Statistics Norway
Statistisk sentralbyrå

Statistics Norway
Department of Social Statistics

Aarno Laihonen, Statistics Finland,
Ib Thomsen, Statistics Norway
Elisabetta Vassenden, Statistics Norway and
Britt Laberg, Statistics Norway

Final report from the development project in the EEA: Reducing Costs of Censuses through use of Administrative Registers

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Preface

As part of the statistical programme of the Statistical Office of the European Community a contract was signed between Statistics Finland, Statistics Norway and Eurostat to carry out work on the feasibility of more extensive use of administrative registers in statistical production in general with emphasis on the use of registers in the 2000 population and housing census. The main aims of the project were agreed to be the following:

- A list of registers and administrative sources and registers in members of the community and ECE-countries.
- Collection of experiences concerning use of administrative registers. In particular potentials and plans for using registers in the 2000 Round of Censuses.
- Organise and host a Workshop on quality aspects of the censuses.
- Recommend further work to be undertaken.

In this final report two papers are presented. The first paper summarises experiences of extensive use of registers and administrative records in connection with Population and Housing Censuses in member states of the European Community with special emphasis on Finish experiences. The paper has previously been presented at The European Population Conference in Milan, 1995, and the Eurostat Working Party on Population and Housing Censuses, April 1996.

The second paper is our inventory of the main administrative sources and registers available within the ECE-region. This inventory is based on the answers to a brief questionnaire completed by a number of ECE countries at the ECE Work Session on the use of administrative sources and registers, held in Geneva on 23-25 January 1995. In addition further information was collected from member states of the European Community, Norway, Switzerland and The United States. A preliminary version of the inventory was presented and discussed on the ECE Work Session on the use of administrative sources and registers, held in Geneva 11-13 November 1996. At the Work Session the participants agreed to provide the updated information on registers to Statistics Norway. The present version of the inventory is updated based on this information.

Three additional papers are previously published from this project. The first is the papers and discussions during the Workshop on Using Administrative Data in Population and Housing Censuses, 9-11 October 1995 in Helsinki.

The second paper describes the use of administrative registers in censuses in Norway during the last 30 years. This paper was presented at the third Mondorf meeting, 25-26 January, 1996, and published in the proceedings from that meeting.

The third paper is a report by Statistics Finland describing systems of register-based employment statistics in Denmark, Finland, Norway and Sweden. The report has been published as a joint publication by Eurostat and Statistics Finland in October 1996.

This project could not have been successfully finalised without the help from a large number of friends and colleagues in statistical offices in the ECE-region. We are grateful for this support. In particular, we are grateful to our contact persons in Eurostat, Curt Grundström, Thana Chressanthaki and Lars Østby, who's patience and continuos support and encouragement has been inspiring throughout the project.

Helsinki,
Ib Thomsen and Aarno Laihonen
Heads of project

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INTERIM REPORT OF THE PROJECT ON REDUCING COSTS OF CENSUSES THROUGH USE OF ADMINISTRATIVE RECORDS

Aarno Laihonen, Ib Thomsen

1. Introduction

A major concern of all statistical institutes is to maintain or even better reduce cost when carrying out population and housing censuses.

A fruitful way to achieve such an aim is to carry out register based censuses as was the case in Denmark (1981 and 1991) and in Finland (1991). Other countries, e..g. Belgium (1981 and 1991), the Netherlands (1991) or Norway (1990) use a combination of conventional data collection on a sample basis and some administrative registers.

To analyze more deeply the advantages in relation with cost and flexibility of using registers Eurostat and EFTA has commissioned a study concerning "Reducing costs of Censuses through use of administrative registers". The study is carried out by Statistics Norway and Statistics Finland.

