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BEST PRACTICES FOR PUBLICATION, DISSEMINATION AND WIDER STATISTICAL USE OF BUSINESS REGISTER DATA

### Dissemination and Statistical Use of Business Register Data

Note by Statistics Finland, Finland

#### I. INTRODUCTION

- 1. The decision of the regular maintenance of statistical business register (BR) was made in Statistics Finland already in 1968. So in autumn 2008 we celebrated BR 40 years anniversary. The first statistics were published of the year 1972. Already before regular BR there were two business censuses carried out with reference years 1953 and 1964.
- 2. In the beginning the published statistics on business population were the main result of the work. During years BR has taken many new duties and it serves now as a very important and versatile tool in register based statistics production and in Finland a part of BR is used also as databank for chargeable data services. Business register is also responsible for the rules and application of Nomenclature générale des activités économiques dans les Communautés européennes (NACE) classification.

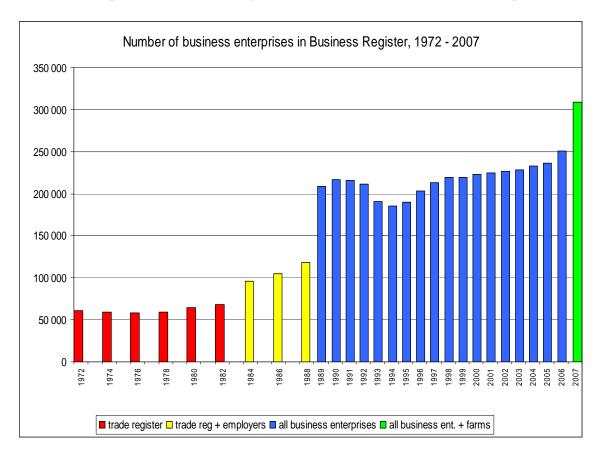
# II. A SHORT SUMMARY OF HISTORY AND DEVELOPMENT OF BUSINESS REGISTER IN FINLAND

- 3. In the beginning register was called 'Register of enterprises and establishments', meaning that register covered those two entity levels. During time the name 'Business Register' has been fixed in use and coverage of the more complicated unit structure of this day from local kind-of-activity units (LKAU), local units (LU), enterprises (ENT), legal units to enterprise groups (EG) has been realised.
- 4. In its earlier phases BR statistics on business population compensated in national account calculations for the lack of other more sophisticated statistics particularly of service sector statistics, which were developed later.
- 5. In the beginning the register covered sales tax units, which constitute only a part of business enterprises. Later register coverage has grown phase by phase and already quite early all employers and all business tax units were included into the register. BR covered also the public sector after central government data collection was established in 1985 in co-operation with regional employment statistics and State Treasury and later in 1990 also local government units were taken to BR. The agriculture sector is the last expansion of coverage and it was realised in 2007, see Figure 1.
- 6. At the same time production system was developed so that BR data could be finalised every year although it was earlier updated every second year. In early years only some data were available from administrative files, and plenty of important material was collected by BR surveys. But as soon as information technology (IT) systems and administrative registers increased in the Finnish society and administration Statistics Finland took them in use.
- 7. In consequence Business Register was developed as useful framework for business surveys. And already in 1980's the interest to develop register based statistics production in Finland was important accelerator to develop BR as good coverage base register for statistics production. Because well developed unique identification (ID) systems are important preconditions for register based statistics production, Statistics Finland participated in all efforts to create the unique business identification system in use in Finland. In 1990 Finland reached the goal of drawing register-based population census.
- 8. Tax administration was the first organisation to generate surrogate business ID already in 1968 and according to legislation of 1991 Statistics Finland had the duty to disseminate public code of businesses. During 1991- 2001 Statistics Finland even maintained chargeable phone service in order to disseminate public ID code.
- 9. As economy and business structures have become more complex the need for Enterprise Groups as statistical unit has arisen and further on globalisation has made it necessary also to keep track on multinational EGs.
- 10. Statistics Finland has participated in international co-operation in BR area and already in the beginning of membership of European Union (EU), BR fulfilled quite well the requirements of European Commission BR Regulation, except enterprise unit.

