly requires better consistency between the various statistical areas at the national and international level.
- 1.4 The SBR plays a key role in responding to all of these developments. Therefore, the challenges of current and future business and trade statistics are, at the same time, challenges for the SBR. The SBR delivers the basic information for conducting economic surveys by providing the populations of statistical units and their characteristics for national business and globalization-related statistics. It also serves as the central data source for querying legal units, enterprises or enterprise groups. Further, the SBR provides links to administrative units and registers, as a central data source, thus enabling the use of administrative data for statistical purposes. It also provides unique identifiers for businesses, enabling linkages at the micro-level across statistical domains that are needed for producing national and international statistics. And finally, it is the central data source for statistical analysis and calculations, identification and delineation of units, definitions of weightings and micro-data linking.

1.5 In particular, the roles of the SBR for the production of business statistics has a significant effect on the national accounts, which require high quality and consistent business and trade statistics.` High-quality business and trade statistics therefore depend on a high-quality SBR. A high-quality SBR fulfils user needs in an optimal way and is based on international concepts, definitions and classifications. Thus, it also serves as the basis for international harmonization of economic statistics in terms of coverage, statistical units and frame methodology.

B. Core Requirements of the Statistical Business Register

- Among the most important requirements of an SBR is that it reflects the real world as much as possible and can be maintained. The SBR has usually been implemented for this purpose by integrating data into a single structured database. Yet, as described previously, addressing the new needs for more integrated data will in part rely by being able to more flexibly integrate data from a variety of sources, while minimizing the storage of redundant information in the SBR. In order to facilitate this integration, a "spine" data model has been developed by the Australian Bureau of Statistics (ABS) and is supported by the UNCEBTS.
- 1.7 In the spine data model, registers are no longer held in a single structured database. Rather, they are created virtually via data linking. The spine is the minimum set of information (e.g., identifiers and the relationships in the economic unit model) required to link two or more datasets, and there is a separation between data inputs, the spine and data outputs. Under this approach the SBR becomes a register environment rather than a stand-alone register. The spine data model also supports inter-operability between registers.
- 1.8 The register environment in this model includes the core register input datasets (not integrated), the spine, and the business rules and views that use the spine to transform data inputs into integrated data outputs. The supporting environment must be sufficiently flexible to enable new datasets to be related to the spine as they are created or obtained. To support coherence within the data, all economic collections should be based on frames from the SBR or be linked to the SBR. Figure 1 depicts how the spine model is used in the ABS.

Figure 1
Schematic representation of the spine model



Note: This figure was developed by the Australian Bureau of Statistics.

- 1.9 Although the core of an SBR should be kept to the minimum set of information that would allow the linking of input and output data, its coverage should be maximized. That is, an SBR should record all institutional units in the national economy that are engaged in productive economic activities; i.e., activities contributing to the gross domestic product (GDP). A national economy can be divided into three parts: the formal sector, the informal sector, and household non-market production for own final use. In the ideal situation, the first two parts should be fully covered by an SBR. In reality, complete coverage of all these units within the SNA production boundary is impossible to achieve. However, for the purposes of international comparisons, it is desirable that the coverage of an SBR meet agreed standards, with completeness being the ultimate aim.
- 1.10 Aiming for completeness will lead to new challenges that will not be addressed only by relying on conventional methods, administrative sources and the traditional survey-based approach. The digital transformation, data revolution and emergence of "big data" all influence the way NSOs collect data. Data are everywhere, generated by everything and everyone. These developments should be seen as opportunities to enrich existing datasets, further characterize enterprises and determine and differentiate subpopulations, noting that new approaches need to be repeatable. To take advantage of all the potential opportunities associated with advanced data collection approaches, much guidance is still needed.
- 1.11 In addition, important pre-conditions for a "modern" SBR are the existence of a legal business registration system and an identity management system. A legal business registration system comprises well-maintained and updated registrations of single businesses identified by a unique national legal unit identifier. Such a system requires specific legislation to support the use of technological communications devices for registration purposes, such as computers and the Internet, for the provision of public services to citizens and other persons in a country or region over the internet, better known as e-government. The recommended core functions for such a business register system are listed in the United Nations

Commission on International Trade Law (UNCITRAL) Legislative Guide on Key Principles of a Business Registry.²

1.12 Moreover, the existence of a legal and institutional framework that mandates the NSO for data collection, facilitates the access to administrative sources and other relevant sources and that includes provisions to facilitate the access to these sources in an efficient and secure way provide an important basis for an efficient establishment and maintenance of SBRs. This is also in line with the UN Guidelines on Statistical Business Registers, the recommendation is for SBRs to be created and maintained primarily using administrative sources. The main benefits of administrative data are that they provide comprehensive coverage of registered businesses, they are constantly updated, and they are free to an NSO.

C. International cross-border data linking

- 1.13 The discussion above primarily relates to SBRs at the national level. However, the increasingly global activities and structures of enterprises pose a challenge for the integration, coherence, consistency and comparison of business and trade and macroeconomic statistics across countries and across statistical domains. This situation requires a structured solution where cross-border relationships and activities of the largest and most important multinational enterprise (MNE) groups can be identified, stored, maintained and made available for compiling statistics on cross-border phenomena. In the European context, the EuroGroups Register (EGR) is the joint tool in the European Statistical System (ESS) that links and coordinates the basic information about MNEs from the EU Member States' SBRs to create the harmonized global structures of MNEs resident in the EU and their constituent legal units.
- 1.14 The United Nations Statistical Commission recognized that creation of a global enterprise group register (complementing to a certain extent the EGR) that shows the legal structure of the largest MNEs would assist countries to understand the non-national part of the MNEs in their country; facilitate the data sharing among countries; and, more generally, aid the analysis of globalization effects and global value chains. In response to the UNSC decision, the United Nations Statistics Division (UNSD), in collaboration with Eurostat, examined various methods for building a global group register based on public information that would complement the EGR and in December 2020 published the first experimental release of the Global Group Register (GGR), a public, open-source database containing profiles of the world's largest 100+ MNEs as a proof of concept. OECD also recognized the need for a global business register and in 2018 it released the Analytical Database on Individual Multinationals and Affiliates (ADIMA), based on public sources. In contrast with the EGR, which is built from the national

² UNCITRAL Legislative Guide on Key Principles of a Business Registry, 2019, Vienna, Austria. https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/lg business registry-e.pdf

³ UNSC Decision 46/107. https://unstats.un.org/unsd/trade/events/2016/newyork-egm/documents/core/Decision%2046-107%20-%20Statistical%20Commission%202015.pdf.

⁴ https://unstats.un.org/unsd/business-stat/GGR/.

⁵ The 2018 release of ADIMA included the profiles of 100 MNEs, expanding to the largest 500 MNEs in the 2019 and 2020 release. OECD also produces a monitoring report on major corporate restructurings, based on company press releases on mergers and acquisitions. https://www.oecd.org/sdd/its/statistical-insights-the-adima-database-on-multinational-enterprises.htm

SBRs of EU Member States, the GGR and ADIMA are built from publicly available sources, such as the Global Legal Entity Identifier Foundation (GLEIF),⁶ companies' websites and companies' annual reports.

1.15 The use of global unique identifiers, such as GLEIF, will benefit the further development and coverage of regional and global registers. The lack of global unique identifiers of businesses is often seen as one of the main obstacles in the establishment and improvement of SBs in countries and greatly hampers the use of administrative data and linking to other registers. In particular, the availability of global identifiers for legal entities enables the linkage across data sources, reduces manual efforts to reconcile different local identifiers, provides information on company ownership and can facilitate the process of integrating information on cross-border transactions (e.g., international flow of goods and taxes).

D. The vision of a dot on the horizon

- 1.16 In summary, the vision of the UNCEBTS of a dot on the horizon for SBRs includes the main roles of the SBR; namely, its role as the backbone for business and trade statistics; the role it plays in producing business and trade statistics (including data collection and compilation); and in supporting emerging data challenges (including the creation of new statistics when or improving the quality and granularity of existing ones). The dot on the horizon also reflects the need for the SBR to represent the real world and can be maintained over time.
- 1.17 In addition, it sets forth the spine model as the future data model for SBR, focusing on the core data requirements (e.g., identifiers and the relationships in the economic units model) required to link two or more datasets; complete or full coverage as the ultimate goal (with maximizing coverage, including the informal sector- as the second-best solution); a register environment that supports inter-operability between registers rather than a stand-alone register; flexibility to use the SBR to integrate new datasets and data sources (e.g., administrative data sources, Big Data, etc.); and provision of common/frozen frames for all economic data collections.
- 1.18 Lastly, the creation will foster cross-border data integration and quality of information on MNEs. An SBR's ability to communicate and exchange data with global registers such as the GGR would be an indicator of advanced maturity under the interoperability dimension of the maturity model.

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⁶ https://www.gleif.org/en/

Chapter 2: The Maturity Model for Statistical Business Registers

A. Introduction

- 2.1 The previous chapter elaborates on the vision for the SBR that can stand the test of time. However, the pace of SBR development varies across countries as it depends on many factors. The Maturity Model for SBRs was developed to provide countries with a tool to assess the stage of development of their SBRs and identify possible improvements to the SBR.
- 2.2 It should be mentioned that the maturity model should not be seen as a static framework for the maturity of SBRs. As technology, economic behaviour and user needs evolves, the maturity model will have to adapt to new realities. It is envisaged therefore that the maturity model is a live framework that is periodically reviewed and adjusted.
- 2.3 Having that in mind, the Maturity Model for Statistical Business Registers (SBRs) aims to be a tool to:
 - share knowledge and best practices
 - determine the current state of your SBR
 - determine possible next steps for development
 - find help and guidelines to actually be able to take those steps.