The aim of the study is to examine the use of administrative sources and registers. A first step is to establish a list of registers and administrative sources existing in the countries and to find out whether there is also relevant information on the possibility of using these sources (data protection law and confidentiality issues). A brief questionnaire completed by the ECE countries at the ECE Work Session on the use of administrative sources and registers for social and demographic statistics, held in Geneva on 23-25 January 1995 forms the basis for this part of the study. From member states of the community, Norway, Switzerland and the United States further information has been collected through visits or from written reports on the use of registers. The information concerns tests, potentials and plans for using registers in the future censuses. Information on whether or not administrative sources were used in previous censuses, the reasons why they were (not) used and the effects on cost and quality of the results.

This report is a preliminary presentation of the major findings in member states of the community, Norway, Switzerland and the United States. The report is divided into two arts:

In part 1 the aim is to give an overview of the availability of key registers in the various countries, and the legislative framework governing the exchange of information between them. Some advantages and disadvantages inherent in a register-based census are given in section 1.2. Finally, in part 1 possible roles the statistician and EUROSTAT can play in promoting further use of registers to reduce costs of censuses are given in section 1.3.

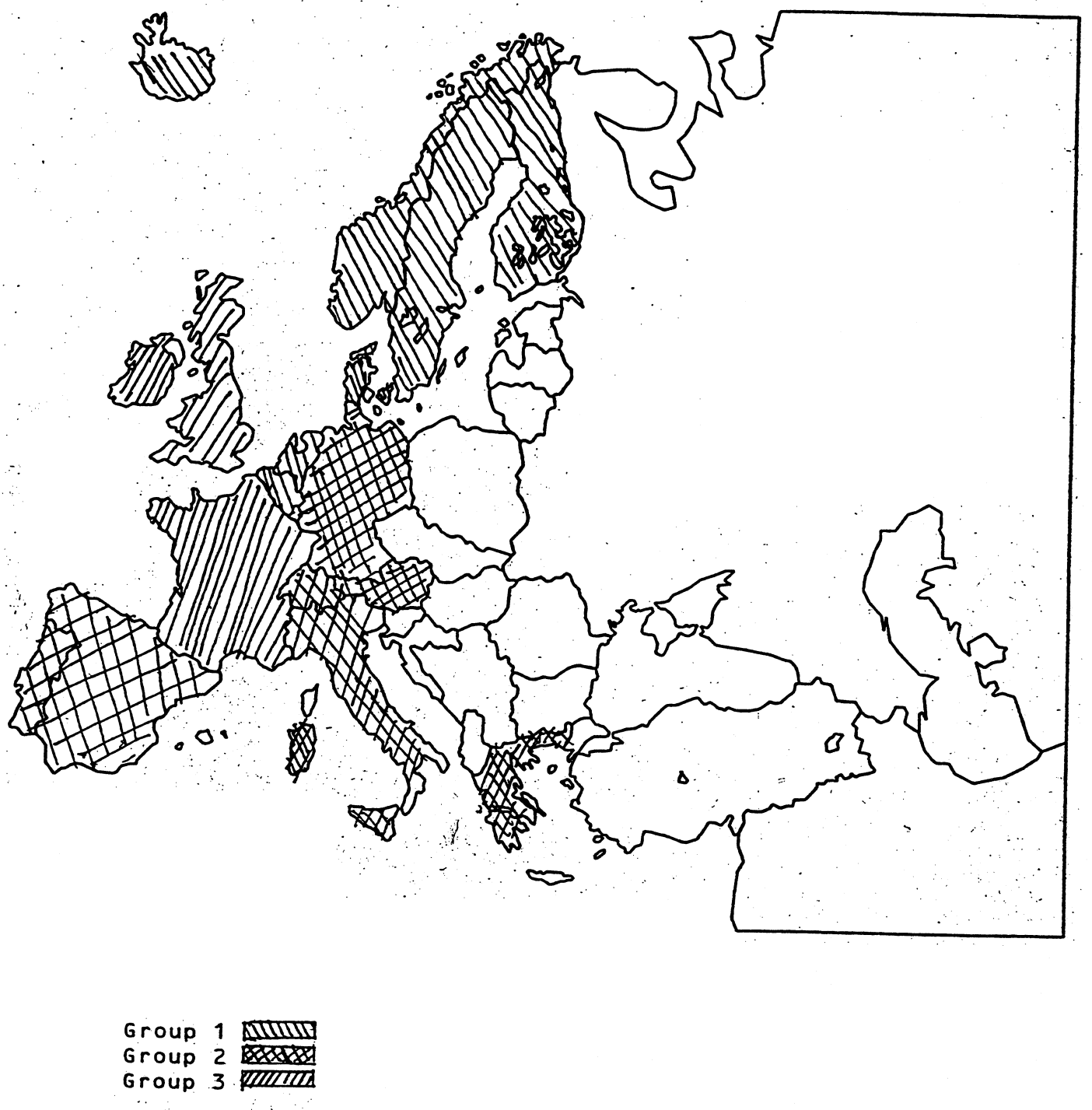
The aim of the section 2 is to consider, from a general point of view, possibilities to carry out a complete population and housing census entirely on the basis of registers and administrative records. The Finnish population and housing census system and the 1990 census are referred as a case.

