ECONOMIC COMMISSION FOR EUROPE   STATISTICAL COMMISSION

CONFERENCE OF EUROPEAN STATISTICIANS

Meeting of Experts on Business Registers

Tenth meeting
Geneva, 18-19 June 2007
Item 6 of the provisional agenda

**QUALITY IMPROVEMENTS IN BUSINESS REGISTERS AND IMPLICATIONS
OF REVISIONS OF THE GENERAL INDUSTRIAL CLASSIFICATION OF
ECONOMIC ACTIVITIES WITHIN THE EUROPEAN COMMUNITIES
(NACE) AND THE INTERNATIONAL STANDARD INDUSTRIAL
CLASSIFICATION (ISIC)**

**METHODOLOGICAL RECOMMENDATIONS ON THE DETERMINATION
OF "FALSELY" ACTIVE UNITS AND THEIR IDENTIFICATION IN
BUSINESS REGISTERS**

**Presented by the Interstate Statistical Committee of the
Commonwealth of Independent States (CISSTAT)**

The meeting was organized jointly with the Commission of the European Communities (Eurostat) and the Organization for Economic Cooperation and Development (OECD)

SUMMARY

The present paper was prepared on request from the Conference of European Statisticians (CES) Steering Group on Business Registers for presentation and discussion at the joint ECE/Eurostat/OECD Meeting in Geneva, 18 and 19 June 2007. This paper presents some methodological recommendations on the determination of "falsely" active units in business registers, which rest on the findings of a study of the operation of business registers in the countries of the Commonwealth of Independent States (CIS) conducted in 2006.

This paper identifies for consideration an important facet of improving the quality of statistical business registers and forms a basis for the discussion on the quality of registers in CIS countries.

GE.07-21738 (E)   310507   040607

I. INTRODUCTION

1.   Business registers are acquiring increasing importance as a means of obtaining statistical data on progress with the execution of short-term economic development programmes and figures on the industrial structure of the economy. In fact, registers constitute the only effective means of securing a complete statistical record of enterprises in each branch of the economy and, if properly set up, can serve as a sound basis for sample surveys.

2.   In order to obtain high-quality statistical data on enterprises, it is essential to have a relatively complete and up-to-date register of enterprises and organizations irrespective of their form of ownership or their legal form, which provides the identification numbers of the businesses and also information about their address, their principal activity, their size and other indicators. The growing need for such information not only from the authorities at all levels, but also from businessmen, voluntary associations, the general public and other users, places additional demands on the quality of this information and the methods of gathering it.

3.   Business registers have been established and are operating successfully in all the countries of the Commonwealth of Independent States (CIS). They have different names, but as they employ a single system of classification and coding, they all act as a statistical inventory and an unambiguous means of identifying companies registered in the territory of CIS States (see table 1).

4.   In addition to fulfilling the above-mentioned function, the business registers of CIS countries in practice serve as the basis for establishing a general statistical compendium, organizing random sample surveys, rotating and coordinating the survey samples and compiling statistical subregisters (for example, of small, agricultural or industrial businesses, building firms, etc.). One aspect that is important for the functioning of these registers is their coordination with the registers of other administrative systems within CIS States.

5.   If the functions listed above are to be performed effectively, they must meet the requirements placed on the processes of inventorizing the surveyed facilities and of establishing and maintaining register databases. Hand in hand with this, the methods and means of improving the quality of business registers must be constantly perfected. **One gauge of quality is a drop in the proportion of "falsely" active units in the register.**

6.   In this paper an attempt has been made to work out methodological recommendations on the determination of "falsely" active units in business registers. For this purpose, the author analysed the reasons for the emergence of "spurious" units and looked at the methods and means of identifying them and also at measures to prevent them from being included in business registers compiled as part of the government statistics of the Commonwealth member States.

