



**Economic and Social
Council**

Distr.
GENERAL

ECE/CES/2009/15
27 March 2009

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

STATISTICAL COMMISSION

CONFERENCE OF EUROPEAN STATISTICIANS

Fifty-seventh plenary session
Geneva, 8-10 June 2009
Item 4 of the provisional agenda

SEMINAR ON STRATEGIC ISSUES IN BUSINESS STATISTICS

SESSION I: REDUCING RESPONDENT BURDEN

**BUSINESS STATISTICS WITH STRONG EMPHASIS ON ADMINISTRATIVE DATA
SOURCES: EXPERIENCE OF SLOVENIA**

Note by the Statistical Office of the Republic of Slovenia

Summary

The Conference of European Statisticians selected in June 2008 (ECE/CES/74) the topic “Strategic issues in business statistics” for a seminar to be held at its 2009 plenary session. The Bureau, acting on behalf of the Conference, approved the outline for the seminar at its February 2009 meeting (ECE/CES/2009/2) and requested Slovenia to prepare a note to provide basis for the discussion.

The note provides an insight into the production of business statistics in Slovenia. The approach is characterized by strong usage of administrative data sources supported by register orientation. The note describes the legal basis, the Business Register and the Statistical Register of Employment, and how the annual accounting statements and the value added tax declarations are used for producing statistics. The benefits, shortcomings and challenges in using administrative sources for business statistics are also discussed.

I. INTRODUCTION

1. Business statistics face two major challenges: providing quality statistics and the commitment to the reduction of administrative burden. Both goals can be conflicting and self-excluding; however, they can be achieved simultaneously. The document describes the approach of the Slovenian statistical system. It is characterized by the strong usage of administrative data sources supported by register orientation. The document begins by describing the legal base and the two most important infrastructural elements, namely the Business Register and the Statistical Register of Employment. The document goes on to describe annual accounting statements and value added tax (VAT) declarations as the main administrative data sources in Section IV, and the statistics produced on their basis in Section V. Section VI elaborates on the benefits, shortcomings and challenges. Section VII concludes.

II. LEGAL ISSUES

2. The prerequisite for using administrative data sources is the legal base. In the case of Slovenia, the most important legal act is the National Statistics Act governing the following:

(a) In order to implement the programmes of statistical surveys, the statistical office has the right to collect data from all existing sources. In keeping and maintaining the data collections, holders of administrative data collections (records, registers, databases, etc.), and also natural and legal persons that are defined by the programme of statistical surveys as data providers, must make use of valid standards (e.g. classifications which are national standard, unique identifications of persons and businesses);

(b) Authorities who collect statistics in their own fields of work and who are not included in the programmes of statistical surveys are obliged to define the methodological bases of their own statistical surveys after having obtained the prior opinion of the statistical office. In fact, they must notify the statistical office and ask for its opinion before setting up new or amending existing administrative data collections in their own fields of work;

(c) The statistical office may make use of identifiable individual data from various administrative data collections which are kept on a legal basis or upon written consent of the individual. In compliance with law, register holders must, free of charge, submit to the statistical office all the requested information. The statistical office may mutually link all data from the personal data collections, which are laid down in the programme of statistical surveys.

3. The provisions of the National Statistics Act listed above offer all necessary legal elements for using administrative data sources. The right to obtain individual data from all existing records and the permission to link them represent the possibility to fully exploit all the advantages of the register-oriented system. The two most important registers for economic statistics purposes are the Business Register and the Statistical Register of Employment.

III. REGISTERS

A. Business Register

4. The Business Register of Slovenia (the Slovenian administrative business register) contains the records of all business subjects in Slovenia performing any type of profit or non-profit activities, regardless of their legal or institutional form or size, with the exception of family farms. In its present form, the Business Register was set up in 1997 and kept by the Statistical Office of the Republic of Slovenia (SORS) until 2002. After 2002, the register has been under the direction of the Agency of the Republic of Slovenia for Public Legal Records and Related Services (PLRRS).

5. The main sources for the register's maintenance are the Court Register (nowadays fully integrated into the Business Register) and other primary registries that provide data to the Business Register on registration of new business subjects, and changes and cessation of already registered units, e.g. the Ministry of the Interior supplies data on political parties and on societies, the Ministry of Culture provides data on artists, the Ministry of Labour provides data on trade unions, different chambers provide data on the registered doctors, veterinarians, chemists, detectives, lawyers, etc. For small and medium-sized sole proprietors, the Business Register acts as primary registry. Government units are entered and updated on the basis of laws defining them.

6. Upon registration, each unit in the register is assigned a unique identification number which cannot be changed throughout its existence. When the unit ceases to operate, this identification number cannot be used to denote other units. The identification number is the linking element among all registers and other administrative records.