1.1. Availability and use of basic registers in every country

In figure 1 the countries are divided into three groups: Group 1 consists of the Scandinavian countries plus the Netherlands and Belgium. In these countries a large number of registers is available and used in connection with the census. The other countries are grouped according to the availability of population registers with addresses. Group 2 consists of countries with central and/or local registers with addresses. Group 3 consists of countries with no population register with addresses.

1.1.1. Countries with access to a large number of administrative registers;
When giving an overview of the availability and use of basic registers, it is natural to start with the situation in the two countries, have managed to base their census on registers exclusively: Denmark and Finland. The system of well coordinated registers in these two countries is a result of 30 years systematic work in several governmental agencies. At the same time a legislative framework is set up to govern the exchange of information between the agencies, including the statistical agency, such that privacy and confidentiality is protected to secure public secure of the record system and its use. The purpose of such a system is not primarily to serve statistical needs, but to make public administration more effective by using a fully coordinated system of administrative records.

Figure 1



The systems in Denmark and Finland have the following essential features:

1. A Central Population Register, CPR, with address for each person and an obligation to report when the address is changed. The CPR is maintained at the local level, which is linked to the CPR through a permanent person identification number. This number is assigned to a person at birth or on arrival in the country for immigrants.

2. A building/dwelling register with a permanent dwelling number, which is part of the address in the CPR. This secures the link between persons and place of living, and it also establishes the household in Denmark and Finland. (This definition of a household is not used in all countries. In some countries two or more households may live in the same dwelling unit.)

3. The personal identification number is used in a number of public registers: Tax-return forms, social security registers etc.

4. A Central Business Register, CBR, with a permanent identification number. The register contains information about location, form of ownership, sector of activity and size.

5. There is a link between each person and the CBR, such that employment status, sector of-activity and work place can be determined by linking the CBR with one or several of the registers mentioned under 3.

Details of the system in Finland are given in part 2 of this report, while the Danish system is presented in EUROSTAT/Denmark's Statistik (1995). Only few countries are in the same situation as Denmark and Finland. Norway and Sweden have a similar system of administrative registers, but no register of dwelling units exist in any of the countries. However, in both countries establishment of such a register is under consideration, and a decision is expected within the next year.

The institutional and legislative framework has been changed in the Scandinavian countries to facilitate the use of administrative registers in statistics production. New laws have been given and institutional arrangements have been established in order to secure statisticians access to administrative registers and link them for statistical purposes. Denmark made a major revision of its Statistics Act as early as 1966. This was followed by the Public Authorities Register Act of 1978, under which the Data Surveillance Authority was set up.

The situation is somewhat different in Belgium and the Netherlands. Belgium has a high quality central population register, which was used during the census 1990. Information from the register was preprinted on the census questionnaire, and people were asked to correct if errors occurred.