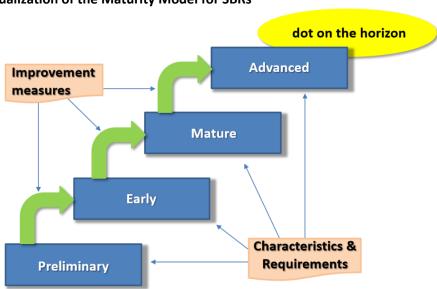
B. Maturity and maturation

- 2.4 The Maturity Model for SBRs describes the different levels / stages of an SBR by a number of dimensions. For each dimension, each stage is described by characteristics that are typical for a certain level.
- 2.5 Stages progress from 'Preliminary', to 'Early', 'Mature' and finally 'Advanced'. The Advanced level is currently closest to the dot on the horizon as described earlier in chapter 1. In the future it is conceivable that the number of levels could increase in line with new insights and developments. A rough guideline could be that a new level should be substantially different from the previous one such that it makes sense to distinguish the different levels.
- 2.6 Each stage can be defined by characteristics and requirements that are specific for that stage. When the Maturity Model for SBRs is in place, it is important that an NSO is able to assess the level that applies to its SBR. To facilitate this, checklists can be developed for performing self-assessments. Notice that the individual dimensions of a specific SBR may be assessed to be at different stages.
- 2.7 The strength of using the Maturity Model for SBRs is that we are now able to define specific guidance on how to move from one level to the next. In fact, it is possible to define guidance for specific

characteristics and requirements. A lot of material is already available and can be re-used to define the guidelines needed. The guidelines should give practical advice on the development and implementation of characteristics and requirements.

2.8 The Maturity Model for SBRs should ideally be built in an online environment, so that its contents are easy to maintain and the model itself is dynamic based on the latest developments and insights. Existing material can easily be re-used by linking to its location. Figure 2 depicts a conceptual visualization of the Maturity Model for SBRs.

Figure 2
Conceptual visualization of the Maturity Model for SBRs



Chapter 3: Dimensions of the Maturity Model for SBRs

A. Overview

3.1 When designing dimensions and stages for the Maturity Model for SBRs, we took note of the Generic Statistical Business Process Model (GSBPM7). The GSBPM provides a framework of all the business processes needed to produce official statistics. For economic statistics, population frames provided by the SBR are a crucial instrument to describe economic indicators about relevant business populations and to design an efficient data collection process. Therefore, the dimensions of the Maturity Model for SBRs should describe the most important conditions affecting the basic design principles for populations, survey frames and data collection in the GSBPM. The stages provide an insight of the maturity status of a particular dimension. The combination of both dimensions and stages aims to help develop efficient design principles in the business architecture for use by an individual NSO. In this respect, the Maturity Model for SBRs then becomes an instrument for improvement.⁸

Table 1
Overview of the dimensions of the Maturity Model for SBRs

N	Dimension	Description
1.	Legal and institutional	This dimension includes the legal and institutional
	framework	framework relevant for establishing and maintaining
		the SBR.
2.	Data sources for the SBR	This dimension includes the various data sources that
		the NSO can use to build and maintain the SBR.
3.	Maintenance and update of the	This dimension includes the maintenance and update
	SBR	procedures for the SBR, and in particular the
		operational requirements of maintaining effective and
		reliable systems.
4.	Coverage of the SBR	This dimension includes the coverage of the
		businesses in the SBR
5.	Use of SBR	This dimension includes the use of the SBR, both by
		external users and internally within the NSO.
6.	IT Environment	This dimension includes the IT environment that
		supports the data storage, maintenance, update and
		dissemination of SBRs.
7.	Interoperability	This dimension includes the ability of an SBR to
		communicate and exchange standardized data with
		other registers, be they domestic, regional, or global.

⁷ https://statswiki.unece.org/display/GSBPM/GSBPM+v5.1

⁸ https://aisel.aisnet.org/ecis2011/28/

1.20 The stages of the Maturity Model for SBRs follow the maturity levels of the Capability Maturity Model (CMM9) and aim to improve the development processes for SBRs. The CMM defines 5 maturity levels. For the Maturity Model for SBRs, it was agreed to define 4 maturity stages.

Table 2
Capability Maturity Model overview of the stages of each dimension

N	Stage	Description
1.	Preliminary stage	"It is characteristic of processes at this stage that they are (typically) undocumented and in a state of dynamic change, tending to be driven in an ad hoc, uncontrolled and reactive manner by users or events."
2.	Early stage	"It is characteristic of processes at this stage that there are sets of defined and documented standard processes established and subject to some degree of improvement over time."
3.	Mature stage	"It is characteristic of processes at this stage that, using process metrics, effective achievement of the process objectives can be evidenced across a range of operational conditions. The suitability of the process in multiple environments has been tested and the process refined and adapted."
4.	Advanced stage	"It is a characteristic of processes at this stage that the focus is on continually improving process performance through both incremental and innovative technological changes/improvements."

1.21 In the next paragraphs, the dimensions and the stages for each of the dimensions are elaborated. In defining the different stages for each dimension, some elements have been taken from the Handbook on Civil Registration and Vital Statistics Systems: Management, Operation and Maintenance¹⁰ (Handbook on CRVS). The Handbook on CRVS takes a holistic systems approach covering civil registration, vital statistics, and population registers, and they identify management as well as issues related to the structural design, business processes, infrastructure, management and operations of an integrated system for registration, issuance of legal documents, register development, and compilation of statistics.

B. Dimension 1: Legal and institutional framework

1.4 This dimension of the maturity model refers to the legal and institutional framework relevant for establishing and maintaining an SBR. The existence of a legal and institutional framework that mandates the NSO for data collection, facilitates the access to administrative sources and other relevant sources and that includes provisions to facilitate the access to these sources in an efficient and secure way provide an important basis for an efficient establishment and maintenance of SBRs. The legal framework refers to

⁹ https://en.wikipedia.org/wiki/Capability Maturity Model

¹⁰ https://unstats.un.org/unsd/demographic-social/Standards-and-Methods/files/Handbooks/crvs/crvs-mgt-E.pdf

the Statistical Act or Statistical legislation in the country. While the legal framework can take different forms rooted in the country's constitutional and institutional environment, however some common elements are identified and elaborated in the Generic Law on Official Statistics¹¹ (GLOS). The GLOS developed by UNECE in 2016 to provide recommendations and good practice guidance on the statistical laws for official statistics, as shown in box 1.

Box 1

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¹¹ https://unece.org/DAM/stats/publications/2016/ECECESSTAT20163 E.pdf

Relevant articles on SBRs in the Generic Law on Official Statistics (GLOS)

In general, the Statistical Act or statistical legislation covers various aspects of the NSO's work, but some aspects are particularly relevant for SBRs. These include:

- the mandate for data collection (Article 15 of GLOS)
 - 15.1 The Producers of Official Statistics shall be entitled to select data sources based on professional considerations and collect the necessary data to compile official statistics directly from respondents. This collection will occur if sufficient data are not already available in the National Statistical System and cannot be obtained from existing data, for example those maintained by national and local authorities outside the National Statistical System.
 - 15.2 Data collection shall be designed with due consideration to quality of statistics, costs of data provision and response burden.
 - 15.3 Irrespective of the data collection methods and sources, data obtained by Producers of Official Statistics are under their ownership and shall be processed, stored and disseminated in full compliance with the provisions of the present Law.
 - 15.4 Within the limits of the provisions on statistical confidentiality in Articles 20-26, Producers of Official Statistics may share data and metadata within the National Statistical System to avoid any duplication of data collection and improve the quality of official statistics.
 - 17.3 Public institutions in charge of administrative registries are considered useful for the generation of official statistics should implement plans for continuous improvement, accept guidelines, comply with standards and regulations for their implementation, in line with the NSO's recommendations.
- the establishment and use of a unique identifier for businesses in the country
- registration requirements for countries that have a business register, which is a data source for the SBR. Recommendations on business registers can be found in the Legislative Guide on Key Principles of a Business Registry, prepared by the United Nations Commission on International Trade Law (UNCITRAL), will be applicable.
- Legislative mandate for NSO on the establishment and maintenance of SBR (Article 19 of GLOS)
 - 19.1 The National Statistical Office may establish and maintain statistical registers, to be used exclusively for statistical purposes. Statistical registers refer to lists of statistical units and their characteristics, including identifiers that are necessary for statistical production and the provision for statistical confidentiality (Article 20 of GLOS).
 - 20.1 Individual data subject to confidentiality, as defined in paragraph 3.1 f, are those that allow natural or legal persons to be identified, either directly or indirectly, thereby disclosing individual information. In addition, the following aggregated data are subject to statistical confidentiality:
 - a. Aggregates composed of 1 to 3 units, when the unit is a natural or legal person, if one of these units could be identified indirectly, thereby disclosing individual data about this unit. Aggregates composed of more than 3 units may be declared confidential by the Chief Statistician if required to ensure statistical confidentiality;

