Draft report on the global status of statistical business register programmes

Prepared by UNSD

December 2013

Introduction

1. The first part of the present *Report* provides an introduction to the goals and main characteristics of SBR programmes and the international recommendations and good practices that have been developed to assist official statisticians in the development, maintenance, and use of SBRs. Its second part then contrasts these recommendations and good practices with the results of a Global Survey conducted by the United Nations Statistics Division (UNSD), with the objective of assessing the current status of SBR programmes across countries in different regions of the world and with different degrees of economic development.

2. This report has been prepared at a time when various regional initiatives on the development of statistical business registers are coming to fruition. These include, among others:

(1) The development of *Guidelines for Building Statistical Business Registers in Africa*, commissioned by the African Development Bank within the framework of its Statistical Capacity Building Program.
(2) The creation of a UNECE *Task Force*, within the frame of the Conference of European Statisticians, to produce a set of international guidelines and recommendations of good practices on statistical business registers with the aim of helping countries develop and maintain their registers and improve their international comparability.[1]
(3) A multi-year project, funded by the Inter-American Development Bank under the auspices of the Statistical Conference of the Americas, in which 11 Latin American countries took part with the aim of defining a regional strategy for the design, implementation and management of Statistical Business Registers, as well as a regional action plan for the execution of this strategy.[2]

3. *Role of Statistical Business Registers in official economic statistics.* Statistical Business Registers (SBRs) are an essential part of a country's statistical infrastructure required for the compilation of official economic statistics, along with economic censuses, which are conducted approximately every five to ten years, and regular economic surveys, which are conducted more frequently. The development and maintenance of SBRs are directly related to the implementation of the recommendations for the System of National Accounts 2008 (SNA 2008),[3] the International Recommendations for Industrial Statistics 2008 (IRIS 2008),[4] and the Guidelines on Integrated

[1] See http://www.unece.org/statshome/areas-of-work/statsarchiveact02e/statsarchive0210be/task-force-business-registers.html
[2] See http://www.eclac.cl/deype/noticias/documentosdetrabajo/7/51327/LCL3707i.pdf
[3] Available from http://unstats.un.org/unsd/nationalaccount/sna2008.asp
[4] Available from http://unstats.un.org/unsd/EconStatKB/Attachment387.aspx

Economic Statistics adopted by the United Nations Statistical Commission at its forty-second session in 2011.[5]

4. *Importance of the SBR to improve survey coordination and reduction of survey-response burden.* An SBR constitutes a crucial resource for the adequate planning, conduction and coordination of statistical surveys of enterprises and other economic units. An up-to-date business survey frame is required for the efficient selection of samples, and provides an efficient way for managing and coordinating surveys which are applied at different points in time or across different domains or geographic areas. This is particularly true in the case of sub-annual surveys, where the need to ensure an overlap of sampled units from period to period needs to be balanced against the need to avoid imposing an excessive response burden on individual economic units.

5. *Increasing need for multi-dimensional and detailed information about economic units*. National statistical systems are increasingly asked to provide information about the relationship between the economic activity in a country or region and the characteristics of its economic units. For example, users are often interested in the analysis of issues such as business demographics, international trade flows by enterprise characteristics, the industrial organization and internationalization of supply chains, and the impact of evolving relationships of ownership and control on the concentration of production factors. In this connection, SBRs are increasingly viewed not only as providing a sample framework and a tool for survey design and coordination, but as a source of business demographic and structural information in their own right.

6. *International harmonization of statistical business registers*. To produce official economic statistics which are consistent and comparable both across countries and across statistical domains, it is necessary to develop a common framework for the harmonization of national statistical business registers, so as to ensure the use of standard classifications, definitions and processes to the maximum extent possible. The development and standardization of SBRs can thus make a significant contribution for the improvement of the quality of statistical outputs. Further, one of the main aims of the harmonization of SBRs across countries is to enable the creation of regional or global registers of multinational enterprise groups (such as the EuroGrups Register for the European Union).The harmonization of SBR definitions refers to both the statistical units and of their characteristics. Similarly, the harmonization of SBR updating and maintenance processes and rules includes such procedures as those employed for creating or modifying individual records for new and existing statistical units, for establishing the relationships between different units, and for ensuring the quality of the SBR.

7. *Need to adapt to the specific situation of the statistical infrastructure in different countries.* The characteristics of SBR programmes differ from country to country. While some countries still rely on mostly stand-alone lists which are used in individual surveys, other countries have highly sophisticated SBR database systems that capture the organization of control links between different units. In this connection, the most pressing issues faced by many developed countries in the development and maintenance of SBRs are often very different from those of more developed countries. Therefore, in the development of international guidelines and standards for business registers it is important to also address the specific needs of less developed countries.

8. *Characteristics of statistical units.* Regardless of the level of complexity and sophistication of a country's SBR programme, at a minimum it must maintain up-to-date and sufficient contact information (e.g., name, postal address, telephone number and e-mail address), and keep track of

[5] See http://unstats.un.org/unsd/nationalaccount/ies/

additional information that allows for the classification of economic units according to their institutional sector, economic activity, and size (e.g., in terms of employment).

9. *Coverage of SBR.* One of the main criteria to assess the quality of a SBR is the comprehensiveness of its coverage. Ideally, a country's SBR should record all the enterprises (and their associated legal units and local units), as well as the domestic component of enterprise groups that contribute to the generation of GDP. However, it is impossible to maintain an SBR that reflects the exact population of all the economic units that contribute to the GDP at any given point in time. Notwithstanding, the agencies responsible for the development and maintenance of SBRs should continuously assess whether the omission of any specific group of units is significant and whether it is admissible in light of its relative economic or analytic importance.

10. For instance, some economies may have a large number of households engaged in production agricultural products other than for own consumption, making it necessary to conduct special area surveys and studies in order to ensure an adequate coverage of the household sector within of the SBR. Similarly, access to specific administrative records may need to be developed in order to cover units of the government sector in the SBR, so as to ensure that the statistics on the economic activity of government units are consistent with other those of other sectors in terms of classifications, definitions, and coverage.

11. *Confidentiality issues*. Often, the identifiers used in business registers are not purely random numbers – they usually contain some embedded information that can be interpreted by anyone familiar with the identification system. However, seemingly inconsequential information included in an identifier can sometimes be used to discover confidential information about individual units. Therefore, the safest identifiers are random character strings containing no information whatsoever. De-identification is the process of removing "name-linking information", i.e., information from a data record that can potentially be used to link the record to the public name of the record's unit. The most obvious items to be removed in the de-identification process are the unit's legal or commercial name, its address (which could be linked to the name), and date of birth (in case of natural persons acting as economic units).

12. *Management of an SBR programmes*. Managing an SBR programmes is a complex endeavors that requires a substantive initial investment in order to develop the necessary set of skills and infrastructure. For instance, registration of new statistical units needs to be carried out by trained specialists well versed in the registration policies and who have enough background knowledge as to be able to authenticate the identity of the units being registered. Also, the SBR programme must be supported by an information system that allows to manage the characteristics and interrelationships of the units being registered.

Global assessment report

The global SBR questionnaire

13. Although it is desirable that the frame for all enterprise surveys of economic activity be derived from a central, general-purpose business register[6] (to ensure, among other things, complete coverage of all economic activities and coherence in the definition and classification of statistical units), the Global Survey was also oriented to countries that rely on ad-hoc or stand-alone listings of enterprises for their different statistical compilations.