- 11. In 2007 register of enterprise respondents was implemented as new service of BR. Service activities are directed towards survey respondents and surveying statistical domains of Statistics Finland.
- 12. In annex 1 there is a summary of some important milestones in the development of Business Register.

Figure 1

Time series of published Business register statistics, number of business enterprises



# III. USE AND DISSEMINATION OF BUSINESS REGISTER DATA

#### A. Direct statistics

13. Business Register produces annual statistics on business population, quarterly statistics on Enterprise openings and closures and statistics on business demography.

### 1. Annual statistics of Business Register data

- 14. Annual statistics drawn from Business Register are regularly published in Statistics Finland home pages (<a href="http://tilastokeskus.fi/til/syr/index\_en.html">http://tilastokeskus.fi/til/syr/index\_en.html</a>) and as the annual publication *Corporate Enterprises and Personal Businesses in Finland.* The publications contain statistical tables, time series and some analyses. The tables are produced according to classifications like NACE, regional classifications, legal form, size categories, etc. The variables are number of units, employment, turnover and sum of wages and salaries. The statistics concerns the units: enterprises, local kind-of-activity units and enterprise groups. Annex 3 shows examples of tables, which are regularly put on Statistics Finland home pages. In addition the enterprise group data give also new potential to analyse business structures, for example to study centralisation of the economy or to apply the independence rule when identifying the small and medium enterprises (SMEs).
- 15. The publication belongs to official statistics in Finland. Some of these variables are also included in structural business statistics (SBS), so there is partly overlapping data production. Anyhow BR statistics represent the analogous basic features on business population as population statistics on human population.
- 16. The production of statistics means additional work for BR. The use in statistics requires more accuracy and quality from specially size variables, employment and turnover, than the use as mere sampling variable. In addition the size variables should also be consistent between the enterprise and establishment level data. Data collection and linking administrative and survey data are challenging, especially in the cases of changing business structures.
- 17. The employment variable is measured as full time equivalent (FTE), turnover is cut or expand to approximate 12 months value in cases when accounting period deviates from 12 months.
- 18. Annual data files. Annual data files are produced for the production and publishing of statistics, time series analysis on the enterprise population and its changes. The annual data file is extract from BR production data base and it is drawn when all data of the statistical year have been completed. The annual data files are produced according to the same principles every year so that comparability over time is ensured.
- 19. The annual data files include only units that have been active during the statistical year. When defining the enterprise population of the statistical year the following threshold values are applied: Active for at least six months in the reference year, and employing at least 0.5 persons (FTE) or having a certain size of turnover in the reference year (in 2007 at least € 9,636)
- 20. These threshold values ensure that the comparability of the changes of the business population is maintained. In BR database there are more than half million active legal units, but only 310 000 business units in the annual statistics, which excludes the smallest, public and non-profit sector units. See picture 1.

### 2. Enterprise openings and closures

- 21. Quarterly statistics on Enterprise openings and closures are actually produced from legal unit data since these statistics are published very soon after registration. The population constitutes of employers and value-added tax paying units (VAT units), whose reporting period to tax administration is monthly, so their existence is easy to follow. This statistics does not describe real births and deaths of enterprises, only administrative ones. The statistics serves mainly as a kind of indicator of business cycles, and you have always to be cautious when interpreting the figures.
- 22. Anyhow, the tables are produced by industry, by region and by legal form. Number of enterprises (legal units) is the only variable. Many regional organizations are interested of these data. The data are published 4 months after the reference period. http://tilastokeskus.fi/til/aly/index\_en.html

# 3. Business demography statistics

23. Business demography statistics are the real description the phenomenon on the enterprise births and deaths. These statistics are produced by the harmonised EU methodology and they are much delayed if compared to above mentioned statistics. Referring to methodology and variables used these statistics can be produced 18 months after the reference period.