- b. Information declared as a state secret on the basis of [name of the legal act].
- 20.2 Statistics referring to national or local authorities are not protected by statistical confidentiality, unless declared as state secrets. The Chief Statistician can waive the protection of statistical confidentiality for other legal persons of the public sector.
- provision for data dissemination (Article 30 of GLOS).
 - 29.1 Official statistics shall be disseminated in a timely and punctual manner in full compliance with Articles 29-30 and the principles in Articles 3-4 of the present Law, particularly in respect of protecting statistical confidentiality and ensuring equal and simultaneous access as required under the principle of impartiality.
 - 29.2 Each Producer of Official Statistics shall establish and make public an advance release calendar that indicates the planned dates and times for the releases of official statistics. Any expected divergence from the advance release calendar shall be communicated to the public before the planned release date. A new date for the release shall be set within reasonable time and made public.
 - 29.3 Releases of official statistics shall be accompanied by metadata and explanatory comments, and access shall be granted to all users free of charge. The Producers of Official Statistics may set the price of printed publications and other material, as regulated in [name of the legal act].
 - 29.4 Official statistics shall be clearly distinguished from any other statistics when released.
 - 29.5 Errors discovered in released official statistics shall be corrected, and the corrections shall be released and communicated to users at the earliest possible time.
 - 29.6 Users are entitled to use official statistics and the related metadata in their own products with indication of the data source.
- 1.5 Memorandum of understanding (MOU), a service level agreement (SLA), or similar arrangement can be used to formalize, in a less binding arrangement, to formalize the cooperation between institutions to access administrative data. These MOUs generally cover data flows, metadata, communications, protection of the confidentiality, and often a clause that ensure that the NSO will be informed in advance of any changes made to administrative process that will affect the resulting data.
- 1.6 The Guidelines on the Legislative Framework for Civil Registration, Vital Statistics and Identity Management¹² (United Nations 2019), notes that the legal framework can cover the following aspects: business registration; business registers; unique identifiers, data protection and privacy; compliance, enforcement, rights and remedies; and transitional provisions. A further elaboration of the legislative framework for SBRs would be useful and could be developed using the UN Guidelines on the Legislative Framework for Civil Registration as a model.
- 1.7 The availability of international or regional regulations/legislation, such as those at European level, can also cover important element for the establishment, maintenance and dissemination of SBRs. For example, the legal basis for European business statistics (Regulation (EU) 2019/2152 of the European

¹² UN 2019. Available at https://unstats.un.org/unsd/demographic-social/Standards-and-Methods/files/Handbooks/crvs/CRVS GOLF Final Draft-E.pdf

Parliament and of the Council of 27 November 2019 on European business statistics) covers, in addition to the various business statistical domains, the statistical business register (Eurostat, 2021).¹³

1.8 Institutional arrangements for SBR is also an important element of this dimension of the maturity model. It refers to the arrangements among the relevant institutions in the country for the maintenance and update of SBR. A clear understanding of the roles of the different institutions is important to establish institutional arrangement. The NSO is typically the institution that is responsible for the SBR, and it is vital for the NSO to establish and maintain good relations with other institutions, especially the owners of data sources. Depending on the nature of the national statistical system; i.e., centralized vs decentralized, there may be special institutional arrangements that guarantee the sharing of relevant information. Institutional arrangements can also be put in place with relevant agencies within the country, such as for example the institution in charge of businesses registration.

1.9 The availability of a national institution that is responsible for the registration of businesses is an important element for the SBR. A business register, administrative business register, or business registry are different from SBR as they represent the country's mechanism for receiving, storing and making accessible to the public certain information about businesses, as required by domestic law. Most countries have a business registry supported by the legislation that require businesses to register in order to participate in the formal economy. When available, they represent an important source of information for SBRs. 14

¹³ European business statistics methodological manual for statistical business registers 2021 edition https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-gq-21-001

¹⁴ https://uncitral.un.org/en/texts/msmes/legislativeguides/business_registry

Figure 3
Summary of stages of maturity for Dimension 1: Legal and Institutional Framework

No statistical law or institutional arrangement and/or MoU

 There is a provision in the statistical law and/or MoU that mandates the NSO to collect data that are relevant for SBRs

 There is a standard statistical law that gives the NSO access to relevant administrative data for SBR

 There is a statistical law with a provision that allows the dissemination of the SBR

Preliminary stage

There is no statistical law or institutional arrangement and/or MoU that can be effectively used to support of SBRs, (namely that have specific provisions for the SBR in the provisions on the mandate for data collection, access to administrative data, management of identifiers, compulsory business registration, dissemination and confidentiality).

Early stage

There is a provision in the statistical law and/or MoU that mandates the NSO to collect data that are relevant for SBRs. This includes for example the conduct of economic censuses and surveys that can support the maintenance of the SBR. An administrative business register may or may not be available in the country. Where it is available access to it may not be guaranteed by law. In the same manner, access to other forms of administrative data is limited and not guaranteed by legislation or MOUs.

Mature stage

There is a statistical law that gives the NSO access to relevant administrative data (see GLOS Article 17.1) for the SBR. This includes access to business registry and other administrative sources. The statistical law or MoU has the provision that all providers of administrative data should provide the NSO with access to their data free of charge, and at the level of detail necessary to produce official statistics. Where possible, metadata to enable data quality assessment should also be provided.

The statistical law or MoU also contains the provision that providers of administrative data shall maintain the continuity of data provision, where possible. If they plan to develop a new data collection or carry out a major revision in their data collection or processing in a way that may affect data provided for official statistics, they shall consult the NSO in advance of the decision.

There is a legislation that obliges businesses to register and support the creation of a unique identifier among all the relevant institutions.

There is a provision in the legislation that regulates access to individual and business data within the National Statistical System through the application of appropriate confidentiality.

Advanced stage

Within the fundamental principle of data confidentiality, there is a provision that allows the dissemination of aggregate data or confidentialized unit record data from the SBR.

The statistical law has the provision that allows micro-data sharing from the SBR with statistical authorities of other countries or international/regional organizations.

The NSO is consulted before the providers of administrative data carry out major changes in their data collection or processing that may affect the data provided.

In line with GLOS Article 15.1, the Statistical Law or MoU permits the use of a survey as an instrument to collect data with respondents only when information is not already available in the national statistical system or cannot be obtained from existing data, for example those maintained by national and local authorities outside the National Statistical System. This provision effectively makes the use of administrative data mandatory.

C. Dimension 2: Data sources for the SBR

- 3.10 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. The data sources depend greatly on the country's situation and availability of relevant information from other institutions. Therefore, the choice of the best data source depends very much on the specific context of a country. However, in line with the UN Guidelines on Statistical Business Registers (para 6.4 United Nations 2020), the recommendation is for SBRs to be created and maintained primarily using administrative sources. They enable good coverage and stability. This approach is in line with Principle 5 of the United Nations Fundamental Principles of Official Statistics, which states "Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents".
- 3.11 There are clear benefits to the SBR when high quality administrative data are available and can be exploited for use in the SBR. Administrative data provide comprehensive coverage of registered businesses, they are constantly updated, and they are free to an NSO. In a country with good access to administrative data, collectively these data determine the coverage of the SBR and hence of the survey frames it provides. In countries where access to administrative data is limited, statistical data may have to be used to provide adequate coverage. The quality of administrative data is important consideration. Close coordination between an NSO and the administrative source is imperative to ensure the

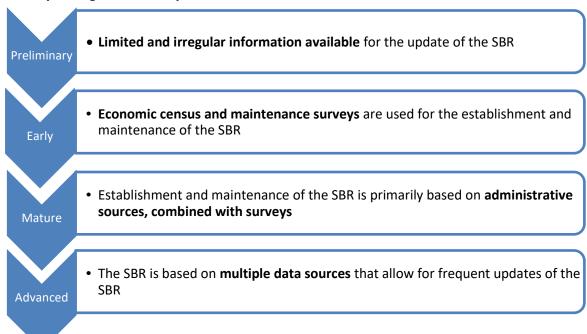
administrative data are well understood and that there are no surprise changes in the data flow or content.

- 3.12 In general, the use of an economic censuses as a main source for the maintenance an SBR is not recommended for the following reasons:
 - a) Economic censuses are very expensive even if the scope is restricted to businesses with identifiable premises. They are generally conducted at best every five or ten years. Thus, NSOs consider a suite of annual surveys based on a register-based list to be much more cost-effective.
 - b) SBRs need to be updated between economic censuses. The small businesses located during area enumeration are volatile in the sense that they may go rapidly in and out of production, or ownership, or change their activities or addresses. Thus, to be really effective as a source of survey frames in the years between censuses, the SBR has to be constantly updated, which itself can be costly.
 - c) In addition to its high cost, the enumeration approach has the disadvantage of not being able to identify and document non-recognizable places of business, or enterprises without a fixed location, for example, web-based businesses, or individual entrepreneurs such as electricians and plumbers, providing services at locations other than their homes.¹⁵
- 3.13 It should be recognized that there are countries where the NSO does not have access to administrative data, comprehensive administrative data do not exist, or the quality of the administrative data is not sufficient for the update of the SBRs. In these countries the traditional economic censuses or other kinds of business surveys, as well as household surveys, are therefore an indispensable source for the SBRs. Economic censuses, mostly based on the establishment unit, deliver relevant and core information for the SBR on each single establishment, such as address, economic activity, legal unit, number of employees. Even in countries that are able to use administrative data for their SBRs, data from censuses may be used as a complementary source for checking or updating the SBR.
- 3.14 The preferred data sources depends on the specific situation in any given country, including the availability of administrative data and the scope and complexity of the national statistical system itself.
- 3.15 However, efforts should be undertaken by countries in exploring potential administrative sources for use in the SBR, understanding their coverage and concepts, and assessing their quality. The improvement of the quality and timeliness of the SBR go hand-in-hand with the improvement of administrative data. In addition, the NSO should aim to actively partner with administrative data providers and influence datasets for use in the SBR.
- 3.16 The availability and use of data sources will be a strong determinant of the maintenance process and effort.