14. While the Global Survey was addressed directly to the statistical offices of more than 200 countries and areas, respondents were encouraged to consult with other agencies of their respective National Statistical Systems when producing their answers. 116 countries and areas responded to the questionnaire, as detailed in Table 1.[7]

Table 1. Number of respondents to the questionnaire, by region

	No. of respondents
Africa	23
CIS	8
Developed	39
Eastern, South-Eastern, Southern Asia	17
Latin America and the Caribbean	18
Oceania	1
South-Eastern Europe	5
Western Asia	5
Non-OECD	*84*
OECD	*32*
Total	**116**

Legal framework and institutional arrangements

15. The legal framework and institutional arrangements facilitate the effective development, maintenance and use of a statistical business register. All aspects the SBR programme depend upon them—from determining which data sources are available for its construction and maintenance, to establishing the range of valid users and uses of the information derived from it.

16. The Global Survey asked national statistical offices whether a legal act mandates four aspects of the maintenance and updating of the SBR: (1) the establishment and maintenance of a list, (2) the use of the list by other agencies for statistical purposes, (3) the protection of confidentiality, and (4) the access to administrative data sources. The responses are summarized in Table 1 and Figure 1.

[6] Central business registers provide a uniquely identified list of statistical units, so that all statistical processes or products that make reference to its data confident that all its records are unique, identified and immutable

[7] See Appendix 1 for the composition of geographic and economic groups used in this report for analytic purposes.

Table 2. Percentage of countries or areas that have a legal mandate for different aspects of the maintenance and updating of SBRs

	Establishment and maintenance	Use by other agencies	Protection of confiden-tiality	Access to adminis-trative sources	Other
Africa	65.2	56.5	87.0	69.6	13.0
CIS	87.5	87.5	100	100	12.5
Developed	89.7	64.1	97.4	92.3	17.9
Eastern, South-eastern, Southern Asia	52.9	52.9	76.5	29.4	17.6
Latin America and Caribbean	61.1	38.9	100	72.2	5.6
Oceania	0	100	100	100	100
South-Eastern Europe	100	40.0	100	80.0	0
Western Asia	80.0	80.0	100	40.0	0
Non-OECD	*65.5*	*57.1*	*91.7*	*65.5*	*11.9*
OECD	*96.9*	*62.5*	*96.9*	*93.8*	*18.8*
Total	**74.1**	**58.6**	**93.1**	**73.3**	**13.8**

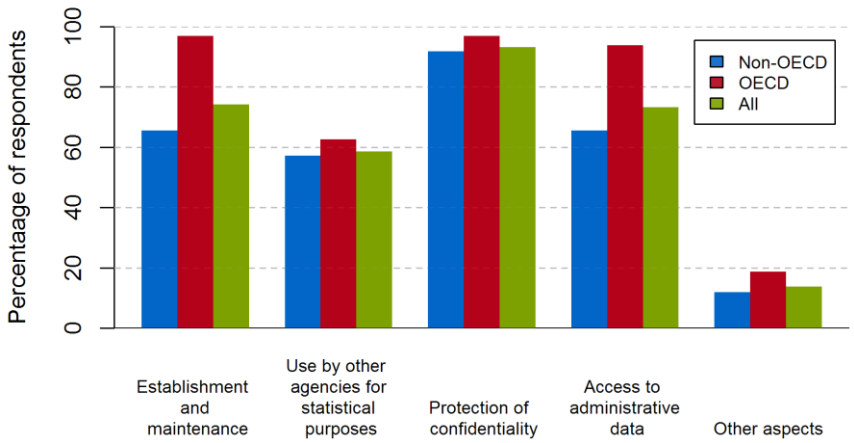


Figure 1: Legal Mandate for Maintenance and Updating of the Business Register

17. One of the first conclusions that can be drawn from the responses to the Global Survey is that the different aspects of the legal framework seem to be closely interrelated. For instance, countries that have legal mandates for the establishment and maintenance of a list are also more likely to have legal mandates for accessing administrative data sources for the maintenance of the SBR, as well as for the use of SBR data by other agencies for statistical purposes. Similarly, countries that have legal acts for protection of confidentiality are also likely to have legal provisions for use by other agencies and access to administrative data. These legal provisions, therefore, seem to come together in a 'bundle'—having one makes it likely to have another.

18. Also, most countries have a legal framework relating to the maintenance and updating of an SBR. Of a total of 116 countries, only four—Morocco, Ethiopia, Bhutan, India, and Maldives—responded that they do not have a legal framework in place for any of the four aspects included in the Global Survey. However, even countries that do not have any specific legislation mandating the establishment of a business register (for instance, Bhutan) may have some regulatory framework in place enabling the creation and maintenance of business registers (e.g., in the form of broad executive orders to compile national accounts statistics, conduct sectorial surveys, etc.) Open-ended responses also suggest that most countries have a multitude of legal instruments in place, ranging from specific

Business Register acts to broader instruments such as legal acts on the compilation of National Accounts, income tax laws, and cooperation agreements on data transfer, which provide the basis for maintaining and running an SBR programme.

19. In general terms, the proportion of countries that report having a legal framework in place in each of these aspects is larger among OECD members than among non-OECD members. This is particularly true for the presence of a legal mandates to establish and maintain an SBR and to enable the access to administrative data, where the difference between the two groups of countries is considerable. However, the contrast between OECD and non-OECD countries is not as strong for the protection of confidentiality and regarding the use of SBR data by other agencies for statistical purposes: whereas the vast majority (more than 90%) in both groups does report having a legal framework regarding confidentiality, a large proportion of countries in both groups (around 40 percent) lacks a legal framework regulating the use by other agencies.

20. Overall, 74.1 percent of the respondents reported that they have a legal mandate to establish and maintain a list of businesses. However, while most OECD members (96.9 percent) have this mandate, only 65.5 percent of non-OECD members do. The developing countries or areas in Eastern, South-Eastern, and Southern Asia, and in Latin America and the Caribbean, were the least likely to have a legal mandate to establish and maintain a list (52.9 percent and 61.1 percent, respectively). Only one OECD member reported that it does not have a legal mandate for the establishment and maintenance of the SBR.

21. Among all respondents, only 58.6 percent of countries had a legal mandate for use of business register by other agencies for statistical purposes. Again, a higher number of OECD members allowed this (62.5 percent) than non-OECD (57.1 percent). The regions that had the lowest proportion of countries with a legal framework allowing the use of SBR data by other agencies were Latin America and Caribbean (38.9 percent), South-Eastern Europe (40.0 percent), and the Eastern, South Eastern and South Asia region (52.9 percent).

22. One aspect of the legal framework which is lagging behind in developing countries relates to the ability to access administrative data sources for maintaining and updating the SBRs. This is particularly true for countries in Eastern, South-eastern and Southern Asia, and in Western Asia, where only 29 percent and 40 percent, respectively, provided a positive answer. This situation is likely related to the fact that in many developing countries the administrative sources are less abundant, and those which are available often provide data whose coverage is rather incomplete with respect to the target population of businesses, or data which is not reliable nor adequately classified according to economic activity or size (Weeks, 2011).