Table 1

List of the titles of registers in full and abbreviated form

CIS countries	Abbreviation	Full title
Azerbaijan	GRSE	State Register of Reporting Units of the Republic of Azerbaijan
Armenia	GR	State Register of the Republic of Armenia
	BR	Business Register (of legal entities and individual entrepreneurs)
Belarus	EGR	Central State Register of Legal Entities and Individual Entrepreneurs
	RESTAT	Statistical Register
Georgia	EGRPO	Central State Register of Enterprises and Organizations in Georgia
Kazakhstan	SR	State Statistical Register (enterprises, local units and private individuals covered by the statistical record)
Kyrgyzstan	EGRSE	Central State Register of Statistical Units
Moldova	RENIM	National Interdepartmental Register of the Republic of Moldova
	RENUS	National Register of Statistical Units
	RGT	Register of Agricultural Holdings (Farms)
Russian Federation	Statregistr of ROSSTAT	Statistical Register of Business Entities of the Statistical Committee of the Russian Federation (ROSSTAT)
Tajikistan	GRPORT	State Register of Enterprises and Organizations in the Republic of Tajikistan
Turkmenistan	SRXS	Statistical Register of Business Entities
Uzbekistan	EGRPO	Central State Register of Enterprises and Organizations
Ukraine	EDRPOU	Central State Register of Enterprises and Organizations in Ukraine

II. QUALITY CRITERIA AND STANDARDS FOR BUSINESS REGISTERS

7.   The keeping and updating of business registers is a complicated process. The quality of the register depends on how precisely this process is organized and on the accuracy of the information which they contain. The quality of a register can be determined and evaluated by benchmarks which in some ways are interconnected and in others are largely self-standing and should therefore be viewed in isolation from one another. These benchmarks include:

(a)   The promptness with which businesses are registered and the extent to which the registers cover all the businesses which have actually been set up and are actively participating in the country's economy;

(b)   The accuracy and freshness of the business register's data on each business;

(c)   Correct identification and the percentage of duplication in the register;

(d)   The number of "falsely" active units, or phantom businesses, registered.

8.   The recommendations on registers drawn up by the permanent Business Registers Working Group (comprising specialists from both European Union member States and countries of the European Free Trade Association), which are based on the assumption that the registers are mainly used for sample surveys, advocate the following quality standards:

(a)   With regard to the promptness of record-keeping and the coverage of businesses by the register - efforts must be made to ensure that 95% of businesses created during year N are registered and recorded in year N+1;

(b)   With regard to the accuracy and freshness of the business register's data on each company - efforts must first be made to reduce the errors introduced when classifying the company's activity and size. In order to maintain these quality indicators at the proper level it is recommended that procedures for updating and checking stratification variables should be carried out at least once a year in the case of units included in control sample surveys and at least once every four years for all the other units. Size indicators must be updated annually, within a one-year time frame, for all units by consulting the appropriate administrative sources;

(c)   With regard to correct coding and the percentage of duplication resulting from inaccuracies introduced during the registration, recording and surveying of firms - efforts must be made to reduce the level of duplication during each survey to no more than 1%;

(d)   With regard to the percentage of "falsely" active units, or phantom businesses - even the most efficiently designed and managed business registers will include, a certain number of such businesses in their databases, since there is always some delay between the moment a business stops operating and the actual registration of its closure, it is recommended that the proportion of "falsely" active units be limited to 50% of the number of entities which have gone out of business within each size category in the register.

9.   In the context of these recommendations on quality standards, it must be noted that, as can be seen from national and international practice, not all defects and inaccuracies in registers are regarded in the same way by users; their importance and seriousness depends on how the register is used. With registers primarily intended as a basis for sample surveys, the most serious shortcomings are the following:

(a)   Less than full coverage of business entities;

(b)   Duplication;

(c)   Errors in firms' addresses, since these errors can hamper contact with the firm and, in some cases, make it impossible to determine the problem faced by the administrator of the register: whether a firm has gone out of business or its details have been incorrectly registered.

10.   Errors due to the inaccurate entering of stratification variables, the size of the firm, or its principal activity, are less serious, since, by using typical control samples, the survey effectively covers all firms and these errors will not be of a systematic nature. But if statisticians obtain increasingly divergent results, they will be forced to conduct more extensive - and hence more costly - surveys.

11.   If the purpose of the investigation is to study the market in goods and services, however, the most important criterion will be the accuracy of its classification criteria. When a register is used for this, whether or not all companies are covered will be of less significance and, provided the coverage is reasonably extensive and even, a small percentage of "falsely" active units will not cause any great problem.