¹⁵ United Nations, 2021 the handbook on management and organization of statistical systems https://unstats.un.org/capacity-development/handbook/index.cshtml#:~:text=Handbook%20on%20Management%20and%20Organization%20of%20National%20Statistical%20Systems,-

The%20Handbook%20on&text=The%20primary%20objective%20of%20the,that%20is%20fit%20for%20purpose.

Figure 4
Summary of stages of maturity for Dimension 2: Data sources for the SBR



Preliminary stage

The information for the update of the SBR is very limited and irregular. If an economic census is available, it may not be conducted on a regular basis. There is no up-to-date comprehensive source on establishments/enterprise/business units for statistical purposes. Scoping exercises may be underway.

Early stage

The establishment and maintenance of the SBR is based mainly on the economic census together with maintenance surveys. There may be periodic economic censuses to update the SBR, but in general the maintenance procedure between census years is limited, causing a significant time lag in the update of SBR data.

No profiling or substantial data confrontation with other sources is undertaken. An assessment of the availability and quality of administrative data for SBRs is being undertaken in the country.

Mature stage

The establishment and maintenance of the SBR is primarily based on administrative sources, such as business registers, taxation data, etc. Statistical surveys (including SBR feedback surveys) are used in combination with admin data.

Economic censuses may or may not be used, but if used, regular updates of the SBR during the intra census period are carried out with additional sources.

Advanced stage

The SBR is based on multiple data sources (e.g., statistical surveys, multiple administrative sources, big data, private data sources) that allows frequent updates of the SBR in line with the frequency of source data updates.

Web scraping and data mining techniques may be used to improve or to verify/update the content of the SBR.

Where there is enabling regional legislation, data from other countries can be used to update and validate the SBR.

D. Dimension 3: Maintenance and update of the SBR

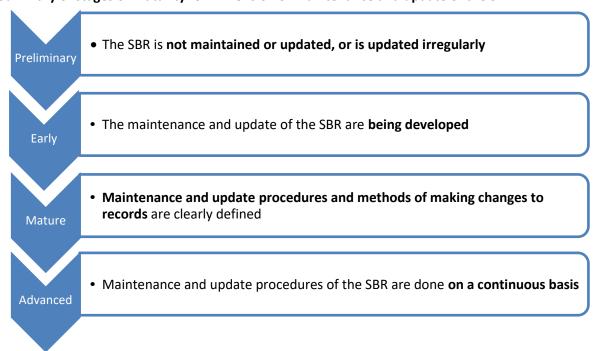
- 3.17 This dimension of the maturity model refers to the maintenance and update procedures for the SBR and, in particular, to the operational requirements of maintaining effective and reliable systems.
- 3.18 In general, the key objective of maintenance is to update the coverage and content of the SBR, taking into account continuity and stability rules, according to a well-defined calendar, and in as timely a fashion as the information sources allow. This is so that the SBR is able to provide economic surveys with sampling frames that are accurate and as up to date as possible.¹⁶
- 3.19 The operational requirements of a maintenance program include the modification of records and preservation of stored records. Modernizing and maintaining the operational requirements is a prerequisite of contemporary functions of NSOs, essential to improving services to the public¹⁷.
- 3.20 Part of the maintenance of the SBR includes the digitalization and automatization of procedures. However, these aspects are elaborated under the IT dimension of the maturity model. In this dimension, the focus is on the following aspects:
 - The sources of information described in Dimension 2 (e.g., administrative sources, economic censuses, feedback from surveys and SBR improvement surveys) and rules for dealing with conflicting information
 - continuity and stability rules determining whether a statistical unit is deemed to have continued
 despite significant changes (for example, of ownership, size, economic activity and/or location),
 or to have died and been replaced by another unit, as are stability rules (sometimes called
 resistance rules) that restrict the speed with which changes of characteristics are applied in order
 to inhibit unwanted oscillations in values
 - preservation of stored records (e.g., procedures for storing and preserving records);
 - validation procedures;
 - the frequency of updates
- 3.21 The methods used and the level of effort required for the maintenance and update are highly dependent on the main data source(s).

¹⁶ UN Guidelines on Statistical Business Registers (2020). para. 7.1.

¹⁷ Handbook on CRVS (para. 228). https://unstats.un.org/unsd/demographic-social/Standards-and-Methods/files/Handbooks/crvs/crvs-mgt-E.pdf.

3.22 A well-established and functioning SBR relies on a well maintained and documented set of procedures that deal with the various aspects mentioned above and a frequent update procedure. The stages of development therefore range from a system where no such procedures are in place to a system where they are all in place and documented and the SBR is updated on a continuous basis, and all rules and procedures are well documented.

Figure 5
Summary of stages of maturity for Dimension 3: Maintenance and update of the SBR



Preliminary stage

The SBR is not maintained or updated, or is updated irregularly with no agreed procedures.

Early stage

The maintenance and update procedures for the SBR are being developed. Methods of making changes to the records, the ways of maintaining the integrity of the records, and keeping a log of all such changes are being developed. Procedures for storing and preserving records is not in place and internal review mechanisms for system functions may or may not be elaborated.

Validation procedures are not regularly done and when in place are ad-hoc and highly manual. The SBR is not updated on a regular basis, or at most annually.

Mature stage

There are clearly defined maintenance and update procedures that covers the continuity rules for the units in the SBR, rules for dealing with inconsistencies across data sources, the timing of the updates, the rules for the maintenance of the historical register, as well as rules for the generation of frozen frames.

Methods of making changes to the records, the ways of maintaining the integrity of the records, and keeping a log of all such changes are well developed and documented. Similarly, procedures for storing and preserving records and internal review mechanisms for system functions are well established and functioning.

Validation procedures are done on a regular basis by confronting the multiple sources used to update the SBR (on an at least an annual basis); such as business registrations, taxation data dedicated SBR surveys, direct contact with businesses, and other government sources.

Maintenance procedures are in place to integrate and transform administrative data into statistical units through profiling. There is a profiling team which engages with the largest and most statistically significant organizations in the national economy.

The SBR is updated regularly, at a higher than annual frequency.

Advanced stage

The maintenance and update procedures of the SBR (live register) are done on a continuous basis often in line with the updates from the administrative data sources.

The availability of unique identifiers in the government institutions facilitate the procedures for the maintenance and update of the SBR.

The SBR maintenance is based around the supply of administrative data and supports statistical outputs, including frozen frames for SBR based surveys and the publication of data from the SBR. The schedule indicates to users the likely variations in SBR coverage and content over time.¹⁸

Profiling is regularly conducted and covers a substantial proportion of a countries economic activity in terms of industry value add. Profiling ensures that where there are significant contributors to economic activity in a particular industry, reporting units are set up to report on that activity, regardless of the legal entity structure. Profiling uses timely administrative data to identify units for investigation; for both new units or to identify changes to existing units. Detailed unit record level reports are created which explain all key changes and are made available to all internal stakeholders.

¹⁸ UN Guidelines on Statistical Business Registers (para. 7.19). https://unstats.un.org/unsd/business-stat/SBR/Documents/UN Guidelines on SBR.pdf

E. Dimension 4: Coverage of an SBR

- 3.23 This dimension of the maturity model refers to the coverage of SBRs. There are three key aspects of SBR coverage¹⁹:
 - 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.
- 3.24 In principle, an SBR should record all institutional units in the national economy that are engaged in productive economic activities; i.e., activities contributing to the gross domestic product (GDP). Thus, NSOs should aim to cover as much national production as possible in their SBRs by including all types of institutional units engaged in production. However, where complete coverage is not easily attainable in practice, and a more realistic aim for coverage can be taken.
- 3.25 One particular issue is coverage of the informal economy, which is highly diversified and for which no administrative data exist. It is usually not recommended to focus on coverage of the informal economy in early stages of SBR development. However, in certain countries particularly developing and emerging economies the informal economy is important, and the collection of economic data about it is a priority. In such cases, it is vital to consider to what extent, if at all, the SBR will cover the informal sector and how the economic production of those enterprises not covered by the SBR can be measured or estimated.
- 3.26 In general, groups of units should not be omitted without an assessment of their economic importance. SBRs should aim to record, at a minimum, all active economic units in the formal economy that are engaged in economic activities contributing to the gross domestic product (GDP).
- 3.27 Figure 3.5 of the UN Guidelines for Statistical Business Registers provides the set of recommendations on the coverage of institutional sectors in the SBR. In general, when first establishing an SBR, the corporations sector is the focus, as it is the most easily covered. The inclusion of the government sector, non-profit institutions and the household's sectors provide more complete coverage.
- 3.28 The coverage of the characteristics of the units maintained in the SBR also needs to be considered. Figure 5.1 of the *UN Guidelines for Statistical Business Registers* provides a list of variables that should be included in the SBR using the following groupings: Identification and contact; Demographic; Economic/stratification; Links and external references.
- 3.29 The coverage of the SBR highly depends on the coverage of the data sources used to update the SBR, and also on the broader legal framework governing the SBR (for example, if it is compulsory for businesses to register and whether the NSO can access administrative data or not). This dimension, therefore, is very interlinked with other dimensions of the maturity model.