23. On the other hand, the responses to the Global Survey show that there is a high level of awareness among most countries with respect to the protection of confidentiality, as evidenced by the prevalence of a very high percentage of countries having laws on this issue: 97 percent of OECD economies and 92 percent of non-OECD economies have a legal mandate in this regard. Nevertheless, there are a few countries still lagging in this dimension. In particular, the legal protection of confidentiality is less common in Eastern, South Eastern and Southern Asia and in Africa (with only 76 percent and 87 percent of countries of these regions providing a positive response to this question, respectively).

24. Some of the legal rules related to the maintenance and updating of the SBR might have conflicting objectives; for instance, allowing for the exchange of data between agencies for statistical purposes may be in contradiction with the need to protect confidentiality. The responses to the Global Survey

reveal this difficulty, and highlight the need to explore ways, technical or otherwise, in which the access of SBR data can be extended while simultaneously protecting confidentiality. Also, the results underscore the need to explore further the hierarchy of the legal instruments that have an impact on the SBR programmes against the priorities of set forth by the National Statistical System for the compilation of official economic statistics.

Dissemination

25. In most cases, dissemination to external users is allowed only for research purposes, with full access not granted in most countries. As shown in Table 3, a majority of countries—59.4 percent of OECD and 52.4 percent of non-OECD members—do not allow access external users access to SBR data. Among those that do, only 4 countries (2 OECD and 2 non-OECD), provide full access. In those cases where access is allowed, users include universities and research institutions, academic researchers, and other government entities such as the central bank.

Table 3. Distribution of countries according to the extent to which SBR data is made available to external users

	No Access	Partial	Full	Total
Africa	30.4	65.2	4.3	100
CIS	37.5	62.5	0	100
Developed	64.1	30.8	5.1	100
Eastern, South-eastern, Southern Asia	70.6	23.5	5.9	100
Latin America and Caribbean	38.9	61.1	0	100
Oceania	100.0	0	0	100
South-Eastern Europe	60.0	40.0	0	100
Western Asia	100.0	0	0	100
Non-OECD	52.4	45.2	2.4	100
OECD	59.4	34.4	6.2	100
All	54.3	42.2	3.4	100

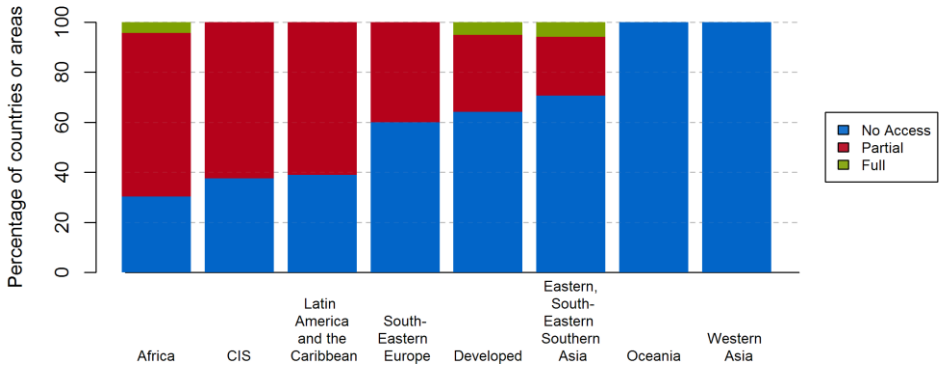


Figure 2. Distribution of countries according to the extent to which SBR data is made available to external users

26. Interestingly, less developed regions such as Africa, CIS, Latin America and the Caribbean, and South-Eastern Europe provide, on average, more access than Developed countries (see Figure 2). This reflects the relationship that exists between different aspects of a country's legal framework and its dissemination arrangements. While one would assume that having laws protecting confidentiality would encourage dissemination (as there would be legal deterrence against violation), the responses suggest that it doesn't have much of an impact. Slightly more than half countries with laws protecting confidentiality provide no access to external users. This suggests the need to qualitatively examine the

confidentiality laws—for instance if they go far enough, or if dissemination is prohibited in those laws itself.

27. However, as shown in Table 4, there seems to be in general a positive relationship between the availability of a legal framework regulating the various aspects of SBR compilation and dissemination, and the provision of access of SBR data to external users. For instance, all the countries that provide full access to external users have a legal framework covering the four dimensions of legal framework covered in the Global Survey. In contrast, countries that do not provide any kind of access to external users are less likely to have a legal framework in place.

Table 4. Relationship between legal framework and access to external users

Groups of countries by extent of access to external users	Share of countries in the group that cover this aspect in their legal framework (percent)			
	Establishment and maintenance of SBR	Use of SBR data by other agencies	Confidentiality protection	Access to administrative sources
Full (4 countries)	100.0	100.0	100.0	100.0
Partial (49 countries)	81.6	65.3	98.0	77.6
No access (63 countries)	66.7	50.8	88.9	68.3

Classification of statistical units by economic

28. The use of a standard industrial classification is indispensable to describe in a comparable and consistent manner the kind of economic activities carried out by the statistical units included in the SBR. The classification of economic activities is not only important as a stratification variable for the adequate selection of samples from the SBR (in its role as a statistical framework for economic surveys), but crucially enables the SBR to become a powerful instrument in the statistical infrastructure of a country for the integration of economic statistics, including within the framework of the System of National Accounts.

29. When considering the economic activity of a unit, a distinction is normally made between principal, secondary, and ancillary activities. The principal activity determines the classification of the units in the SBR, although secondary and ancillary activities may also be recorded. Ideally, the classification of units by economic activity should be made at the level of detail in which individual units are sufficiently homogeneous—thus, classification by economic activity is usually carried out at the level of establishment and/or kind-of-activity unit.

30. The System of National Accounts (SNA 2008) recommends the use of the International Standard Industrial Classification of all Economic Activities (ISIC) in the compilation of the production account and the generation of income accounts by industry. The last and fourth revision of ISIC (ISIC, Rev.4) is the outcome of a review process that spanned several years and involved contributions from many classifications experts and users around the world.

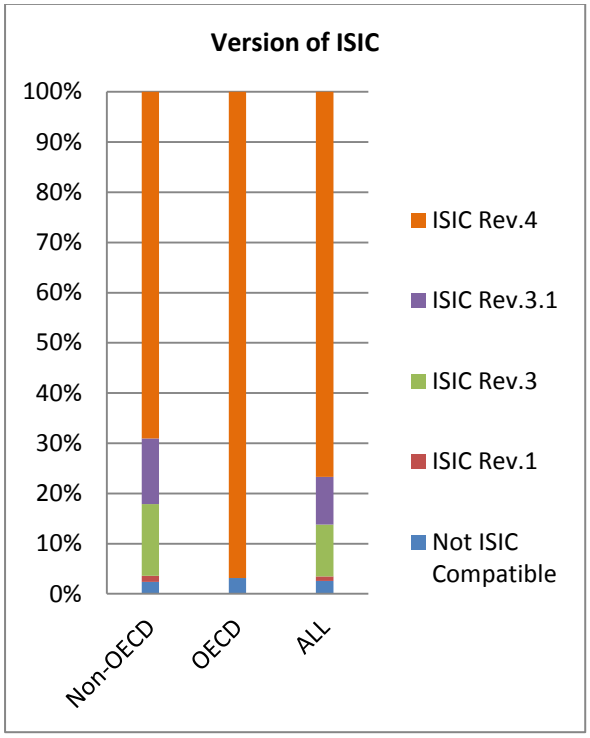
31. The economic activities in ISIC are subdivided in a hierarchical, four-level structure of mutually exclusive categories. The categories at the highest level are called sections, which are alphabetically coded categories intended to facilitate economic analysis. The sections subdivide the entire spectrum of productive activities into broad groupings, such as “Agriculture, forestry and fishing” (section A), “Manufacturing” (section C) and “Information and communication” (section J). The classification is