III.   NOTION OF "FALSELY" ACTIVE UNITS IN BUSINESS REGISTERS: REASONS FOR THE PRESENCE OF "FALSELY" ACTIVE UNITS

12.   According to the definition contained in part I (business registers) of the Multilingual Statistical Glossary published by Eurostat in 1994, **the term "falsely" active unit (phantom) means a unit which is recorded in the register and listed in it as being economically active whereas, in fact, it is inactive.**

13.   Cessation of activity can be of two kinds: legal and economic. Legal cessation of activity presupposes that economic activity has also ceased, whereas the converse is not true: a unit which no longer engages in economic activity can still exist legally.

14.   Units which have ceased both their economic and their legal activity are often called "dead" and must be removed from the register.

15.   A unit which remains legally "alive", but which has, in fact, been inactive for some time, is often described as "dormant". Such units remain in the register for such time as is specified by the register's rules.

16.   The appearance of a "dormant" unit in the register can be quite legitimate. For example, under a country's law, a newly set-up, legally registered unit is entitled under domestic law to defer its start-up for up to one year. More often, however, its appearance has a not entirely statutory basis which does not provide genuine accountability for failure to comply with time limits, or even for the wilful omission of information about a change in the activity "status" of a business.

17.   The appearance of "falsely" active units in the register can be accidental or deliberate. Many entrepreneurs do not report the cessation of business activity, since until the very end they are unsure whether it is final or temporary.

18.   It is not, however, rare for an entrepreneur who has falsely registered a company for a specific operation (for example for the one-off carriage of goods through customs) then to disappear. This results in yet another "falsely" active unit appearing in the register.

19.   "Falsely" active units may appear when the wrong address is given wittingly, or if the address is deliberately changed some time after registration. The consequence (if the provision of this information does not represent a bookkeeping or statistical reporting requirement) is that such a unit figures in the register as being legally alive but in fact inactive, since it is impossible to obtain any information about its activity.

20.   Sometimes the change in ownership of a firm - if it is misinterpreted as the disappearance of the firm - can also produce a "dead" unit.

21.   Statistically speaking, these two states of being "dead" or "dormant" are relatively similar: the unit no longer engages in business activity and consequently no longer takes part in the economic process. It is therefore important for the statistics to capture this information, so that these units can be excluded from analyses.

IV. METHODS AND MEANS OF IDENTIFYING "FALSELY" ACTIVE UNITS

22.   An analysis of national and international practice with regard to the functioning of business registers has shown that there are few methods and means which could be employed to pinpoint "falsely" active units. All the methods and means mentioned below can in fact be combined and are capable of revealing not only "falsely" active units, but also other mistakes linked to different quality criteria.

A. Conducting control surveys

        This method is particularly designed to evaluate the quality of a register and is regarded as the classic method. These surveys cover only "high risk" units and check the accuracy of the data in the register. They are especially valuable in that they reveal not only whether or not units are active, but also coding errors. Such surveys will be more of an administrative than a statistical nature and provision should be made for them in the legislative texts setting up registers. Many countries use this method.

        This method is, however, rather ineffective for determining the quality of registers which display two serious defects: insufficient coverage and a high percentage of duplication.

B. Cross-checking the databases of business registers kept by statistical bodies against the databases of other administrative bodies

In all countries, alongside statistical registers, there are also registers (lists or card indexes) of other administrative bodies which ensure the necessary coverage of business entities for them to perform their assigned functions. These include, for example, registers of tax, financial, social and other administrative bodies, as well as the databases of telephone directories or electricity companies. By comparing these files with the statistical register it is possible to identify those units in the statistical register which are missing from the databases of other administrative sources. A further check is necessary, to ascertain whether or not they have discontinued their business activity and thus to single out the "false" units from the total number of units identified in this way. Eurostat surveys have confirmed that this method satisfies statistical requirements best. This method is currently in wide use by all CIS countries.