¹⁹ UN Guidelines for Statistical Busines Registers (2020). para. 3.2. https://unstats.un.org/unsd/business-stat/SBR/Documents/UN Guidelines on SBR.pdf

Figure 6
Summary of stages of maturity for Dimension 4: Coverage of an SBR

Coverage of the SBR is very limited

 Fairly good coverage of the SBR, with efforts being made to improve the coverage

 The SBR covers all the institutional sectors of the economy, including multiple types of units and minimum set of variables

Advanced

Additional efforts are being made to expand the coverage of SBR

Preliminary stage

The coverage of the SBR is very limited in terms of institutional sectors and the set of characteristics of the units in the SBR. The coverage of the units in the SBR in terms of their contribution to total national economic production is also very limited.

It is difficult to make an assessment of the coverage of the SBR since the information available is limited.

Early stage

There is a fairly good coverage of some institutional sectors of the economy and the formal sector. Efforts are being made to assess sources and methods to improve the sectoral coverage.

In terms of the characteristics of the units, there is a systematic effort to include the minimum characteristics, such as identification and contact information, demography, and economic/stratification variables.

The type of units in the SBR is limited and only covers the types of units of the source data. There is not systematic effort to extend and interlink types of statistical units in the SBR.

The coverage of the units in the SBR represent a good proportion of the total national economic production.

Mature stage

All the institutional sectors of the economy are included in the SBR.

The SBR include multiple types of units (e.g., legal units, establishment, local units, kind of activity units, enterprises, or enterprise groups) and the links between them.

The characteristics of the units in the SBR contain variables from the following groups: identification and contact information; demography; economic/stratification variables; links and external references.

The coverage of the units in the SBR is a significant proportion of the total national economic production.

Advanced stage

This stage includes additional efforts to expand the coverage of SBR. These efforts may include:

- the inclusion of the informal sector in the SBR if it is relevant in the country;
- The inclusion of geospatial information in the SBR to allow for spatial analyses;
- The link with global identifiers such as the LEI from GLEIF. When regional identifiers are available, they are included in the SBR as well;
- Additional variables are included in the SBR (or can be linked to the SBR) that can support thematic analysis such as digitalization, etc.)

F. Dimension 5: Use of SBR

- 3.30 This dimension of the maturity model refers to the use of the SBR. As the SBR develops, it lends itself to a wider range of uses by users internal to the NSO as well as by external users. This dimension focusses, therefore, on how well the SBR meets the needs of its users and the significance of the SBR within the NSO. In a sense, this dimension includes elements of quality of the SBR, as the quality of the SBR influences how broadly user needs can be met. The use of the SBR in statistical processes will probably depend on the stage of maturity of the other SBR dimensions. Confidentiality is also a key consideration.
- 3.31 The stages of development of this dimension are very much based on the roles of the SBR described in the UN Guidelines on SBR. As the SBR matures, its roles expand for example from being solely in support of different surveys to provide the populations of statistical units with links to administrative units at fixed points in time for specific reference periods, enabling the production of consistent and coordinated business statistics. As the SBR matures, it is used as the basis for the compilation of business demography and other statistics based directly on the SBR. Finally, as the SBR matures, it is used as the basis for micro-data linked, for data exchange and contributes to the development of international regional group registers.

Figure 7
Summary of stages of maturity for Dimension 5: Use of SBR

Use of SBR is almost solely to support siloed business surveys

 The SBR can only be used to supplement a stove pipe survey frame process

 The SBR serves as a backbone in the production of business demography statistics and economic statistics

 The SBR is used for micro-data linking, data exchange and contributes to the development of global/regional registers

Preliminary stage

In this stage, the use of the SBR is almost solely to support siloed business surveys. There is no attempt to provide a common frame for the production of consistent and coordinated business statistics.

Early stage

The SBR can only be used to supplement a stove pipe survey frame process. This may be because administrative sources are unable to be linked using a unique identifier, or because the input sources are not mature leading to coverage issues or double counting of units in the SBR.

The users of the SBR have limited involvement in the SBR development and maintenance.

Mature stage

The SBR is used to create a snapshot/frozen frame from which all survey frames are drawn using the standardized economic unit model and unique identifiers.

The SBR is also used to create and publish business demography statistics available to all users.

The SBR serves as a backbone in the production of economic statistics, effectively taking multiple roles in the preparation and coordination of surveys, as a source of information for statistical analysis of the business population and its demography, to link administrative data, and for the identification and construction of statistical units.

Advanced stage

This stage is characterized by expanded uses of SBR, such as:

- micro-data linking
- data exchange and
- contributing to the development of international or regional group registers.

In the advanced stage, anonymized unit record data may also be released to researchers in line with legislation and the confidentiality principle of official statistics.

G. Dimension 6: IT Environment

- 3.32 This dimension of the maturity model refers to the IT infrastructure that support data storage, maintenance, update and dissemination of SBRs. IT infrastructure refers to a combined set of hardware, software, networks and related facilities that are used to develop, test, deliver, monitor, control or support IT services. People, processes and documentation are not considered part of IT Infrastructure.²⁰
- 3.33 The IT infrastructure is a fundamental element for efficient SBRs. Given the size of SBRs (in both small and large economies) and the necessary frequency of updates, it is not possible to efficiently maintain an SBR without proper IT infrastructure.
- 3.34 The stages of maturity of this dimension go from a non-existent IT infrastructure in the preliminary stage, where information is generally stored in excel sheets with no automated procedures to update the records to a well-developed and supported IT infrastructure with automated procedures such as the update of records, automatic data transfer from administrative data, and validation of the information, etc. The IT infrastructure for the SBR should be part of the NSO integrated production system.

Box 2 Integrated production system

An **integrated production system** is an IT environment that can support the whole statistical data production cycle as defined by the GSBPM and meet the requirements of a large part of the various statistical surveys maintained by an NSO. An integrated system enables an NSO to transition from a fragmented stove-pipe oriented production with specific systems for each domain, to the modern generic and standardised statistical production environment. A fully integrated system uses applications and processes that use standards and metadata to talk to each other in order to make the whole production cycle less burdensome, easier to manage and less expensive to operate.

Source: Section 5.5.5 of the UN Handbook on Management and Organization of National Statistical Systems Ver.2.2 (United Nations, 2021)

²⁰ Page 448 of the https://unstats.un.org/wiki/display/HSO/Chapter+11+-+Common+Statistical+Infrastructure.

Figure 8
Summary of stages of maturity for Dimension 6: IT environment

Preliminary

There is no (integrated) IT infrastructure for SBR

The IT infrastructure consists of a simple database structure, containing the essential information from the main data source

The IT infrastructure is well developed and scalable, and supports many tasks and user requirements related to SBRs

The IT infrastructure is part of the NSO integrated production system and extensions for additional features are continuously explored and implemented

Preliminary stage

There is no (integrated) IT infrastructure for the SBR. Records are generally kept manually (e.g., in Excel spreadsheets). There exists only a basic maintenance strategy.

Early stage

The IT infrastructure for SBR consists of a simple database structure, containing the essential information from the main data sources. There may be separate applications built to perform different tasks (e.g., updating records, validating data, and extracting samples frames, etc.), but they are not integrated. No rules exist on the organization of the IT infrastructure or software.

Mature stage

The IT infrastructure for the SBR is managed as a project, implemented in phases, is well developed and scalable, and supports many tasks and user requirements related to SBRs, such as the updating of records, the importing of data from administrative sources, the validation of records, the maintenance of historical frozen frames, the creation of the common/frozen frame, and the maintenance of unique identifiers and other functions.

The IT infrastructure is supported by continuous maintenance procedures and dedicated staff.

Advanced stage

The IT infrastructure for the SBR is part of the NSO integrated production system.

The IT infrastructure is extended to include additional features and is continuously improved. These New approaches may include, for example: new data science technologies such as big data, web scraping, datamining, graph databases and cloud environments, or dedicated portals for businesses to enter and edit their information.

H. Dimension 7: Interoperability

- 3.35 This dimension of the maturity model refers to interoperability, namely the ability of an SBR to communicate and exchange standardized data with other registers, be they domestic, regional, or global. Although this dimension could be seen as part of the IT infrastructure, it is separately identified because of its importance.
- 3.36 In general, *interoperability* is the ability to join-up and merge data without losing meaning (JUDS 2016²¹). In practice, data is said to be interoperable when it can be easily re-used and processed in different applications, allowing different information systems to work together. Interoperability is a key enabler for the development sector to become more data-driven.²²
- 3.37 Interoperability for SBRs has a narrower focus, covering how the IT system for SBR is linked to other administrative or statistical registers or datasets. The stages of development in this dimension range from a system that has no considerations for its interoperability, to an SBR system that is fully interoperable with other administrative or statistical registers and serves as spine to link datasets with clear governance.

²¹ Joined-Up Data Standards project. (2016). The frontiers of data interoperability for sustainable development, [online]. Available at: http://devinit.org/wp-content/uploads/2018/02/Thefrontiers-of-data-interoperability-for-sustainable-development.pdf [Accessed 13 September 2018].

²² Gonzales, Luis and Tom Orrell, 2020. *Data interoperability: a practitioner's guide to joining up data in the development sector* https://unstats.un.org/wiki/download/attachments/36143964/Guide%20to%20interoperability.pdf?version=1&modificationDa te=1540053145360&api=v2.

Figure 9
Summary of stages of maturity for Dimension 7: Interoperability

There are no considerations for the interoperability of the SBR

 There is limited interoperability of the SBR with other systems

 A common Unique ID framework is used consistently to identify people and enterprises across multiple registers

 The SBR can be linked with other statistical registers and allow for micro-data linking and data exchange with other SBRs

Preliminary stage

In the preliminary stage there are no considerations for the interoperability of the SBR with other registers.