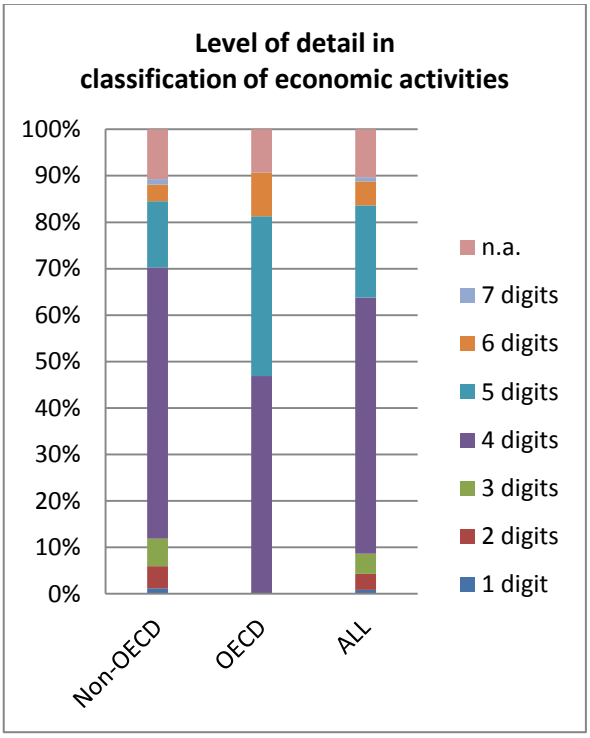
then organized into successively more detailed categories, which are numerically coded: two-digit divisions; three-digit groups; and, at the greatest level of detail, four-digit classes.

32. Most countries have developed industrial classifications which are national adaptations of ISIC in any of its various revisions, and which provide additional layers of detail to better reflect the structure of their respective economies.[8] This has been confirmed by the results of the Global Survey, which indicate that the industrial classification used in the SBRs is in most countries consistent with ISIC.[9]

33. Thirty one out of the thirty two members of the OECD included in the survey user an industrial classification which is compatible with the most recent version of ISIC (ISIC Rev. 4). Of these countries, ten use the NACE or NAICS classification. In non-OECD countries, 69 per cent of the countries are compatible with ISIC Rev. 4, 13 percent with ISIC Rev. 3.1, and 14 per cent with ISIC Rev. 3. Four non-OECD countries are using the NACE classification.

34. In terms of the detailed level of industrial classification, the majority of the countries in the sample classify statistical units in the SBR at least at the 4-digit level of detail (91 percent of OECD , and 77 percent of non-members). Of all the countries that responded to the survey, only ten classify statistical units by economic activity more broadly (either at the Section, Division or Group levels).



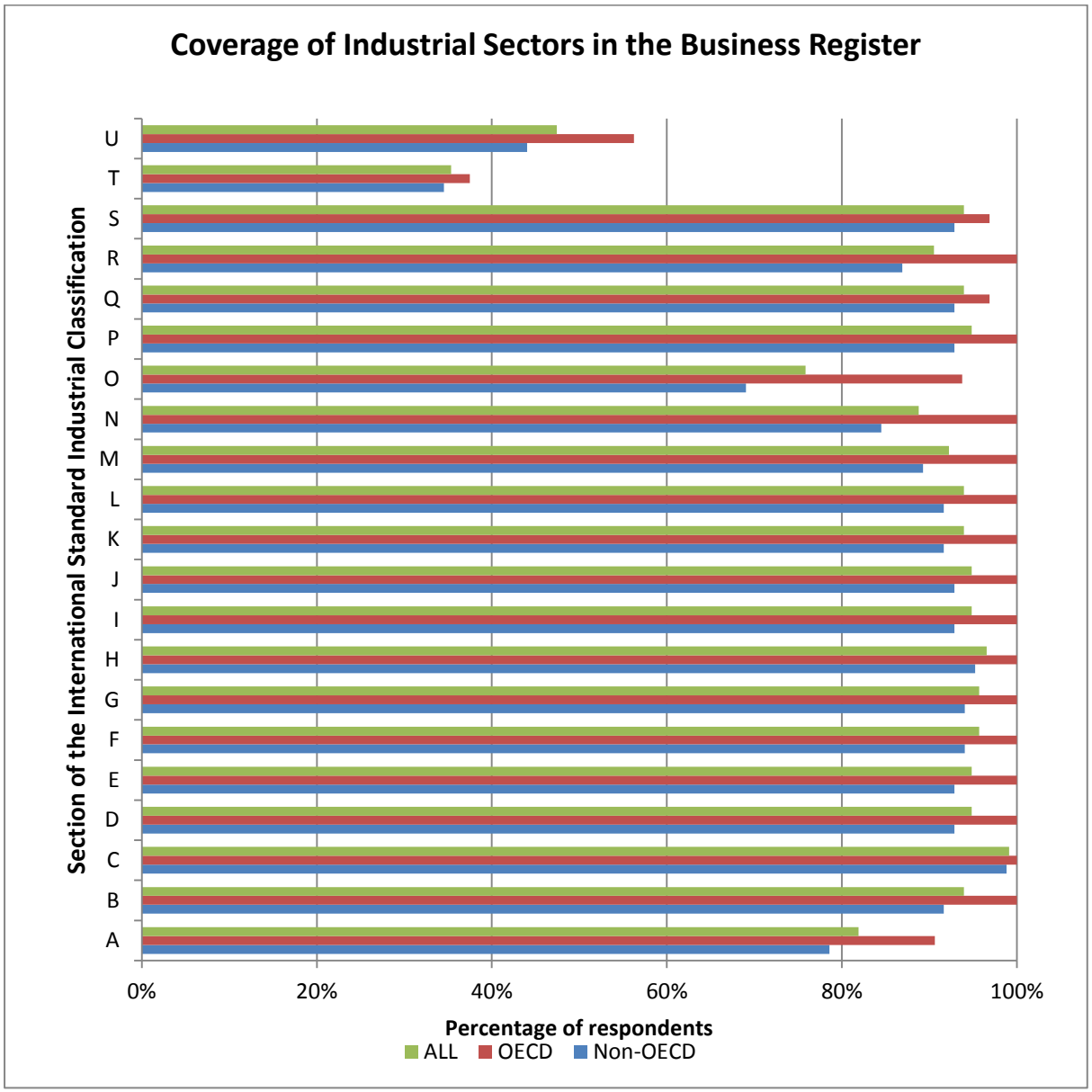


Coverage of the SBR

[8] For instance, the use of the Statistical classification of economic activities in the European Community (NACE), which is in use by all EU member States, and the North American Industry Classification System (NAICS), which has been adopted by Canada, Mexico and the United States of America, are, for the most part, aligned with ISIC Rev. 4.