C. Combining the databases of several administrative registers (card indexes)

A single administrative register (card index), even when it is of a high quality, often does not cover all units, especially small enterprises, or does not take into consideration a number of descriptors and indicators which are essential for statisticians (for example the size of the firm, whether or not it has a licence for an activity, etc.). In this case, the decision is often taken to create a register for statistical purposes on the basis of two or more administrative registers. Although this is the preferred method for identifying "falsely" active units, the updating of such a register is considerably more difficult and can lead to one and the same firm being recorded several times, unless identical methods and rules for entering names and addresses are applied. In this case, statistical bodies must cooperate closely with their partners.

D. Control survey of a representative area

It is possible to employ a more expensive, but more reliable method, that is to say by conducting a mini-census of enterprises in a typical section of a geographical area by systematically "combing through" that section. The statistics record all companies operating in the selected section and disclose those not listed in the register; if there is a printout from the register of all firms in the given typical section for the previous accounting period, this can be used to track discrepancies in the listing of firms and organizations, including those companies which are now inactive in the given area, but which were previously included in the register. Following further analysis (to clarify whether there are any cases of relocation), those units which are "falsely" active can then be identified.

E. Conducting a general census of enterprises

In a number of countries a general census of enterprises is carried out every five years. Statisticians draw up a questionnaire, go down every street in the country, identify all business entities and request their executives to fill in the questionnaire. By this method a register can then be drawn up as at the day on which the census is conducted. This register can be used as a basis for sample surveys until the next census, but it must be updated as the data which it contains soon becomes stale and over time it gets harder and harder to detect "falsely" active units.

In the period between censuses of enterprises, the register can be updated in various ways: by including the data of sample surveys, by holding micro-censuses, by cross-checking it against the databases of registers kept by other administrative bodies or by a combination of these methods. But this is rather expensive and best suited to use in small countries.

F. Indirect monitoring by checking the availability of jobs

When statistical bodies correctly and promptly update the indicators of job availability in their registers and compare job estimates both by geographical area and by entire sectors of business activity which are based on data taken from the register with job estimates based on data taken from traditional sources of information, a much more accurate indication is obtained of the margin of error introduced by the inclusion of "falsely" active units and due to the inadequate coverage of firms in the register.

G. Increasing the number of register users

23.   In conclusion, in the light of the above consideration of quality control methods, it is clear that it will only be possible to determine and detect the most widespread errors and shortcomings (including "falsely" active units) and to eliminate them if registers increase the number of users. From this point of view, permitting the largest possible number of users to have access to the list of units recorded in the register, even if such users are not statisticians, will help create the conditions for improving the quality of the register as a whole.

V. MEASURES TAKEN TO ELIMINATE AND PREVENT THE INCLUSION OF "FALSELY" ACTIVE UNITS

24.   In order to eliminate shortcomings linked to the presence of "falsely" active units and to improve the quality of the register as a whole, a wide spectrum of organizational and methodological measures are recommended. Most national statistical services in the CIS countries are already successfully using a number of effective measures which merit further development. Mention should be made of the following.

A. Cross-checking the databases of statistical registers against the registers of tax authorities

By cross-checking the databases of these two systems it is possible:

(a)   To determine the extent to which firms are covered by these registers and accordingly to bring to light discrepancies in the listing of businesses;

(b)   To ascertain how far these firms have been unambiguously identified (identification codes and names), their descriptors are clearly coded (location, kinds of activity, forms of ownership, etc.) and their address and other data are precisely recorded;

(c)   To analyse the results of cross-checks, to list companies missing from the registers and to determine the accuracy of the entries of those which are included;

(d)   To record and identify the companies missing from statistical registers and to update the data on those included in the register.

25. In order to carry out this cross-checking exercise, the statistical systems and tax authorities of the CIS countries identify the specific tasks involved and the organizations responsible for performing them, produce the necessary guidelines, manuals and software tools, do the groundwork and make the relevant organizational arrangements.

26. Once these cross-checks have been made, the statistical bodies and tax authorities often work together to produce and issue summary recommendations on the methods to be used, with a view to ensuring the comparability of the data in the registers by streamlining the procedure for introducing modifications into the databases of these systems as discrepancies come to light. For example, in order to coordinate the information and methods used in the two systems' registers more effectively with a view to ensuring their quality, each statistical entity included in the registers has been assigned an additional descriptor, the tax identity number (NIP) and in most cases the procedure and method followed in making essential changes to entries in the register for an enterprise's actual address and telephone number have been harmonized.