Early stage

In this stage there is a limited interoperability of the SBR with other systems which are mainly confined to administrative sources

Mature stage

A common Unique ID framework is used consistently to identify people (natural persons) as well as enterprises consistently across domestic administrative and statistical registers. Fully compliant with international standards and classifications, such as ISIC. Characteristics such as industry, size class, and revenue, are comparable internationally.

Advanced stage

Micro-data linking, such as linking business demography and trade by enterprise characteristics data. Regional cross-country analysis is possible due to the harmonization of national SBRs that can exchange statistical information at the enterprise level. This can facilitate the sharing of a wide range of variables covering structural business statistics, international trade in goods and business demography.

The SBR can be linked with a range of other statistical registers, including population registers, housing registers and address registers.

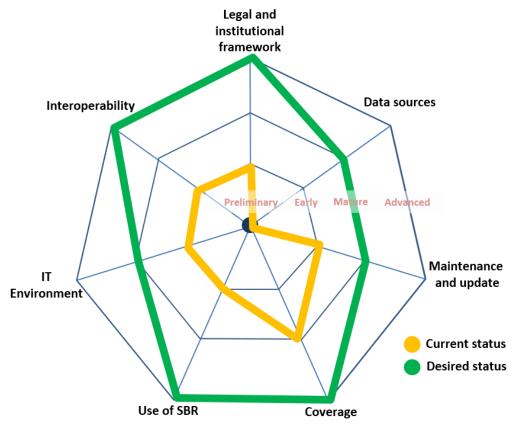
Chapter 4: Maturity model toolkit

- 4.1 The Manual for the Maturity Model for SBRs is accompanied by a suite of resources, or a "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
- 4.2 The framework for the maturity model is described in Chapter 3. It contains the dimensions and progressive stages of development of SBRs, and it provides the basis for the self-assessment questionnaire, the organization of existing guidance and training material and the development of a global assessment on the implementation of SBR in countries.
- 4.3 The framework for the maturity model for SBRs has to be periodically reviewed and adjusted to reflect changes in technology, data sources, practices and also user needs. In this way it will remain relevant.

A. Interactive Self-assessment questionnaire

- 4.4 The maturity model can serve as a benchmark against which countries can assess the current state of maturity of their SBR. The UNCEBTS has proposed an online questionnaire to help NSOs self-assess their SBR's stage in each dimension, consisting of simple multiple-choice questions and resulting in a score for each dimension. The results of the self-assessment are private and can be conducted as many times as needed. It is important to note that the maturity model is not a tool to assign a single score to define the status of implementation of the SBR in a country. It is rather a multidimensional model that helps to identify elements of the SBR that could be improved.
- 4.5 After the assignment of a score for each dimension is completed, the implementation of the maturity model in each dimension can be visualized in a radar chart as shown below. The radar chart not only helps to visualize the current implementation of the SBR in a country but can also help monitor the evolution over time.

Figure 10 Visualization of self-assessment results



4.6 The SBR maturity model self-assessment can therefore help countries to identify possible areas for improvement. The areas chosen to improve will be determined by a cost benefit analysis that takes into account the country's resources, constrains, legislation, knowledge, and infrastructure as well as other factors.

B. Link to existing manuals handbooks and training material

4.7 It is envisaged that a website of the maturity model framework and its dimensions will be developed. The website will link the dimensions and stages of the maturity model to existing resources on how to improve an SBR in each dimension. The website will also provide a space to share country practices on specific topics related to SBRs.

C. Global assessment on the implementation of the SBR in countries

4.8 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.

Glossary

Activity

An activity is a process; i.e., the combination of actions that result in a certain set of products. Activities are defined as the use of inputs (e.g., capital, labour, energy and materials) to produce outputs. The outputs that result from undertaking activities can be transferred or sold to other units (in market or non-market transactions), placed in inventory or used by the producing units for own final use.

In practice the majority of units carry on activities of a mixed character. One can distinguish between three types of economic activity:

Principal activity: The principal activity is the activity which contributes most to the total value added of the unit under consideration.

Secondary activity: A secondary activity is any other activity of the unit that produces goods or services.

Ancillary activity: Any ancillary activities are those that exist solely to support the main productive activities of a unit by providing non-durable goods or services for the use of that entity.

Source: United Nations, Statistics Division, "International Standard Industrial Classification of all Economic Activities (ISIC)", Statistical Papers Series M No. 4, Rev. 4, New York, 2008.

Link: https://unstats.un.org/unsd/classifications/Econ/isic

Administrative business register

An administrative business register is a regularly updated structured list of specific business units in a territorial area, which is maintained by administrative authorities for administrative, legal or taxation purposes (e.g., recording and maintaining certain details of businesses or taxation).

Related terms: Administrative register, statistical business register

Administrative data

Data originally collected for non-statistical purpose. Control of the methods by which the administrative data are collected and processed rests with the administrative agency. In most cases the administrative authority will be a government unit.

Source: United Nations Economic Commission for Europe, "Using Administrative and Secondary Sources for Official Statistics: A Handbook of Principles and Practices", United Nations, New York and Geneva, 2011.

Link: http://www.unece.org/fileadmin/DAM/stats/publications/Using Administrative Sources Final for web.pdf

Related terms: Administrative register, administrative source

Administrative source

Administrative source are files of data collected by government bodies for the purposes of administering taxes and benefits or monitoring populations. More generally, administrative sources contain information that is not primarily collected for statistical purposes.

Source: United Nations Economic Commission for Europe, "Using Administrative and Secondary Sources for Official Statistics: A Handbook of Principles and Practices", United Nations, New York and Geneva, 2011.

Link: http://www.unece.org/fileadmin/DAM/stats/publications/Using Administrative Sources Final for web.pdf

Related terms: Administrative register, administrative data

Administrative unit

An administrative unit is designed for the purposes of conforming with an administrative regulation, for example for registration purposes or for accounting purposes of VAT and other taxes.

Related terms: Statistical unit

Business

Term is used as a type of enterprise, namely a "commercial enterprise" or legal unit with commercial economic activity

Related terms: Enterprise

Business demography

Business demography covers events, like births and other creations of units, deaths and other cessations of units, and their ratio to the business population. It covers follow-up of units in time dimension, thus gaining information on their survival or discontinuity. It also covers development in time dimension according to certain characteristics like size, thus gaining information on the growth of units, or a cohort of units, by type of activity. Demographic information can in principle be produced for any statistical unit; however, a clear political interest in Europe is on enterprise demography. In other regions business demography data are often calculated based on establishments. The demography of enterprises can be assessed by studying enterprise births and enterprise deaths and by examining the change in the number of enterprises by type of activity; i.e., by examining the flows and stocks to get a complete picture of the enterprise dynamism.

Source: European Commission (Eurostat), Organisation for Economic Cooperation and Development (OECD), "Eurostat – OECD Manual on Business Demography Statistics", Methodologies and Working papers, Publication Office of the European Communities, Luxembourg, 2007.

Link: http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-RA-07-010-EN.pdf

Related terms: Continuity, survival

Characteristic

A characteristic is one of a set of information that is stored in a business register to describe a statistical unit. Characteristics are provided for identification of a unit like name, address, and identification numbers, for economic description of a unit, like activity code, turnover or employment of a unit or for the structure of a unit, like the relationship to other statistical units.

Source: UN Guidelines on Statistical Business Registers (2020). UNECE Guidelines on Statistical Business Registers (2015).

Link: https://unstats.un.org/unsd/business-stat/SBR/Documents/UN_Guidelines_on_SBR.pdf and

https://unece.org/DAM/stats/publications/2015/ECE_CES_39_WEB.pdf

Related terms: Variable

Common frame

See: Frozen frame

Delineation of statistical units

Delineation of statistical units means creation of statistical units to be used in various statistical processes. The delineation is done by grouping or dividing administrative or other relevant units according to harmonized rules, including criteria based on classifications by economic activity, location or other economic characteristics.

Source: UNECE Guidelines on Statistical Business Registers (2015).

Link: https://unece.org/DAM/stats/publications/2015/ECE_CES_39_WEB.pdf

Related terms: Statistical unit, profiling

Economic activity

Any activity consisting in offering goods and services on a given market is an economic activity. In addition, nonmarket services contributing to gross domestic product as well as direct and indirect holdings of active legal units are economic activities for the purposes of statistical business registers.

Source:

European business statistics methodological manual for statistical business registers 2021 edition.

Link: https://ec.europa.eu/eurostat/documents/3859598/12433023/KS-GQ-20-006-EN-N.pdf/0c31c77a-5d20-9954-9223-2b856fdb93c9?t=1613481618625

Related terms: Active unit, activity

Economic census

A survey conducted on the full set of observation objects belonging to a given business population.

Source: Economic Commission for Europe of the United Nations (UNECE), "Terminology on Statistical Metadata", Conference of European Statisticians Statistical Standards and Studies, No. 53, Geneva, 2000.

Link: http://www.unece.org/stats/publications/53metadaterminology.pdf

Related terms: Economic survey

Economic survey

An investigation about the characteristics of a given business population by means of collecting data from a sample of that population and estimating their characteristics through the systematic use of statistical methodology

Source: Economic Commission for Europe of the United Nations (UNECE), "Terminology on Statistical Metadata", Conference of European Statisticians Statistical Standards and Studies, No. 53, Geneva, 2000.