[9] Only three countries indicate that they use in their SBR an industrial classification that is not compatible with ISIC.

35. The survey reveals that SBRs cover the industrial sector (as defined by IRIS 2008) in the majority of countries (both OECD members and non-members). However, in the OECD countries the sectors which are less frequently covered by SBRs are agriculture (sector A), activities of households as employers (sector T) and activities of extraterritorial organizations and bodies (sector U). In addition to these three sectors, the SBRs of many non-OECD countries, especially in Africa and Western Asia, do not cover economic units from public administration and defense (sector O).



Definition of statistical units

36. Statistical units may be defined following many criteria, namely: legal, accounting or organizational criteria; geographical criteria; and economic criteria. The relative importance of these criteria depends on the type of unit concerned.

37. The systematic description of the economy, as represented by SNA, analyses two interrelated types of transactors and transactions that require two levels of statistical units. The establishment, in

combination with ISIC and CPC, is used for the analysis of transactions in goods and services and for compilation of the production account. The enterprise is used as the statistical unit for compilation of income accounts, accumulation accounts and balance sheet accounts, as well as in the institutional sector classification of economic entities.

Box 1:
Definition of different statistical units

Enterprise
An institutional unit in its capacity as a producer of goods and services is known as an enterprise. An enterprise is an economic transactor 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.

Establishment
SNA describes the statistical unit to be defined and delineated for industrial or production statistics as the 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.

Kind-of-activity unit
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, in the case of such a unit, there is no restriction on the geographic area in which the activity is carried out but it is characterized by homogeneity of activity.

Local unit
Enterprises often engage in productive activity at more than one location, and for some purposes it may be useful to partition them accordingly. Thus, a local unit is defined as an enterprise or a part of an enterprise (for example, a workshop, factory, warehouse, office, mine or depot) which engages 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.

38. The most used statistical unit in the business registers are enterprise as 80 per cent of all countries cover this unit. The coverage of enterprise in the business registers are 91 per cent among OECD countries and 76 per cent in non-OECD countries. There are noticeable differences between OECD and non-OECD countries. While OECD countries coverage rate is higher than non-OECD countries for enterprise groups, enterprises and local units, the coverage rate among non-OECD countries for establishment and kind-of-activity units.

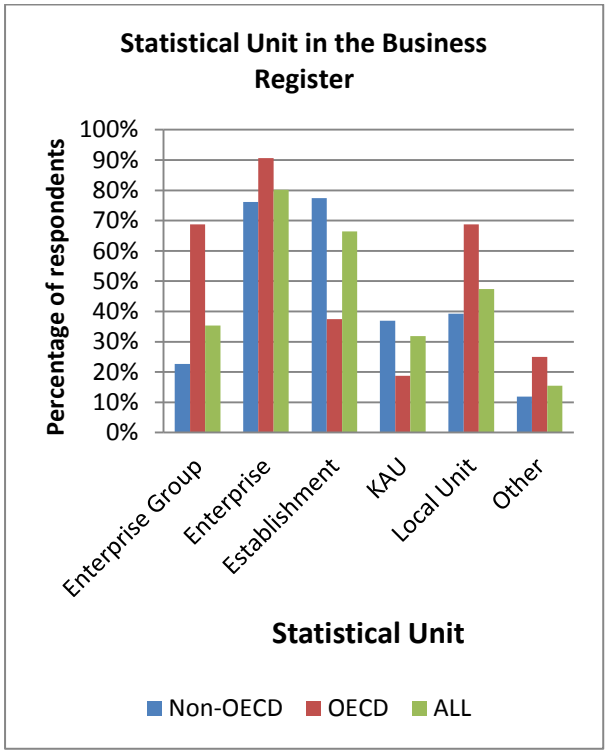
39. In fact, the most used statistical unit in the business registers among non-OECD countries are “establishments”, which is covered in 77 per cent of the countries. The unit “enterprise group” has a lower coverage both among OECD and, in particular, among non-OECD countries with only 23 per cent of non-OECD countries covering “enterprise groups” in their business registers. In particular “enterprise groups” has a low coverage rate among Latin America and Caribbean countries as well as in Eastern, South-eastern, and Southern Asia.

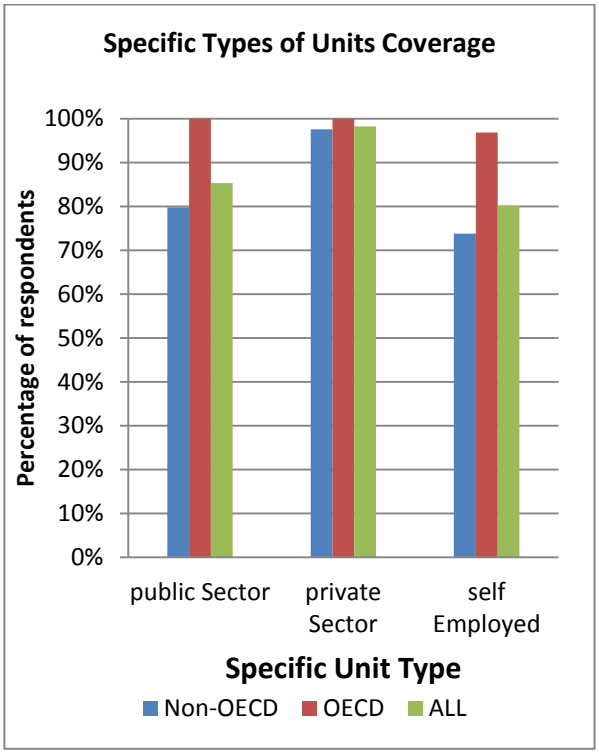
40. In terms of the specific types of unit coverage, all OECD countries covers public and private sector, and only one OECD country in the sample does not cover self-employed businesses. Among non-OECD countries, only two countries in the sample do not cover the private sector. However, respectively 17 and 22 non-OECD countries in the sample do not cover public sector enterprises/establishments and self-employed businesses. In particular Latin American and the Caribbean and Western Asia have low coverage of the public sector enterprises/establishments, while Africa and CIS have a low coverage of self-employed businesses.

41. Those Latin American countries that say that they use "enterprise" as statistical unit need to be double-checked as it is most likely the case that they actually mean "legal unit", but there has been a lot of confusion with the definition of "enterprise" in the region.

42. In terms of other units that are covered in the Business Register, a number of countries refer to legal units, individual entrepreneur and institutional unit.

43. In many developing countries, the informal sector accounts for as much as half of economic activity and employment. The role of informal sector in the business register is therefore an interesting issue that should be further studied. Capturing the informal sector in a business register would appear difficult in many countries; however there are countries such as Dominica which also include the informal sector in their SBR.