# B. Business Registers use in statistics production

- 24. Use of Business Register data is quite autonomous by staff in Statistics Finland. BR database is available for on-line use as well as reading by batch programs. Some systems have direct connection to BR database from their own applications. The autonomous use of BR data is supported by metadata like variable and process descriptions. BR has some 300 users among Statistics Finland staff.
- 25. Besides survey frame BR serves as data mine for various businesses and other statistics. We can say that BR is enclosed in production process of every business and even many social statistical domains. BR meets very well already the needs of statistics production. It covers all industries and even the small units relating to gross domestic product (GDP) and it delineates the most important statistical units.
- 26. It also realises well the principle of bringing many kinds of administrative data in use in statistics (see Annex 2). There are 67 separate updating events from 18 separate administrative data sources during a year. In addition 16 questionnaires are sent to BR respondents every year.
- 27. With the above mentioned operations and measures BR is able to maintain data content which is enough wide and whose timeliness is fairly good. A couple of recent examples of trust on BR: SBS have recently given up collecting the employment data for themselves and they use BR employment figures in their production process. Relating to the implementation of NACE Rev 2 it is forbidden in Statistics Finland to use any other NACE code than the one from BR.

- 28. However, new needs have arisen. There are topics like, globalisation, multinational enterprises (MNE), need to better manage data collection from the complex and major enterprises, need to delineate the enterprise unit, to start profiling activities and Statistics Finland strategies to further improve the consistency of its statistics. The former BR database architecture was implemented in 1997.
- 29. These all reasons together have made it reasonable to start the BR redesign project. Such a planning project has started in the beginning of this year. The main goals are: to define a data warehouse in connection to BR, to define the interactive nature of BR and determine interfacial processes between BR and other statistical domains, to determine a metadata-oriented approach to reception of administrative data and to plan the possible changes of BR data content.

# C. Chargeable information services

- 30. The customised information services from BR data have been publicly available for general use since the 1980's. Services are available either as standardised form or totally tailored according to customer needs. The customer demand concerns either aggregate statistical compilations or micro data. Lists of enterprises and local units can be targeted in various ways according to every classification variable in the register. For this there is a ready application which produces the final file according to the units and variables that the customer has requested. Some customers, such as big companies, will supplement or update periodically their own registers.
- 31. Some examples of a statistical compilation services: calculations of tax allocation are produced for the Ministry of Finance and Tax Administration. In different regions the role of the local unit data is important and several municipals and federations of municipals are direct customers of the BR. Regional organisations are also benefiting the business portal financed and organised by Ministry of Employment and the Economy. This portal contains some unit level information about the largest enterprises in different regions.
- 32. BR service team by four persons takes care of the service activities. The Business Register Service Guide <a href="http://tilastokeskus.fi/tup/yritysrekisteri/palveluopas\_en.html">http://tilastokeskus.fi/tup/yritysrekisteri/palveluopas\_en.html</a> is produced for customer presentations and as a marketing tool.
- 33. The majority the customers of chargeable services come from the private sector, while the public sector accounts for 30 per cent of the total volume of services. The banking and insurance sectors and research institutes make up the most important private sector customers. The most important public sector customers are ministries, local government institutions and regional planning organisations.
- 34. A special service is directed to researches, namely in the Research Laboratory. This is a place where plenty of Statistics Finland's data are available for outside researches. Basically the unit identification codes are ciphered in these data files.

# IV. QUESTION OF MICRO DATA AND CONFIDENTIALITY

- 35. The statistical data are totally confidential. In general all data are published aggregated, so that no single entity's data will be available. In Finland Business Register is the only exception to that main principle. Micro data are available according to the authorisation of Statistics Act (280/2004) <a href="http://tilastokeskus.fi/meta/lait/tilastolaki\_en.html">http://tilastokeskus.fi/meta/lait/tilastolaki\_en.html</a>.
- 36. The Statistics Act includes specific provisions on the public data items of the Business Register. The list of public data includes:
- (a) Business identity code and its validity period, legal form, name, industry, language code, municipality of domicile and public address, as well as other public contact information;
  - (b) Type of owner;
  - (c) Location and establishments of activity;
  - (d) Size category of turnover;
  - (e) Total number of personnel and number of personnel by municipality;
  - (f) Engagement in foreign trade;
- (g) Liability to pay value added tax, activity as employer and registration in preliminary tax withholding register; and
  - (h) In respect of enterprise groups, group relationships.
- 37. There are some consequences to data collection. Although the attitude in the Finnish society is in favour of open registers, the deliver of BR data has some sticky impact on response of surveys. The Statistics Act demands to explain to respondents the purposes of use of survey data. In all BR survey letters to the respondents it is then told that the collected data are also used in data services.