In the Netherlands there is no central population register. The establishment of a central regular was stopped by the Parliament. However, a high quality decentralized population registration system excises in the Netherlands. The automated basic registration system, GBA, has been functioning since November 1994. It involves a network of 636 municipal population registers and about 300 users, of which Statistics Netherlands is one. Based on information from the GBA, Statistics Netherlands is able to produce almost all current vital and migration statistics. Concerning the future, there are no plans to go back to a traditional census in the Netherlands. It is expected that census statistics in the future will be produced by combining sources like administrative registers and surveys in a similar way as in 1990. The details of the methodology to be used will depend on what data are available and accessible.

1.1.2. Countries with central and/or local population registers with addresses

In order to link administrative records for census purposes, there must be available a high quality population register with name, address and a personal reference number. The second group of countries to be considered here is therefore countries with such registers, or planning to develop one.

The following countries are grouped into this group: Austria, Germany, Greece, Italy, Luxembourg, Portugal, Spain and Switzerland.

Within this group of countries the availability and accessibility varies very much between the countries. In some countries high quality population registers exist, but are not accessible for statistical purposes, while in other countries a lot of work has to be done before an efficient system of population registers is established (see Eggerickx and Bégeot).

In Austria there are two decentralized individual registers: The Vital register, containing notifications of vital events, and the Register of citizenship. A Central Population Register (CPR) will be established in the near future by combining 2350 local registers. The main purpose for creating a CPR is to give the police a better instrument to locate criminals. It is, however expected that this register will play an important role in production of population statistics and future censuses. At present it is, however uncertain whether the CPR will be operative before the next census.

In Greece and Portugal there are long term plans to create a computerized central population register. As a first step the aim is to computerize the local registers. Both countries receive support from EU to upgrade the population registration, and would like to see Eurostat play a coordinating and supporting rule in the promotion of more use of administrative registers in statistics production.

In Germany there is no central population register, but a high quality system of decentralized population registers is in operation. Its role in future censuses is not clear at the moment as it is forbidden to link the census to the registers.

In Luxembourg a central register excists, but the information is not consistent with information found in the local registers, which for various reasons see an advantage in inflating the population figures. At present it is illegal to link the census and the register. Preparatory work on a new Public Register Act is ongoing, and the central statistical office, STATEC, is involved fin this work.

In Switzerland, as part of the planning of the census 2000, the Federal Statistical Office, FSO, commissioned a working party with representatives from regional statistical of offices, to study possible alternatives to a traditional census. Emphasize was put on increased use of communal and cantonal administrative registers for statistical purposes in general, and the census in particular. Technical as well as legal issues are studied. Swiss Federal Statistical Office (1995). The study concludes that for the census 2000 a register based census is not possible. However, the study also show that the main problems for a register based census no longer are of technical nature. In view of the fast technological development, which facilitates electronic exchange of data between central, communal and cartonal registers, FSO is determined to continue its efforts to increase the use of administrative data in the future. The emphasis is on further development towards a partial register census in year 2000. Furthermore, given that good data protection laws are introduced, the working party do not expect strong public objections to record linkage. Both the Federal Office of Justice and FSO agree that no serious problems are foreseen when setting up laws for regulating the use of registers in statistics production.

In Spain the Municipal Census of Population, MCP, plays a major role in demographic statistics. Under an Act of 1985, the MCP must include the persona! particulars required for public, legal purposes and for the Register of Electors. The information recorded in the MCP is: Name, sex, nationality, place and date of birth, National Identification Card Number, place of residence and educational level. Each Municipal Council, which is responsible for MCP, maintains the register in accordance with rules and regulations set up jointly by the National Statistical Institute and the Public Administration Ministry. The MCP is kept up to date by entering new residents who move into or are born in the municipality, and removal of persons who move out or die. Births and deaths are taken from the Civil Register. Based on MCP, population figures are published every year by sex, municipality, province and Autonomous Communities.