Tracking relationship between different types of statistical units

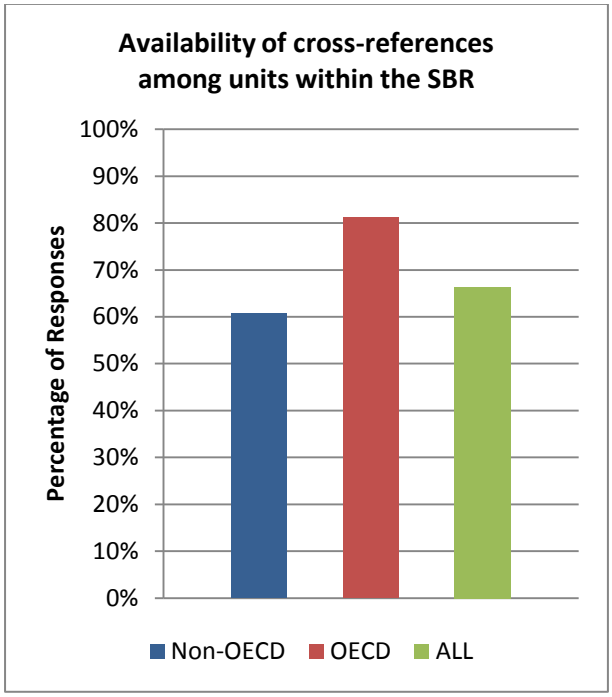
44. All units need to have a unique identifier in the business register. This is important for identifying but also for combining and matching of data from different data collections with the same unit. Among the economies in the sample, 14 economies do not have an identify number for statistical units. Some of these economies use the legal name/company name in order to link to other sources. However, this might create a number of issues in terms of spelling. In Zambia for example, the use of

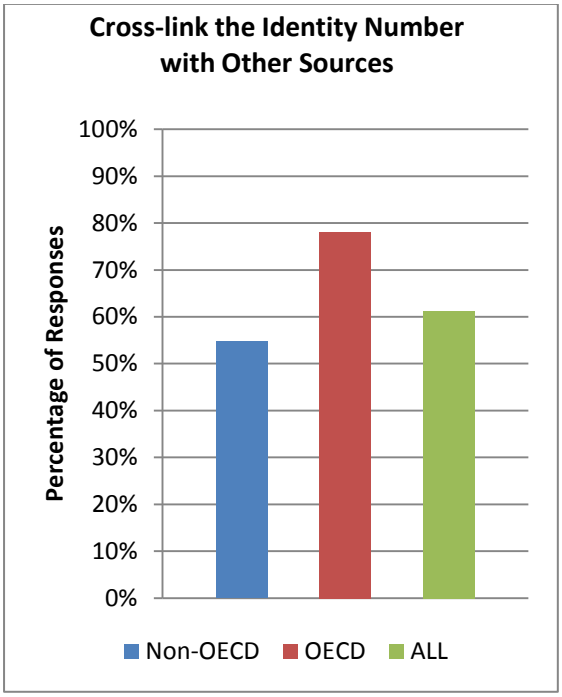
the Economic Activity combined with other identifiers such as geo-codes and physical location helps in linking at most 75 percent of the units.

45. Cross-references among units within the business registers are available in two-thirds of the countries in the sample. This rate is 81 per cent among OECD countries and 61 per cent among non-OECD countries. Among the economies where cross-linking using the identity number is not possible, the common problem is that the identification number differs from one source to another. The identifier is unique to the business register and; there is no national identity number. In order to cross-link, these economies use the name, activity and location to link the data from different sources.

46. The percentage of countries in which it is possible to cross-link the identity number for statistical units with external identity numbers used in other sources is 61 per cent among the countries in the sample. The percentage is 78 per cent among OECD countries, while it is only 55 per cent among non-OECD countries. In Africa, only 26 per cent of the countries have the opportunity to cross-link the identity number for statistical units with external identify numbers.

47. The percentage of countries that can cross-link identity number for statistical units with external identity numbers is extremely low in developing countries, which is a major obstacle for the use of data sources for the maintenance of business registers.





Data Sources and Update Protocols

48. Business registers capture a variety of information on businesses, and it is important to understand where all this information is derived from. The results from the Survey seem to indicate that for each of the business characteristics, countries use a wide range of data sources. While some sources are more used than others for a specific character, the responses show that that they are by no means the only source being used.

49. Most economies, both OECD and non-OECD, rely heavily on NSO Surveys and tax records. Both these sources have inherent shortcomings, which in turn would have implications for an updated business register. Surveys take a lot of capacity and resources to conduct and process, and if done frequently, also is a burden for business owners. This sense of burden might also influence how businesses fill out the survey—impacting reliability of the data derived from the Survey. Non-OECD economies rely more on NSO Surveys than OECD economies to update the business register, so capacity constraints might influence how frequently these economies can conduct the surveys and, in turn, update their business register. Maybe the focus should be on using administrative data than conducting the surveys.

50. Tax records are one of the key sources for a number of characteristics in the business register in most economies. However, in most economies, even in OECD-countries, tax records come with a lag. Reliance on tax records could therefore make information in the business register obsolete.

Table 5. Percentage of OECD Member Countries which use each of various data sources to collect different characteristics of statistical units in the SBR

	Reg. Number	ID. Number	Contact Info.	Enterprise Type	Industrial Classification	No. of Employees	Date of Birth/Closure	Active Status	Control Type	Turnover	Net Fixed Assets
NSO Survey	22%	28%	84%	41%	88%	66%	41%	63%	44%	56%	25%
Government Survey	3%	9%	9%	9%	13%	9%	6%	9%	13%	6%	0%
Tax Records	44%	44%	66%	53%	59%	44%	50%	66%	34%	88%	25%
Social Security Registry	13%	19%	28%	13%	19%	50%	13%	34%	0%	3%	0%
Transportation Registry	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Health Records	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Customs	6%	3%	3%	3%	0%	0%	0%	0%	0%	3%	0%
Local Governments	13%	13%	22%	13%	13%	9%	13%	13%	9%	9%	9%
Other sources	44%	41%	63%	47%	38%	19%	47%	31%	47%	9%	13%

51. The relative use of various data sources to update the information on characteristics of the SBR units in OECD economies is shown in Table 5, and summarized below (with percentage of economies in the OECD group that reported using the sources for the italicized characteristics appear in brackets):

- **NSO Surveys** are the most frequently reported data source for *contact information (84%), industrial classification (88%), contact information (84%), net fixed assets (25%) and number of employees (66%).* It is also reported as the second most mentioned data source for *active status (63%), control type (44%),* and *turnover (56%).*
- **Tax Records** are the most frequently reported data source for *turnover (88%), active status (66%), ID number (44%), enterprise type (53%), registration number (44%), and date of birth/closure (50%)*. Tax records are also reported as the second most mentioned data sources for *contact information (66%), and industrial classification (59%)*.
- **Social Security Registry** is used as the second most reported data source for *number of employees (50%),* and the third most reported source for *active status (34%).*

- **Other sources** are one of the most used data source category for registration number (44%, along with tax records), and *control type (47%)*. It is also reported to be used quite considerably for the following characteristics (percentage of countries using it in brackets): *identification number (41%), contact information (63%), enterprise type (47%), and date of birth/closure (47%).* "Other Sources" mentioned in the responses include: administrative data, economic chamber/chamber of commerce, national banks, polls conducted by other government agencies, department of justice and economic census.
- **Health Records and Transportation registry** were not used at all and **customs record**s were reported being used by very few countries for *registration number, ID number, contact information, and turnover*. Less than 15% of the countries reported using **local government** sources for *all characteristics*, except for contact information, in which case 22 percent of countries reported using it as a source.