27. Cross-checks of this kind are carried out annually in practically all the CIS countries.

28. Pursuant to agreements between government statistical services and registration bodies, tax authorities and credit providers, firms can now only register for tax purposes and open current accounts on production of an official letter confirming that they have been entered in the statistical register.

B. Use of the data of annual (quarterly) financial statements and the data of subregisters for the periodic cross-checking of listings of businesses submitting such financial statements to government statistical bodies against the data in the register

29. The adoption by most CIS countries of legislation on the registration of legal persons, stiffening the requirement for enterprises and firms to keep the government statistical bodies informed of their current status and any changes to it has necessitated the use of various sources of data on active firms for the compilation of the relevant statistics. As a result, the number of cases in which the listings of firms in these sources differed from those contained in the corresponding master lists of companies in the register has decreased significantly (as, for example, in the case of wholesale trade and agricultural holdings, or farms), as has the number of discrepancies in the lists of enterprises in the same branch of the economy, used for the compilation of accounting figures on labour, output, finances, etc.

30. In many instances, the reason for the discrepancies between the total number of firms in registers and in the branch subregisters is the disparity between the declared and actual properties of businesses. The declared type of activity is liable to change most frequently, especially when small enterprises are concerned. For this reason, as noted above, annual financial statements have been adopted as the principal source for updating the basic type of activity.

31. Through the regular cross-checking of statistical registers against the registers of tax authorities and those of other ministries and departments and the use of the database containing annual financial statements, it is possible to fill many gaps in the data and significantly to raise the quality of the register.

32.   In 2006, the CIS Interstate Statistical Committee carried out a periodical survey of business registers in CIS countries and evaluated their quality in accordance with the above-mentioned criteria (see table 2).

Table 2

Evaluation of the quality of a register

CIS countries	% of coverage	Updating interval	% of firms covered by the updating exercise	% of duplication	"Falsely" active units		% of mistakes in use of classification codes
					Dead	Dormant	
Azerbaijan	95	yearly	98	2	<20		<5
Armenia	85	yearly	60	-		<40	-
Belarus	90	3 times a month	70	<0.02	-	<3	<2
Georgia	93	yearly	98	<0.1	8-10	<30	<1
Kazakhstan	98	daily	98		20-23	15-18	<5
Kyrgyzstan	100	weekly	75	-	20-25	27	-
Russian Federation	97	monthly	90	<0.1	<20-30		<1
Tajikistan	98	quarterly	90	0.1	<5	35	<1
Turkmenistan	100	yearly	60	-	2		<2
Uzbekistan	100	monthly	75	0.3	-	9.2	<1
Ukraine	≅100	daily	100		<20		<1

33.   The above evaluation shows that the quality of business registers operating in CIS countries is close to, or within the mark.

34.   The following action is recommended with a view to pursuing work to improve the quality of the register as a whole, including by reducing the percentage of "falsely" active units:

(a)   Conducting special control surveys on a systematic basis;

(b) Using mini-censuses for different regions in order to detect "falsely" active units;

(c)   Continuing work to upgrade the register's information sources;

(d)   Refining the system of making direct use of information concerning the start-up or closure of businesses drawn from the business ledger card. To this end, in addition to introducing in real time the full extent of changes of the essential elements tracked in the ledger card, recourse should be had to repeated updating (which, as a rule, is carried out overnight) in order to establish in the database a short record including the following essential elements:

(i)   Identification number of the change;

(ii)   Date of processing and actual date of the change;

(iii)   Code for the change in each of these units.

35.   The list of changes drawn up at the time of updating, with the deletion of superfluous descriptors (full name, detailed address, etc.) must be kept in an indexed sequential file, which can be used monthly and annually to generate statistics on the setting up or closure of enterprises. These data can be more precise and make it possible to distinguish, for example, between new enterprises and enterprises which have resumed operation or been created through mergers. Since they identify the circumstances surrounding the cessation of a company's activity, these data permit a distinction between a new enterprise which has arisen to take the place of one which has gone out of business and an enterprise which has been absorbed by one already in existence.

- - - - -