Link: http://www.unece.org/stats/publications/53metadaterminology.pdf

Related terms: Economic census

Economic unit

An economic unit is a legal unit, or part of a legal unit, with economic production as defined in the current version of the SNA.

Source: System of National Accounts (2008).

Link: https://unstats.un.org/unsd/nationalaccount/docs/sna2008.pdf

Related terms: Legal unit, economic production, statistical unit

Economic production

Economic production may be defined as an activity carried out under the control and responsibility of an institutional unit that uses inputs of labour, capital, and goods and services to produce outputs of goods or services.

Source: System of National Accounts, 2008.

Link: http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf

Related terms: Activity, economic unit

Enterprise

An enterprise is a legal unit (or the smallest set of legal units) producing economic goods and services with autonomy in respect of financial and investment decision-making, as well as authority and responsibility for allocating resources for the production of goods and services. It may be engaged in one or more productive activities. An enterprise may be a corporation (or quasi-corporation), a non-profit institution or an unincorporated enterprise. Corporate enterprises and non-profit institutions are complete institutional units. On the other hand, the term "unincorporated enterprise" refers to a household or government unit in its capacity as a producer of goods and services. The enterprise is the level of statistical unit at which information relating to its transactions, including financial and balance-sheet accounts, are maintained, and from which international transactions, an international investment position (when applicable), consolidated financial position and net worth can be derived.

Source: United Nations, Statistics Division, "International Standard Industrial Classification of all Economic Activities (ISIC)", Statistical Papers Series M No. 4, Rev. 4, New York, 2008.

Link: https://unstats.un.org/unsd/classifications/Econ/isic

Related terms: Multinational enterprise, standard statistical unit

Enterprise group

An enterprise group is an association of enterprises bound together by legal and/or financial links. A group of enterprises can have more than one decision-making centre, especially for policy on production, sales and profit. It may centralise certain aspects of financial management and taxation. It constitutes an economic unit which is empowered to make choices, particularly concerning the units which it comprises. An enterprise group is a set of enterprises controlled by the group head.

Source: European Commission, Eurostat, "Business Registers Recommendations Manual", Methodologies and Working papers, Publication Office of the European Union, Luxembourg, 2010.

Link: http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-32-10-216-EN-C-EN.pdf

Related terms: All-resident enterprise group, multinational enterprise group, truncated enterprise group

Establishment

The establishment is defined as an enterprise or part of an enterprise that is situated in a single location and in which only a single (non-ancillary) productive activity is carried out or in which the principal productive activity accounts for most of the value added.

Source: United Nations, Statistics Division, "International Standard Industrial Classification of all Economic Activities (ISIC)", Statistical Papers Series M No. 4, Rev. 4, New York, 2008.

Link: https://unstats.un.org/unsd/classifications/Econ/isic

Related terms: Standard statistical unit

Establishment

An establishment is an enterprise, or part of an enterprise, that is situated in a single location and in which only a single productive activity is carried out or in which the principal productive activity accounts for most of the value added.

Source: System of National Accounts 2008.

Link: https://unstats.un.org/unsd/nationalaccount/docs/sna2008.pdf

EuroGroups Register (EGR)

The EuroGroups Register (EGR) builds a framework of registers, consisting of a central register kept at Eurostat and registers in each EU Member State and in EFTA countries. The central register contains information about multinational enterprise groups, which have statistically relevant financial and non-financial transnational operations in at least one of the European countries. Registers in the EU Member States and in EFTA countries contain information regarding multinational enterprise groups active in the respective countries and are fully consistent with the central register.

The aim of the EGR network is to hold a complete, accurate, consistent and up-to-date set of linked and coordinated statistical registers, which offer compilers a common frame of multinational enterprise groups, global as well as truncated national groups, operating in the economy of the EU and EFTA countries, together with their constituent legal units and enterprises and the ownership and control relationships between legal units.

Source: European Commission, Eurostat, "Business Registers Recommendations Manual", Methodologies and Working papers, Publication Office of the European Union, Luxembourg, 2010.

Link: http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-32-10-216-EN-C-EN.pdf, https://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/eurogroups-register

Related terms: European System of interoperable statistical Business Registers, multinational enterprise group

European System of interoperable statistical Business Registers (ESBRs)

The ESBRs project (2013-2020) is rationalising, strengthening and standardising national SBRs and EGR in the European Statistical System (ESS) with the ultimate aim of making them an efficient interoperable system. It is a continuation of previous EGR and profiling projects carried out in the ESS. A core goal is the improvement of the EGR statistical frames so that they can provide better quality information on multinational enterprise groups (MNEs) for globalisation statistics. It includes an updated and agreed methodology for EU profiling that enables all ESS countries to achieve the same view of MNEs (seeing the whole elephant); it is based on a collaborative approach with different countries contributing to profiling the same MNEs according to defined roles and responsibilities and supported by a secure platform for sharing confidential data. The ESBRs project includes also practical pilot exercises aimed at testing the proposed solutions with ESS countries.

Source: European Commission (Eurostat), "The European System of interoperable Business Registers (ESBRs)", Compact guides, Publication Office of the European Union, Luxembourg, 2013.

Link: http://ec.europa.eu/eurostat/documents/4031688/5931580/KS-03-13-411-EN.PDF, https://ec.europa.eu/eurostat/web/ess/esbr

Related terms: EuroGroups Register

Frame

The frame for a given survey is the subset of the frozen frame, comprising the set of units that match the specification of the survey target population. Thus, for example, a survey of employment will include units in all (or at least most) industries that are employers, i.e., will exclude units that are non-employers. A survey of manufacturing will include all units that have an ISIC code in the manufacturing group, whether they have employees or not. A survey of capital expenditure may include all units above a certain size. Thus, the survey frames are typically different from one another but may be extracted from the same common set of units; i.e., a frozen frame. A frame may be referred to as a survey frame also as a sampling frame or a survey sampling frame.

Source: UN Guidelines on Statistical Business Registers (2020).

Link: https://unstats.un.org/unsd/business-stat/SBR/Documents/UN Guidelines on SBR.pdf

Related terms: Frozen frame

Frozen frame

The frozen frame is a subset of the snapshot that comprises all statistical units that are active, or potentially active, or active within the previous reference year. It also includes administrative units that are linked to these statistical units. The aim is to include all units and all characteristics that are used by subsequent processes. In other words, it is a trimmed down version of the snapshot that is easier to manipulate because the possible large number of inactive units are not there. It may be further

restricted by containing only units for which there are values for the characteristics that are to be used for frame extraction and sample selection for at least one survey.

Source: UNECE Guidelines on Statistical Business Registers (2015). UN Guidelines on Statistical Business Registers (2020).

Link: https://unece.org/DAM/stats/publications/2015/ECE_CES_39_WEB.pdf

https://unstats.un.org/unsd/business-stat/SBR/Documents/UN_Guidelines_on_SBR.pdf

Related terms: Frame, live register

GSBPM

The Generic Statistical Business Process Model (GSBPM) models the phases of the statistical business process and provides generic terms to describe them. The GSBPM is used to harmonise statistical computing infrastructures, facilitate the sharing of software components and provide a framework for process quality assessment and improvement. The GSBPM is intended to apply to all activities undertaken by producers of official statistics, at both the national and international levels, that result in data outputs. It is designed to be independent of the data source, so it can be used for the description and quality assessment of processes based on surveys, censuses, administrative records, and other non-statistical or mixed sources.

Source: United Nations European Commission for Europe (UNECE), UNECE Statistics Wiki. As of 1st July 2019, the current version is GSBPM v5.1.

Link: https://statswiki.unece.org/display/GSBPM/Generic+Statistical+Business+Process+Model

Related terms: GSIM

Head office

Head offices are units exercising some aspects of managerial control over its subsidiaries. Their activities include the overseeing and managing of other units of the company or enterprise; undertaking the strategic or organizational planning and decision making role of the company or enterprise; exercising operational control and manage the day-to-day operations of their related units.

Source: System of National Accounts, 2008.

Link: http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf

Related terms: Holding company

Identifier

The purpose of an identifier is to identify a unit and to link it with other units in the register and with administrative and statistical sources. The identity number of a legal unit can be either specific to the statistical business register or an external one, common or shared with other institutions in the Member State, a so called unique identifier.

Source: European Commission, Eurostat, "Business Registers Recommendations Manual", Methodologies and Working papers, Publication Office of the European Union, Luxembourg, 2010.

Link: http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-32-10-216-EN-C-EN.pdf

Related terms: Characteristic

Informal sector

The informal sector is broadly characterised as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organisation, with little or no division between labour and capital as factors of production and on a small scale. Labour relations – where they exist – are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees. The informal sector thus defined excludes households producing exclusively for own final use.

Source: Measuring the Non-Observed Economy: A Handbook, OECD, IMF, ILO, Interstate Statistical Committee of the Commonwealth of Independent States, 2002.

Link: http://www.oecd.org/dataoecd/9/20/1963116.pdf

Institutional sector

In the 2008 SNA all resident institutional units are grouped together to form five institutional sectors, on the basis of their principal functions, behaviour and objectives:

- S.11. Non-financial corporations are institutional units which are independent legal entities and market producers that are principally engaged in the production of goods and non-financial services.
- S.12. Financial corporations are institutional units which are independent legal entities and market producers that are principally engaged in financial services including financial intermediation.
- S.13. General Government consists of institutional units that, in addition to fulfilling their political responsibilities and their role of economic regulation, produce services (and possibly goods) for individual or collective consumption mainly on a non-market basis and redistribute income and wealth.
- S.14. Households are institutional units consisting of individuals or groups of individuals as consumers and as entrepreneurs producing market goods and non-financial and financial services provided that the production of goods and services is not by separate entities treated as quasi-corporations. It also includes individuals or groups of individuals as producers of goods and non-financial services for exclusively own final use.
- S.15. Non-profit institutions serving households (NPISHs) are separate legal entities which are non-market producers that are principally engaged in the production of services for households or the community at large and whose main resources are voluntary contributions.