(b) Also, the relative use of various data sources to update the information on characteristics of the SBR units in non-OECD economies is shown in Table 6, and summarized below (with percentage of economies in the non-OECD group that reported using the sources for the italicized characteristics appear in brackets):

- **NSO Survey** is the most frequently reported data sources for all the characteristics except registration number. For registration number too, it comes a close second with 32 percent reporting it (33 percent report using tax records)
- **Tax record** is the second mostly reported data source for most of the characteristics, followed by similar percentage of countries reporting using "Other Sources".
- **Social security registry** is mostly used for determining the number of employees (50 % reported using it, which is the second most reported source for this characteristic).
- **Transportation registry** is used by few economies for most (<5 percent in most characteristics), and is reported being used by 12 percent of economies for *contact information*. **Customs records** show slightly higher usage patterns (<10 percent for most economies), but used by 13 percent for contact information, 10 percent for ID number, and 8 percent for industrial classification. **Health records** are used by 8 percent of the economies for contact information.
- **Other sources** as indicated in the open-ended questions include: central bank, court data, trade register, investment promotion agency, and other government agencies such as regulatory bodies, commercial directory, and administrative records. One country also used advertisement information published in the newspapers.
- **Local governments** were used by non-OECD economies more than OECD economies as data source.

Table 6. Percentage of non-OECD Member Countries which use each of various data sources to collect different characteristics of statistical units in the SBR

	Reg. Number	ID. Number	Contact Info.	Enterprise Type	Industrial Classification	No. of Employees	Date of Birth/ Closure	Active Status	Control Type	Turnover	Net Fixed Assets
NSO Survey	32%	44%	76%	63%	82%	83%	60%	67%	46%	60%	37%
Government Survey	7%	7%	15%	10%	13%	15%	7%	8%	4%	6%	4%
Tax Records	33%	30%	43%	32%	32%	23%	36%	36%	18%	39%	12%
Social Security Registry	10%	19%	27%	14%	12%	33%	13%	12%	2%	0%	0%
Transportation Registry	4%	4%	12%	2%	5%	2%	1%	5%	2%	0%	0%
Health Records	1%	1%	8%	1%	0%	1%	1%	0%	2%	0%	0%
Customs	7%	10%	13%	7%	8%	1%	2%	2%	2%	2%	0%
Local Governments	20%	15%	26%	23%	20%	13%	24%	18%	10%	7%	7%
Other sources	32%	30%	42%	29%	23%	10%	30%	20%	19%	11%	4%

Updates to the Register

52. For the vast majorities of OECD economies, all the characteristics—except net fixed assets—are continuously or regularly updated for all units for at least some of the units every year. In contrast, countries in the Africa, Latin America and Caribbean, and Eastern South-Eastern and South Asia region updated the characteristics of enterprises least frequently.

53. Thirty seven percent of non-OECD economies never update the registration number, and thirty nine percent never update the ID number. It is not clear why some characteristics have such high rates of non-update, given that both updated and non-updated characteristics in non-OECD economies mention NSO Survey as one of the most frequently reported data source.

54. In OECD economies, the characteristics that have a high number of countries (at least 70 percent) reporting as being most updated also happen to have tax records as one of their key (either first or second) mostly reported data source. It might reflect the ease of availability of obtaining tax records.

Characteristics that 70 percent or more countries indicated were updated "continuously or regularly for all units"	Most Frequently Reported Data Source	Second most-Frequently Reported Data Source
Contact	NSO Survey (84 percent)	Tax Records (66 percent)
Enterprise Type	Tax Records (53 percent)	Other Sources (47 percent)
Industrial Classification	NSO Survey (80 percent)	Tax Records (59 percent)
Number of Employees	NSO Survey (66 percent)	Social Security Registry (50 percent)
Date of Birth/Closure	Tax Records (50 percent)	Other Sources (47 percent)
Active Status	Tax Records (66 percent)	NSO Survey (63 percent)
Turnover	Tax Records (88 percent)	NSO Survey (56 percent)

55. Eighty eight percent of OECD countries updated their business register within a year since it was used for sample survey selection, with fifty three percent doing it within three months. Seventy four

percent of non-OECD countries did the same, with only Twenty six percent doing it within the first three months. Among the regions, Western Asia; Eastern South-eastern and Southern Asia, and Latin America and Caribbean countries had the longest gaps.

56. Net fixed asset was marked as "not applicable" by 50 percent of OECD countries and 55 percent of non-OECD countries.

57. Continuity rules were available for statistical units in 66 percent of the countries (84 percent of OECD and 58 percent of non-OECD). Only 48 percent of countries in Africa had continuity rules available, and this was much lower compared to all other regions (the second lowest regions were South-Eastern Europe and Western Asia, 60 percent each).

SBR data verification and validation

58. Statistical business registers are large databases holding records of units and their characteristics, relationships and history. In theory, they could provide a perfect image of the outside world. They would contain no errors, as these would be corrected the moment they occur. In reality, however, it is impossible to avoid errors and incorrect information in a business register.

59. There are various reasons for the differences between this image and the real world. The sources of information used to maintain and update the register will generally contain irregularities of some sort. The register may be subject to certain lags in the recording of real world events or it may have gaps due to the lack of adequate sources for certain types of information.

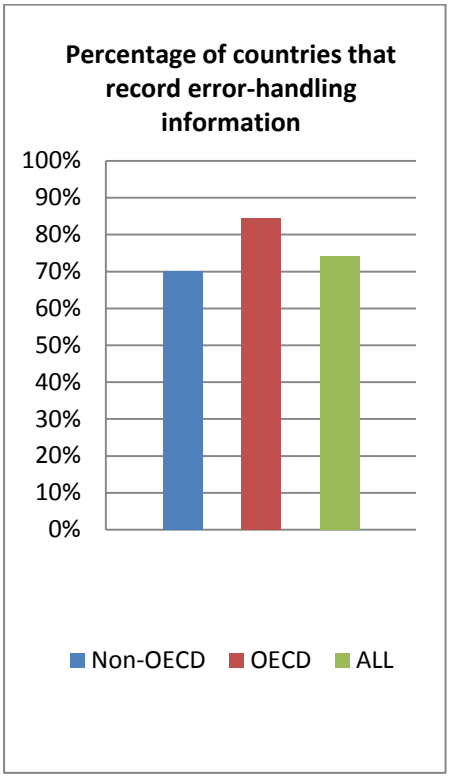
- A number of different errors might arise.
    - Errors in existence
    - Errors in identification characteristics
    - Errors in economic/stratification characteristics
    - Errors in units
    - Errors in links and relationship characteristics