# V. STRATEGIC GOALS FOR BR IN THE STRATEGY OF ECONOMIC STATISTICS

- 38. In 2008 Statistics Finland adopted a new strategy of economic statistics. In the context of the new strategies and adopting the dimensions of the European Statistical System Business Register has even more important role, if possible, in statistics production than before. In line of this process Statistics Finland has also set programs for co-ordinating the current development work. Two of these development programmes meet closely BR challenges, namely the development programme of globalisation of enterprises and the programme of developing business data collection.
- 39. Globalisation: The international co-operation around multinational enterprise groups is needed. By battling the problems of globalisation in Business Register, some of the work in other economic statistics will be saved. To meet this demand BR is maintaining Enterprise Group register and is widening data collection on multinationals and participates to data sharing with EuroGroups register.
- 40. Statistics Finland Business Register is seen as one of the strategic means in improving coherence. The use of Business Register as a frame will be a necessity in every enterprise

statistics. By using the same classification for same units, the problems of coherence will diminish. The work concerning NACE Rev. 2 implementation first in BR, is a significant matter in this area. To improve the collection and processing of data on the largest enterprises is another important means to improve coherence.

- 41. The strengthening of Business Register as a frame in every business statistics will increase efficiency of production. Its' main advantages lay on processes and quality questions. Inside Statistics Finland common frame BR brings coherence to statistics, gains in costs (smaller samples, workflow synergy) and makes processes more effective. Co-operation with administrative data providers brings quality control of administrative sources as well as decreases the response burden of enterprises.
- 42. One of the strategic goals is to enlarge the scope of Business Register, by introducing possible new variables needed in economic statistics. These new variables may come from databases of other business statistics or to supplement direct data collection from other business statistics. There may be a need to increase the amount of basic information on enterprises in BR for example to the use of regional statistics.

#### **REFERENCES**

Laukkanen, Timo: Concepts and Methods for Information and Data Sharing, 21<sup>st</sup> Meeting of the Wiesbaden Group on Business Registers - International Roundtable on Business Survey Frames.

Viitaharju, Tuula: Business Register Data Dissemination Issues in Finland, 17<sup>th</sup> International Roundtable on Business Survey Frames.

Statistics Finland: Strategy for economic statistics and measures proposed for 2008-2012.

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#### Annex I

#### MILESTONES IN THE DEVELOPMENT OF BUSINESS REGISTER HISTORY

1953 Business census;

1964 Business census;

1968 Regular maintenance of Business Register - total updating every second yea;

1968 Business ID of tax administration covers sales tax unit;

1969 First BR questionnaire - to all businesses within sales tax (sales tax was a kind of initial stage of VAT;

1972 First delivery of BR statistics. As sales tax covered well only manufacturing, trade, construction and hotels and restaurants the published statistical booklets were produced only on enterprises and establishments of these industries;

1984 expansion to employers, which means better coverage for service sector and private non-profit sector, all industries in publication;

1985 start to publish Statistics of Enterprise Openings and Closure;

1985 Register of central government units (separate register) - data collection in co-operation with regional Employment statistics and State Treasure;

1987 Linking working persons to their employers' establishments by a joint survey with regional employment statistics (central point of register based population census statistics;

1988 Regular annual maintenance of Business Register (see also y. 1968;

1990 Local government units attached to register of central government units - using only administrative data:

1990 Finland becomes the second country in the world to draw a register-based Population Census;

1990 expansion to all business tax units (which means good coverage also of small business units;

1991 Law on Business ID (tax administration generates, Statistics Finland circulates, next step: in 1998 Business ID covers also sole proprietors;

1991 - 2001 BR phone service for disseminating Business ID;

1994 Statistics Act identifies a list of public data items in BR;

1995 Start to develop Enterprise Group register as part of BR (covers in the beginning only truncated and largest groups);

1995 European Union membership, BR regulation concerning Finnish BR;

1999 BR statistics into Internet (free of charge);

2000 public sector register is joint to main BR;

2001 Law on BIS, legal register: joint business information system of the National Board of Patents and Registration and the Tax Administration - unique business ID in Finland - free service available in the Internet, Statistics Finland closes phone service of the Business ID;