Source: System of National Accounts 2008.

Link: http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf

Related terms: Institutional unit

Institutional unit

An institutional unit is an economic unit that is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities. Thus an institutional unit is entitled to own goods or assets in its own right; to exchange ownership of goods or assets in transactions with other institutional units, is able to take economic decisions and engage in economic activities for which it is itself held to be directly responsible and accountable at law, is able to incur liabilities on its own behalf, to take on other obligations or future commitments and to enter into contracts, has a complete set of accounts or it would be possible to compile a complete set of accounts if they were required.

Source: System of National Accounts 2008.

Link: http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf

Related terms: Institutional sector, standard statistical unit

Kind-of-activity unit (KAU)

A kind-of-activity unit is an enterprise or part of an enterprise that engages in only one kind of productive activity or in which the principal productive activity accounts for most of the value added. Compared with the establishment, the KAU is not restricted on the geographic area in which the activity is carried out but it is characterized by homogeneity of activity.

Source: United Nations, Statistics Division, "International Standard Industrial Classification of all Economic Activities (ISIC)", Statistical Papers Series M No. 4, Rev. 4, New York, 2008.

Link: https://unstats.un.org/unsd/classifications/Econ/isic

Related terms: Establishment

Legal unit

Legal units include:

- Legal persons whose existence is recognised by law independently of the individuals or institutions which may own them or are members of them.
- Natural persons who are engaged in an economic activity in their own right.

The legal unit is usually recorded in one or more administrative sources. The sources used for statistical business registers do not necessarily provide identical views of legal units. These units can vary both between different sources within a country and between countries. Thus, the legal unit is not suitable as a statistical unit, particularly for international comparisons. The characteristics of a legal unit are: it owns goods or assets, it incurs liabilities and it enters into contracts. The legal unit always forms, either by itself or sometimes in combination with other legal units, the basis for the statistical unit known as the "enterprise".

Source: European Commission, Eurostat, "Business Registers Recommendations Manual", Methodologies and Working papers, Publication Office of the European Union, Luxembourg, 2010.

Link: http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-32-10-216-EN-C-EN.pdf

Related terms: Legal form, legal person, natural person

Local kind-of-activity unit (local KAU)

See: Establishment

Local unit

A local unit is an enterprise or part of an enterprise (for example, a workshop, factory, warehouse, office, mine or depot) that is engaged in productive activity at or from one location. The definition has only one dimension in that it does not refer to the kind of activity that is carried out.

Source: United Nations, Statistics Division, "International Standard Industrial Classification of all Economic Activities (ISIC)", Statistical Papers Series M No. 4, Rev. 4, New York, 2008.

Link: https://unstats.un.org/unsd/classifications/Econ/isic

Related terms: Enterprise, statistical unit

Multinational enterprise group

A multinational enterprise group is an enterprise group that has at least two enterprises or legal units located in different countries.

Source: European business statistics methodological manual for statistical business registers 2021 edition. **Link:** https://ec.europa.eu/eurostat/documents/3859598/12433023/KS-GQ-20-006-EN-N.pdf/0c31c77a-5d20-9954-9223-2b856fdb93c9?t=1613481618625

Related terms: All-resident enterprise group, enterprise group, truncated enterprise group

Natural person

The term natural person is used by the law and by many administrative authorities to denote a human being endowed with all the rights constituting legal personality.

Source: European Commission, Eurostat, "Business Registers Recommendations Manual", Methodologies and Working papers, Publication Office of the European Union, Luxembourg, 2010.

Link: http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-32-10-216-EN-C-EN.pdf

Related terms: Legal person

Production unit

A production unit carries out an economic activity under the control and responsibility of an institutional unit using inputs of labour, capital and goods and services to produce outputs of goods and services. Enterprises can be very heterogeneous if they have several secondary activities that are quite different from their principal activities. In order to obtain groups of producers whose activities are more homogeneous, enterprises are partitioned into smaller and more homogeneous units of production like local units, kind-of-activity units, and establishments.

Source: System of National Accounts 2008.

Link: http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf

Related terms: Economic unit, institutional units, market producer, product, statistical unit

Profiling

Profiling is a method to analyze the legal, operational and accounting structure of an enterprise group at national and world levels, in order to establish the statistical units within that group, their links and the most efficient structures for the collection of statistical data. The profiling process is called manual when profilers analyze available information on a group and delineate enterprise(s) within this group on an individual basis. This method is costly in terms of time and resources, and requires specific skills from the profilers; therefore, for reasons of means, it can be applied to only the largest, most relevant groups. When there is a comprehensive dialogue and a meeting with the profiling team and group's representatives (generally consolidators or accountants), this is considered to be intensive manual profiling. When there is an analysis of the group without contact with its representatives, or contact only by mail and conference calls with its representatives on very general aspects regarding [global enterprise/enterprise] delineation, this is usually considered to be light manual profiling. Nevertheless, nowadays, a huge majority of groups in all countries are small and medium-sized. For reasons of resource constraints, these groups are recommended to be profiled through algorithms. This method is called automatic profiling.

 $\textbf{Source:} \ \textbf{Eurostat (2020), European Business Profiling -- Recommendations manual, Chapter 9}.$

Link: https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/ks-gq-20-002

Related terms: Delineation

Quality

ISO 9000:2000 states that quality is the 'degree to which a set of inherent characteristics fulfils requirements'. Therefore, the quality of statistics can be determined by the extent to which they meet user needs. Quality of statistics can be defined with reference to several criteria.

- Relevance. An inquiry is relevant if it meets users' needs. The identification of users and their expectations is therefore necessary.
- Accuracy. Accuracy is defined as the closeness between the estimated value and the (unknown) true value.
- Timeliness and punctuality in disseminating results. Most users want up-to-date figures that are published frequently and on time at pre-established dates.
- Accessibility and clarity of the information. Statistical data have most value when they are easily accessible by users, are available in the forms users desire and are adequately documented.
- Comparability. Statistics for a given characteristic have the greatest usefulness when they enable reliable comparisons of values taken by the characteristic across space and time. The comparability component stresses the comparison of the same statistics between countries in order to evaluate the meaning of aggregated statistics at the European level.
- Coherence. When they originate from a single source, statistics are coherent if elementary concepts can be combined reliably in more complex ways. When they originate from different sources, and in particular from statistical surveys of different frequencies, statistics are coherent insofar as they are based on common definitions, classifications and methodological standards.

• Completeness. Domains for which statistics are available should reflect the needs and priorities expressed by the users of the ESS.

Source: European business statistics methodological manual for statistical business registers 2021 edition.

Link: https://ec.europa.eu/eurostat/documents/3859598/12433023/KS-GQ-20-006-EN-N.pdf/0c31c77a-5d20-9954-9223-2b856fdb93c9?t=1613481618625

Related terms: Quality indicator

Reporting unit

The reporting unit is the unit that reports to the survey authority. It reports information for each of the observation units. In certain cases, it may correspond to an observation unit. An example where it is not the same is where an accounting business reports data on behalf of a client business that is the actual subject of the survey.

Source: European Commission, Eurostat, "Business Registers Recommendations Manual", Methodologies and Working papers, Publication Office of the European Union, Luxembourg, 2010.

Link: http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-32-10-216-EN-C-EN.pdf

Related terms: Observation unit

Revenue

See: Turnover

Statistical Business Register (SBR)

The business register for statistical purposes is a fully and comprehensive, regularly updated and structured list of business units engaged in the production of goods and services, which is maintained by national statistical authorities for statistical purposes to assist the compilation of statistical data and particularly as a (backbone) tool for the preparation and coordination of surveys, as a source for information for statistical analysis of the business population and its demography, for the use of administrative data, and for the identification and construction of statistical units.

Source: European business statistics methodological manual for statistical business registers 2021 edition. UNECE Guidelines on Statistical Business Registers (2015).

Link: https://ec.europa.eu/eurostat/documents/3859598/12433023/KS-GQ-20-006-EN-N.pdf/0c31c77a-5d20-9954-9223-2b856fdb93c9?t=1613481618625 and https://unece.org/DAM/stats/publications/2015/ECE CES 39 WEB.pdf

Related terms: Administrative business register

SBR improvement survey

A survey conducted by statisticians to improve SBR quality.

Source: UN Guidelines on Statistical Business Registers (2020).

Link: https://unstats.un.org/unsd/business-stat/SBR/Documents/UN Guidelines on SBR.pdf

Related terms: Statistical business register

Statistical units

Statistical units are the units for which information is sought and for which statistics are ultimately compiled. Commonly used types of statistical units for economic statistics are the enterprise, the enterprise group, the kind-of-activity unit (KAU), the local unit and the establishment (in Europe called local kind-of-activity unit (LKAU)). In national accounts also the institutional unit is of importance.

Source: United Nations, Statistics Division, "International Standard Industrial Classification of all Economic Activities (ISIC)", Statistical Papers Series M No. 4, Rev. 4, New York, 2008.

Link: https://unstats.un.org/unsd/classifications/Econ/isic

Related terms: Legal unit, institutional unit

Survey Frame

See: Frame