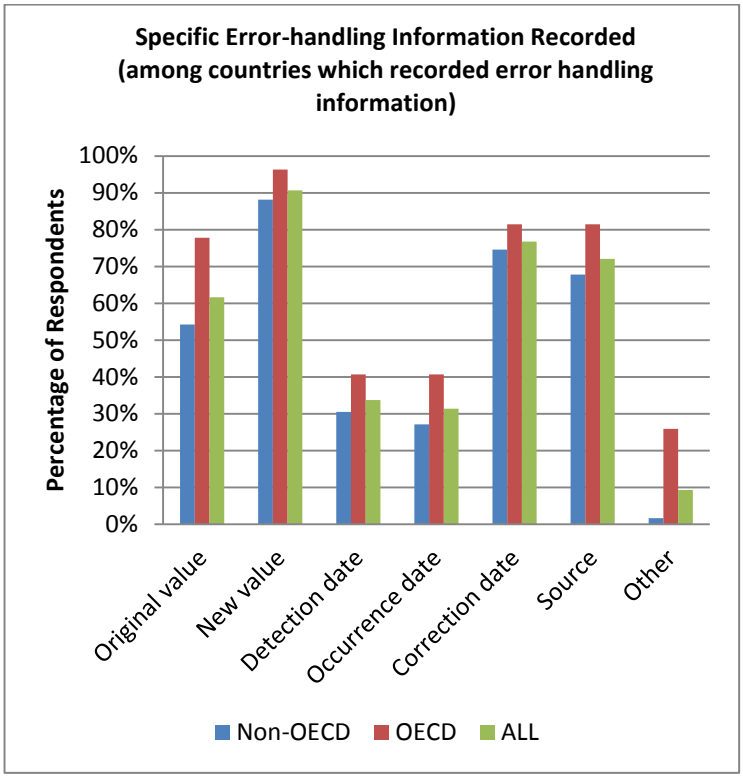
60. The majority of countries record the handling of errors which were detected during updating. Among OECD countries, 84 per cent of the countries record error-handling information. The percentage is slightly lower among non-OECD countries, with 70 per cent recording error-handling information.

61. Among the countries which recorded error-handling information, almost all record the new value (96 per cent among OECD countries, 88 among non OECD countries). In the OECD countries, around 80 per cent of the countries also record the original value, correction date and the source. Among the non-OECD countries, around 70 per cent record the correction date and source, but only 54 per cent of the countries record the original value. Other information about the handling of errors such as detection date and occurrence date are not recorded as frequently.

62. Some countries record additional information such as the date from which the new information was valid in reality and the name of the person (user of the BR) in case if data was corrected manually.

63. One approach to more systematically handle errors is to set up a specific database to record these details. The structure and functionality of such a database should depend on the procedures agreed for handling errors. For example, Republic of Korea are planning to construct the error management system from 2013.





Analytical products and applications

64. For statistical purposes the business register is a tool used for preparing and coordinating surveys as well as an information source used in the statistical analysis of the business population and its demography. There is a growing demand for information on the structure and demography of the business population

Business demographics

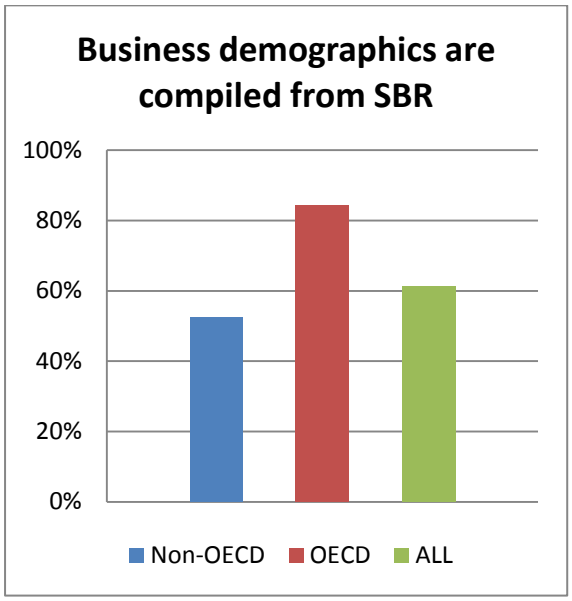
65. In 84 per cent of OECD countries, business demographics are compiled from SBR, while the share is only 52 per cent among non-OECD countries. In particular few Western Asian countries compile business demographics from business registers. The majority of countries (61 per cent) state that documentation on SBR is available to enable ease of interpretation by staff.

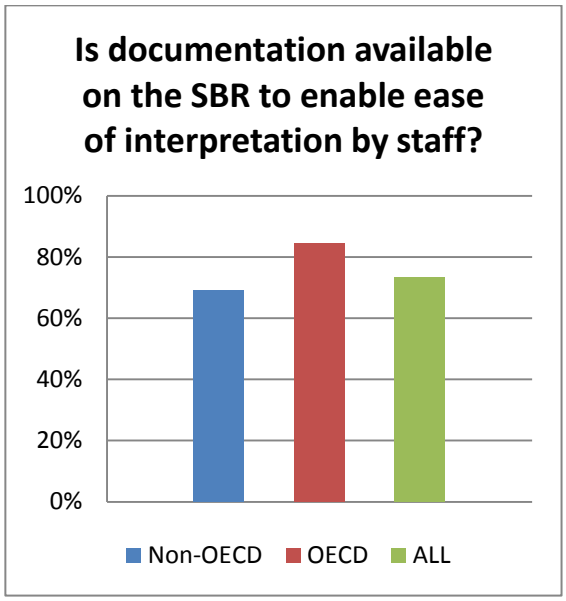
66. While the percentage of countries with available documentation is 84 per cent among OECD countries, it is only 52 per cent among non-OECD countries. The percentage is in particular low among Western Asian countries (20 per cent) and Eastern, South-eastern, Southern Asia (41 per cent).

67. In several countries The Business Register is one of the sources, often the main source, for preparing Business Demographics. The additional sources are administrative ones: TAX register and VAT register.

68. Availability of documentation that can enable ease of interpretation by staff could facilitate the usage of business registers for the production of analytical products such as business demographics. In fact, among the countries with available documentation, 2 out of 3 countries also use the SBR for the

production of business demographics. This is indicative of the importance of documentation for the production of analytical products.





Count of Country Business demographics	Documentation available		Grand Total
	No	Yes	
No	16	29	45
Yes	15	56	71
Grand Total	**31**	**85**	**116**

Appendix 1: Classification of countries into geographic and economic groups for analytic purposes

Total Countries / Areas		116
Developed Countries / Areas (39)		Åland Islands, Australia, Austria, Belgium, Bermuda, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United States of America
Developing and Transition Countries/ Areas (77)	**Africa (23)**	Angola, Botswana, Burundi, Cameroon, Cape Verde, Djibouti, Egypt, Ethiopia, Ghana, Kenya, Liberia, Madagascar, Mauritius, Morocco, Nigeria, Rwanda, South Africa, Tunisia, Uganda, United Republic of Tanzania, Zambia, Zimbabwe
	Eastern, South-eastern, Southern Asia (17)	Bangladesh, Bhutan, Cambodia, China, China Hong Kong SAR, China Macao SAR, India, Indonesia, Malaysia, Maldives, Mongolia, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, Viet Nam
	Western Asia (7)	Bahrain, Jordan, Oman, State of Palestine, United Arab Emirates
	CIS Countries (8)	Armenia, Azerbaijan, Georgia, Tajikistan, Belarus, Republic of Moldova, Russian Federation, Ukraine
	South-eastern Europe (7)	Albania, Bosnia and Herzegovina, Montenegro, Serbia, Former Yugoslav Republic of Macedonia
	Latin America and Caribbean (18)	Aruba, Bahamas, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, El Salvador, Honduras, Mexico, Montserrat, Panama, Peru, Saint Vincent and the Grenadines, Trinidad and Tobago, Uruguay
	Oceania (1)	Solomon Islands

OECD Countries (32)	Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Republic of Korea, Slovakia, Slovenia, Spain, Sweden, Switzerland, United States of America