7. Characteristics which are recorded for the units in the Business Register are numerous. The most important ones for economic statistics are: identification number, name, address, activity (Standard Classification of Activities which is the Slovenian version of the Classification of Economic Activities (NACE)), institutional sector (Standard Classification of Institutional Sectors which is in line with the European System of Accounts), legal organizational form, origin of foundation capital, countries of foundation, type of ownership, etc.

8. The Business Register thus encompasses all units relevant to economic statistics. It provides the most exhaustive and the widest possible framework for the selection of units. However, another register is used for the determination of active population, namely the Statistical Register of Employment.

B. Statistical Register of Employment

9. The Statistical Register of Employment is maintained by SORS. It is updated with data from the so-called M-forms, i.e. registration of data for compulsory social security and on employment. With M-forms, persons liable to pay social security contributions (business units, including unincorporated enterprises) submit the data they have to keep in their records according to labour, social and health care and statistics legislation. They are obliged to file the insurance application, the change of data during insurance and the deregistration from insurance.

For collecting M-forms and data entry, the responsible institution is the Health Social Security Fund. The Fund also disseminates data to keepers of the records, including to SORS.

10. The observation unit in the register is persons who have compulsory social insurance or are employed or self-employed on the territory of the Republic of Slovenia and are at least 15 years old and not retired. Employment can be temporary or permanent, full time or part time.

11. Characteristics, situation and relationships of units in the register are taken from M forms, the Central Population Register and the Business Register; they are linked with uniform identifiers for persons and business entities. Characteristics which are recorded for the units in the Statistical Register of Employment are numerous, for example: personal identification number, level of professional qualification, education, occupation performed by the person, shift work, employment duration, working hours/insurance time, status of the insured/employed person, business identification number, activity code, legal organizational form, institutional sector, etc.

12. Employment covered by the Statistical Register on Employment represents approximately 85% of the total domestic employment as estimated in national accounts. The main differences are accounted for by individual farmers and unpaid family members (8% of non-included employment), self-employed and other entrepreneurs performing business as their second job (3.3%), persons working under two special types of contract (1.4%), students working via temporary employment agencies (1.3%), and illegal and hidden work (0.6%).

13. In economic statistics, the register is mainly used for three purposes. The first purpose is to estimate employment figures. The second purpose is to extract the active population of business units from the Business Register. In this respect, it also determines the second-step sampling frame for the majority of statistical surveys dealing with enterprises. The third purpose is to estimate the non-response in both, statistical as well as administrative data sources.

IV. DATA SOURCES

14. In economic statistics, a variety of data sources are used. This document focuses on two administrative sources which are considered to be of crucial importance for the production of statistics. They are the annual accounting statements and the value added tax declarations.

A. Annual accounting statements

15. Strictly speaking, annual accounting statements (profit/loss account and balance sheet) are not purely administrative data sources. They are collected for the purpose of the public disclosure of accounting statements, for statistical purposes or for control purposes. The purpose and the legal basis on which they are collected depend on the type of accounting statement.

16. There are nine types of annual accounting statements, depending on the type of business entity:

- (a) Annual accounting statements of corporations (limited liability companies, unlimited liability companies, joint stock companies, limited partnerships, limited liability cooperative society, etc.);
- (b) Annual accounting statements of small unincorporated enterprises;
- (c) Annual accounting statements of large unincorporated enterprises;
- (d) Annual accounting statements of indirect budgetary units (schools, hospitals, kindergartens, etc.);
- (e) Annual accounting statements of direct budget units (ministries, courts, government units, municipalities, etc.);
- (f) Annual accounting statements of societies (social, cultural, recreational, sports, hunting, fishing associations, etc.);
- (g) Annual accounting statements of legal persons of private law (trade unions, foundations, agricultural collectives, political parties, chambers, etc.);
- (h) Annual accounting statements of monetary institutions (banks, savings banks, savings and loans undertakings); and
- (i) Annual accounting statements of insurance undertakings (insurance companies, reinsurance companies and pension companies).

17. The first seven stated types of accounting statements are collected by PLRRS. The legal basis for their collection lies in the National Statistics Act and laws on different types of business entities (e.g. the Companies Act, the Societies Act, the Disabled Persons Organizations Act, the Accounting Act, etc.) which stipulate that all business entities must make their accounting statements public. Therefore, the data are collected for statistical purposes, for the purpose of public disclosure of accounting statements and for control purposes (only in the case of budget units and partly for unincorporated enterprises). The questionnaires that are used are adapted to these different needs and are agreed among institutions. The primary body that sets the content of questionnaires is PLRRS in cooperation with the Slovenian Institute of Auditors. The exceptions are questionnaires for budget units which are prescribed by the Ministry of Finance. The questionnaires for different types of units are adapted to and refer to the accounting scheme which is prescribed by the Slovenian Institute of Auditors or the Ministry of Finance. All accounting statements are available to SORS at individual level with all identifications.