There are 8091 municipalities in Spain, which each manage its own MCP. At present only the large and middle-sized municipalities have computerized the MCP. Furthermore, the Civil Register is not computerised. For these reasons there is little direct communication between the various administrative registers, and as a result double entries or omissions are not always detected. Every five years the MCP is therefore completely renewed by a municipal census. Every ten years this operation is coordinated with the population and housing census.

In Spain plans are now being worked out to update and simplify management of the MCP. Those taking part in this work are Public Administration Ministry, the National Statistics Institute, the Spanish Federation of Municipalities and Provinces and the Foreign Affairs Ministry.

1.1.3. Countries with no central and/or local population registers with addresses

This group of countries consists of the following countries: France, Ireland, UK and the United. States. In none of these countries is there a central or local register with current address. However, in most of the countries several administrative registers exist together with a personnel identification number of some kind.

In France an identification number, NIR, is assigned to every person at birth, or in case of immigration, at arrival. The history of this number goes back to World War 2. It is used for administration of the social security system, and INSEE maintains a register, the Repertoire National d'indentification des Personnes Physiques, RNIPP, with information on name, sex, date and place of birth and, eventually, date and place of death. Other governmental agencies have no access to NIR. The main purpose of RNIPP is to help these agencies when they need to identify a person, and to notify them when a person has died. Technically, INSPF is in other words able to link administrative records by means of NIR. However, Commission Nationale de l'Informatique et des Libertes, CNIL, must give its permission before such linking can take place.

A law to govern the exchange of personal data was enacted in 1978 and CNIL was established to enforce the principles and procedures laid down in the law. There are no exemptions for data collected or linkage of data for statistical purposes. In practice this has resulted in that no linkage of personal data is permitted for statistical or other purposes.

A new development in France is a register based on yearly declaration of wages by employers, DADS. From this register a large amount of statistics will be produced: Labour market statistics, salaries statistics and even some mobility statistics is expected. This register can not be linked to other administrative records or to the census.

In France statisticians do not expect intensive use of administrative registers in the next census. There is, however, a strong pressure on INSEE to reduce the costs of the census operations. Various methodological changes are therefore under consideration to be used in the next census. Such methodologies include use of GIS-technology to produce a building frame, eventual in collaboration with the mail services; use of sampling in the urban areas combined with small area estimation methodology.

In England registers of personal data and housing data are available for a large number of administrative purposes. A personal identification number covering practically everybody also exists, but is of little use outside the National Health Services. However, no central register with all the information exists. In England and Ireland the plans are to perform a traditional census with no links to the register information.

1.1.4. Comparing with the situation in the mid 1980's

In 1986 a study on the future of the census of population was published by EUROSTAT, Redfern (1986). In this study it was among other things investigated to what extend one could expect an increase in the use of administrative records in connection with censuses. Not all countries in that

study are included in the preset one, and visa versa. Furthermore, Redfern divides the countries somewhat differently from the present grouping. In spite these differences it is possible to compare the present situation with that of the mid 80-ties: Of the Scandinavian countries, only Sweden was included in 1986, but Redfern concludes in his study that the Scandinavian countries are likely to increase the use of administrative registers in future censuses. This actually happened. In Denmark and Finland censuses are now based exclusively on registers. In Norway and Sweden use of registers reduced the costs of the 1990-census, but data were collected by questionnaire in both countries. In Norway from a 10% sample, and in Sweden from all individuals. What is needed in both these countries for a full register-based census is a dwelling Unit register. In both countries the feasibility of establishment of such a register is under investigation.

In our second group changes have also been made during the last ten years. In most countries central population registers or plans to establish one exist. Furthermore, legal and administrative framework that enables statisticians to have access to administrative files have been established or is being developed. The development is faster in some countries than in others. In Belgium and the Netherlands, registers are being used extensively and in the Netherlands no traditional censuses are expected in the future. In other countries progress is rather slow. In Greece and Portugal EUROSTAT is assisting the countries. From Portugal it is reported that progress is very slow, and that more help and assistance is needed. Also statisticians from other countries in this group would like to see EUROSTAT play a more active role to speed up the work.