2006 Register of Enterprise respondents and respondents' service;

2007 Expansion to agriculture;

2008 Profiling activities start;

2009 Planning the new BR system (former systems were implemented in 1968, 1984, 1997).

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# Annex II

# **BUSINESS REGISTER DATA COLLECTION**

# **Administrative data sources:**

REGISTER PROVIDER	CONTENTS - the most important variables	PERIODICITY, or the updating times per year
Tax administration (1)	Customer register of Tax administration - main source of units for BR - Business ID, name, postal and location address, postcode, municipality, legal form, NACE-code, accounting period, date of registration and closure	- monthly
Tax administration (2)	Business revenue data file (accounting data) - turnover, - balance	- data on accounting period - several updates following data accumulation
Tax administration (3)	Primary producers' taxation data file - economic variables of farms and forestry	- annual
Tax administration (4)	Payment control register for VAT and employer contributions (VAT and PAYE data <sup>1</sup> ) - sales - sum of wages and salaries, etc.	- monthly
Tax administration (5)	Employer's annual notifications (annual PAYE register) - wages and salaries	- annual
Tax administration (6)	Data on company owners - owner (foreign, domestic?) - share of ownership - affiliate, subsidiary company - share of ownership	- annual
Tax administration (7)	Data on partnership members - partnership ID - share of participation	- annual
National Board of Patents and Registration (8)	Trade Register - business closures, - mergers, their ID-relationships	- every second month
National Board of Patents and Registration (9)	Annual reports (scanned picture files) - consolidated financial statements - subsidiaries	- weekly
National Board of Customs (10)	Business engaging in foreign trade - reference to intrastat system - import, export companies	- annual

 $<sup>^{1}</sup>$  VAT = Value added tax; PAYE = pay as you earn

REGISTER PROVIDER	CONTENTS - the most important variables	PERIODICITY, or the updating times per year
Bank of Finland	Foreign Direct Investment	- annual
(11)	- investing country	
	- share of ownership	
Invest in Finland	Foreign investment	- annual
(12)	- ownership	
Population Register Centre	Register of Buildings and Dwellings	- annual
(13)	- map coordinates	
State Treasury	Register of agencies and offices in central	- annual
(14)	government	
	- agency ID, name, address	
	Employment relationship register of civil	- annual
	servants	
	- employment of central government	
Local Government Pensions	Register of local government units and	- annual
Institution	employment relationships of wage earners	
(15)	- local units	
	- employment of local government	
Information Centre of the Ministry	Farm register	- annual
of Agriculture and Forestry (16)	('sister register' for BR)	
	- link relationship between the two	
	registers	

# **Commercial data sources:**

REGISTER PROVIDER	CONTENTS	PERIODICITY
Post of Finland	Address Register	- twice a year
(17)	- genuine addresses in use in Finland	
	File of company addresses	
	- business addresses	- every second month
Suomen Asiakastieto Oy	Consolidated financial statements	- annual
(18)	- consolidated groups	
	- subsidiaries	

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#### **Annex III**

#### LIST OF PUBLISHED STATISTICAL TABLES

Enterprises according to NACE (n=1077), (Number of enterprises, Employment, Turnover); Enterprises according to NACE (n=21) and legal form (n=7), (Number of enterprises, Employment, Turnover);

Enterprises according to NACE (n=105) and ownership (n=5), (Number of enterprises, Employment, Turnover);

Enterprises according to NACE (n=21) and institutional sector (n=5), (Number of enterprises, Employment, Turnover);

Enterprises according to NACE (n=105) and size category of employment (n=10), (Number of enterprises, Employment, Turnover);

Enterprises according to NACE (n=105) and size category of turnover (n=10), (Number of enterprises, Employment, Turnover).

Establishments according to NACE (n=1080), (Number of establishments, Employment, Turnover);

Establishments according to NACE (n=105) and regions (n=20), (Number of establishments, Employment, Turnover);

Establishments according to municipalities (n=416), (Number of establishments, Employment, Turnover);

Establishments according to NACE (n=105) and size category of employment (n=8), (Number of establishments, Employment, Turnover);

Establishments according to NACE (n=21) and size category of turnover (n=9), (Number of establishments, Employment, Turnover);

Establishment in Retail trade according to municipalities (n=416), (Number of establishments, Employment, Turnover).