18. Accounting statements of monetary institutions are collected by the Bank of Slovenia and accounting statements of insurance undertakings by the Insurance Supervision Agency. Both types are collected primarily for the control purpose and are available to SORS at the aggregate level.

19. Accounting statements cover the whole economy with the exception of a small part of unincorporated enterprises (data for them are available from the income tax declarations from the

production activities of households; these data are submitted to SORS by the Tax Administration at individual level with all identifications), individual farmers (estimated with the economic accounts for agriculture) and religious organizations. The coverage is full as all business entities are obliged to submit the statement irrespective of their activity or size. The response rate is high; for corporations as the most important type it amounts to 98.5% in terms of employment, it is 100% for budget units and financial institutions, and the worse for societies (5%).

B. Value added tax declarations

20. Value added tax (VAT) declarations are collected by the Tax Administration for the administrative purpose. Declarations are submitted by all business subjects liable for VAT. They submit declarations with different frequency; the majority of units submit the declarations on a monthly basis and others every three months. Data are available to SORS each month approximately 50 days after the end of the month. The database that is received by SORS contains data from all individual declarations, including the tax number.

21. Currently, 21 variables are shown in VAT declarations. The most important ones for economic statistics are: supplies of goods and services, supply of goods to other EU Member States, purchases of goods and services, acquisition of goods from other EU Member States, purchase value of immovables and purchase value of other fixed assets.

22. The VAT database is exhaustive as almost all business units are in the VAT system (the VAT system is compulsory for all units with the twelve months turnover above EUR 25 000). Units out of the VAT system are small; in the VAT system slightly above 99% of the total turnover of the national economy is included. The VAT database thus contains the large majority of active business units and is used as a direct source for statistical surveys, for the treatment of non-reporting and for grossing-up purposes.

V. STATISTICS PRODUCED

23. The above-mentioned data sources are extensively used in the production of economic statistics. For short-term business statistics, the most important are VAT declarations. They are used directly for the estimation of turnover in a number of service industries, namely retail trade, wholesale trade, repair, hotels and restaurants, transport, storage, communication, business activities and other service activities. The mentioned statistics are not produced using only VAT declarations; in order to provide results that are close enough to the statistical definition of the observed phenomenon and to stay in touch with the most important reporting units, data on turnover are collected also directly with the classical statistical survey. The number of observed enterprises in the services survey is approximately 15 000, of which 740 (5%) report also with questionnaire.

24. VAT declarations as the main data source for the short-term turnover estimates were introduced in 2007. The main reason was the commitment to reduce the reporting burden. Prior to that, approximately 5 600 enterprises were directly surveyed. Compared to the current number of enterprises (740), this represents a major decrease in the burden imposed by statistics.

25. Structural business statistics almost entirely rely on annual accounting statements. They are used to produce relevant statistics in all observed activities (from categories C to K of NACE Rev.1) and for a number of variables, e.g. turnover, output, value added, costs of material and services, purchases of goods, trade margin, inventories, operating surplus, wages and salaries, social security costs, etc. Out of the total estimated turnover in these activities, 99% is estimated on the basis of annual accounting statements, 0.4% on the basis of income tax declarations from the production activities of households and 0.4% on the basis of VAT declarations.

26. The only large-scale statistical survey conducted within the structural business statistics is the investment survey. Nevertheless, VAT declarations are used to estimate data for non-reporting units and for grossing-up the survey data to total population.

27. The situation in the case of national accounts is similar. For the output approach, annual accounting statements, income tax declarations from the production activities of households and VAT declarations are used to estimate approximately 80% of the total value added produced by the national economy. What is not covered is value-added generated by owner-occupiers (6%), value added generated by individual farmers (2%) and different types of adjustments, e.g. conceptual and exhaustiveness, including illegal activities (12%).

28. Finally, employment estimates need to be mentioned. For all economic statistics, employment figures are predominantly obtained from the Statistical Register of Employment. No adjustments to the register data are made for the short-term statistics purposes and only minor ones in structural business statistics. Adjustments made in national accounts are already described in paragraph 12. In the past, almost all branch statistical surveys contained questions on the number of employees. In addition, there was a special employment survey covering all activities. Such a situation caused unnecessary duplication of work and confusion among users. It was then decided to eliminate the special employment survey, to avoid employment questions in branch surveys as much as possible and to use register data as the principal data source for employment estimates (from the demand side perspective).