In our third group the situation concerning the non-existence of a central population register, the situation is unchanged. Furthermore in all countries within this group it is expected that the statisticians access to administrative records for statistical purposes will be very limited in the years to come. However, in most of these countries the statisticians are under pressure to reduce the costs of the census, without reducing the quality and content. This has resulted in some very interesting developments of importance to future censuses far many Counties. In France, for instance, the register based on yearly employer report to the social security administration is of interest. It indicates that in a country, where linkage of personal records is very limited, linkage of data reported by a third party, may be permitted. Based on such registers it is possible to produce a lot of "cencus-like" results, and this may have a number of serious consequences far the Census. If the results are consistent the census may become redundant, or at least partly so. If the results are consistent the user will be irritated and ask the statistician to make up his mind.

An interesting methodological development is taking place in the United States and Canada, where a register of addresses now is being set up in collaboration with the national mail services. For countries in this group it seems to be a possible substitute for a central population register with addresses. As is the case in countries which use administrative records, costs of the census is reduced by sharing and exchanging data with other public agencies.

Finally it should also be mentioned the register data play an increasing role in connection with quality control, intercencal population estimation etc.

1.2. The advantages and disadvantages of register-based censuses

There are following advantages in using administrative data

- possibility of considerable cost reductions as compared to own direct ~ collection by a national statistical institute. For instance in Finland 93% of all the basic data of the statistical service comes from administrative sources and only about 7% is collected directly by authorities. However, this 7% accounts for about 30% of the total cost of the whole statistical service. If all the basic data were collected directly at an average unit cost of that 7%, the total cost of the national statistical service would be more than four times the present cost.

- Quality of traditional survey statistics can be improved through adding administrative data to survey results (increasing contents) or using administrative total data as an aid in sampling and estimation processes (increasing accuracy).

- Entirely new kind of statistics can be produced by using administrative data which have 100% coverage of statistical units. Different kinds of longitudinal flow statistics are an example of such new statistics. They cannot be compiled from sample based surveys because of measurement and sampling errors and direct total data collection would be too expensive.

- The most important disadvantage is lack of flexibility concerning the choice of definitions. In the case of the definitions of households, for instance the "de jure" definition will usually get priority over the "de facto". definition.

- In most countries combining information from registers and surveys, statistics for small areas can not be produced with sufficient accuracy.

- Some variables are very hard or impossible to get from existing registers. Examples are "means of transport" and occupation.

1.3. The role of the statistician and of EUROSTAT

As it follows from the discussion given above, a register based census and register based statistics in general, is only elements of a much larger issue, namely rationalization of public administration through increased use of modern, electronic technology. As mentioned above, several administrative registers and record systems exist in most countries. However, they are not organized in a way that makes the best use of information technology. In other countries, use of excising information is discouraged by laws and practices which prevent information to be shared between various agencies. These issues obviously go far beyond the statisticians responsibility, but experiences from Scandinavia seem to indicate that the statistician is in a special position to evaluate the record system as a whole, as opposed to each agency responsible for specific parts of the system. Statisticians should therefore join forces with ministries and agencies with a similar overall responsibility. Often a ministry is responsible for the efficiency of the whole public administration. In such countries statisticians should contact this ministry to point out the potentials of the use of registers in public administration in general, and statistics production in particular. Another group among which the statisticians may find people with a similar view on the use of registers is the social scientists. It is well known that non-response in connection with surveys is becoming a very serious beat to the quality of the results. In their efforts to get more understanding for the use of administrative records, statisticians should therefore contact social scientists, who often play an important role in the public discussion on social issues.

PART 2: REGISTER BASED POPULATION CENSUS OF FINLAND AS A CASE OF USING ADMINISTRATIVE DATA

The aim of this section is to consider, from a general point of view, possibilities to carry out a complete population and housing census entirely on the basis of registers and administrative records. The Finnish population and housing census system and the 1990 census are referred as a case.