VI. EVALUATION

29. The main benefit of administrative data sources is the coverage. They cover almost all economically important units; consequently, in business statistics no adjustments for non-observed units are usually necessary and for national accounts, with the widest coverage of activities, relatively small corrections are needed (see paragraphs 12 and 27). This benefit is extremely important for small economies in which the compilation of statistics on the basis of sample surveys can cause disproportionate burden compared to burden in large economies. The size of the sample is not proportionate to the size of the economy (size of the observed population). To produce quality statistics in a small economy, the number of units included in the sample should be almost the same as in a large economy.

30. Another important feature of administrative sources is small non-response which, in the case of Slovenia, is negligible. Missing units are usually those that went bankrupt or submitted the statements after the deadline. According to our experience, almost all units register upon start of their work and almost all submit relevant statements and reports. The size of the so-called

grey economy originating from deliberate non-registering or deliberate non-reporting is therefore quite small, amounting to 1.4% of Gross Domestic Product (0.4% and 1.1%, respectively).

31. The third advantage is small costs of businesses and administration when compared to benefits. As questionnaires for accounting statements are agreed between institutions, the same data are used for many different purposes. In addition, accounting statements are publicly available and are extensively used also by the research community. On the other hand, for business entities it is important that accounting statements are based on the prescribed chart of accounts. To fulfil the questionnaire, enterprises do not need to perform a lot of additional work; they just need to use data already available within the enterprise. Due to the confidentiality requirements, VAT declarations are not publicly available; nevertheless it is shown above that substantial reductions of costs can be achieved by using them for statistical purposes.

32. When using administrative data for economic statistics purposes, some weaknesses need to be mentioned as well. Even though statisticians can influence the content of questionnaires, the definitions of variables are not always in line with the statistical definitions. To bring definitions closer to statistical requirements, two solutions are used in SORS: the first one is to conduct regular, small-scale statistical surveys, including only a limited number of enterprises. This approach is also important to keep at least minimal contacts with the most important reporting units (see paragraph 23). The second option is larger ad-hoc sample surveys. These surveys are either independent or attached to some other surveys. Their main purpose is to obtain more detailed breakdown of particular variables or to acquire information not available in administrative sources. These surveys are not conducted regularly; instead their results are used to produce benchmark estimates and are then extrapolated in the following years. Administrative data sources thus cannot fully replace classical statistical surveys.

33. An important factor for SORS in dealing with the administrative data is the competence of staff. To produce statistics on the basis of administrative sources, the statisticians need different and additional knowledge from that required for conducting classical statistical surveys. The statisticians need to not only understand statistical concepts but they must also be familiar with administrative definitions and concepts and relationships among them. The statisticians must also understand that the observed population in the administrative source is not necessarily the population observed for statistical purposes; in this respect, relevant mechanisms need to be established to adjust for the coverage. Further on, new approaches to data control are needed and this is complicated by the fact that usually many linked data sources need to be checked simultaneously. Data provided are increasingly less checked directly with observed business units; instead, statistical editing procedures are being used. All these methods are much more complicated and demanding than the classical ones. Therefore much attention has been paid to addressing these issues and to educating and qualifying statisticians to cope with the different approaches to produce statistics.

34. Finally, the use of administrative data poses a potential threat to the statistical system. One of the most important objectives of administrative data use is the reduction of burden. However, this goal is not limited to statistics but it is also pursued by other parts of administration. In the past we faced the undesirable changes in administrative questionnaires and the abolishment of important sources due to the reduction of administrative burden by different institutions. This brings a certain degree of instability to the system, frequent changes in methodology, difficulties

in providing comparable time series and additional costs. Therefore, increased coordination and cooperation with different institutions are needed to maintain the necessary data sources. Here, SORS has one of the most crucial roles. For this purpose, it developed additional mechanisms for coordination beside the National Statistics Act (like Statistical Advisory Committees).

VII. CONCLUSION

35. In Slovenia, the statistical system has a long tradition of using administrative data sources for producing economic statistics. The Business Register was established in 1976 and it now includes almost all business entities. The Statistical Register on Employment which is based on administrative records was set up in 1986; it includes the bulk of employed population. Both registers together with unique identifiers of business units and persons, and the strong legal base of the National Statistics Act, represent the most important infrastructural elements of the system of economic statistics. As regards data sources, annual accounting statements are an invaluable direct data source for structural business statistics and national accounts and an ancillary data source for short-term business statistics. More recent are experiences in using VAT declarations and this can be attributed also to the fact that VAT was introduced only in 1999. Nevertheless, VAT declarations are already used to a great extent, and further possibilities for their utilization still exist.

36. For Slovenia, the experiences of using administrative data are extremely positive. Such an approach is the most optimal one; it guarantees almost full coverage, and good quality statistics and reasonable costs for enterprises. There are also, of course, some weaknesses stemming mainly from different definitions and un-coordinated changes in the administrative system. Nevertheless, these shortcomings are more than outweighed by the benefits of the present system.

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