2.1. Availability of administrativre data and acceptability of its use

Availability of administrative data for statistical purposes is of course a central precondition for their extensive use in the national statistical service. In most developed countries there excise a lot of administrative, machine readable records in possession of central or local government bodies or public institutions. However, the actual availability of such records to the national statistical service differs from country to country for legal, institutional or technical reasons.

In many counties data protection legislation does not recognize "statistical use" of person or enterprise data collected for administrative purposes in any particular way. All the general restrictions are applied as such to the statistical use. Such restrictions are eg.

- specification of the purpose of data collection
- restriction of the use of data to the specified purpose
- restrictions of combining data from different sources through record linkage.

These restrictions hamper the effective use of administrative data for cost reduction purposes in the statistical service and even Nile out possibilities to produce new statistics with rich contents and new aspects (e.g. different kinds of longitudinal flow statistics and a wealth of GIS products).

The existing restrictions are often explained by data protection (confidentiality and integrity) reasons. These explanations may be rather misplaced for several reasons:

- Use of personal data for statistical purposes is hardly a breach of integrity or confidentiality as such, because in statististics one is not at all interested in individual persons but in properties and parameters of populations or sub-populations. Neither are there any legal or other «ices to individuals whose personal data are used for compiling statistics, as is usually case with administrative uses of data.

- In those countries where the use of administrative data for statistical purposes is allowed, the flow of data is strictly "one way"; from administration to statistical service. The data which has crossed the border of statistical service is not released outside in an identifiable form. Such data usually cannot be used, for instance, as legal evidence against a person or an enterprise.

- Data protection and data security can be effectively arranged by legal, organisational and data technical measures when there is only a restricted number of statistical bodies, which have right to use administrative data for statistical purposes. Level of data protection may even considerably increase, when direct data collection for statistics is reply with the use of administrative data because the acces of the statistical staff to unit level data can beeffectively restricted.

Collection and registration of data for administrative purposes usually means that persons or enterprises are obliged by law to report the data requested. The "right of an individual to informational self determination" (see Herberger, 1988) is already resticted by reasons of social necessity or benefits greater than the sum of personal losses. In such cases the specification of the purpose could and should always include e.g.: ".... and for statistical or research purposes as regulated in the general data law and the statistical law". This would add to reins which already justify restriction of a personal right and inform the subjects on possible father use of their personal data.

This is the approach adopted in Findland and other Nordic countries (Denmark, Iceland, Norway and Sweden). The specification of purpose for statistical use should be formulated as generally as possible (e.g. "for statistical purposes" as is used both in the Finnish data law and statistical law). There is not much sense to restrict a statististical authority in using already existing and already collected data if data protection control and data protection measures have been adequately arranged.

It is clear that the right of a statistical authority to request data for statistical purposes should be defined by law. In the Finnish statistical law the right is general concerning data in possession of the central government bodies and more specified for contents concerning the data requested from local governments, enterprises and other institutions. Individuals are obliged to provide data only for population and housing censuses otherwise data collection from persons is voluntary and based on the principle of "informed consent" (see ISI, Declaration on Professional Ethics).

Besides legal differences, there are differences in the infrastructure of the administrative data systems between different countries. In countries with centralized registers and widespread use of uniform identication codes it is easier to utilise administrative data for statistical purposes than in countries where unit level administrative records are mainly kept by local or regional authorities and identification codes of persons and enterprises differ from system to system. In centralized systems the data have often also better internal comparability than in decentralized systems. However, it should be recognized that technical difficulties of decentralization and lack of uniform identifiers can be overcome by the modern data transfer, data network, data management and record linkage techniques.

The legal and institutional restrictions are the most, essential obstacles to the widespread use of administrative data for statistical purposes. Awareness of the potential of the use of administrative data in the national statistical service has been growing during recent years, especially concerning cost implications when government budgets are beeing suppressed everywhere.

The real implications of the use of administrative data for statistical data to privacy and data confidentiality are also more widely seen from the proper perspective of modern information society. This has led to increasing interest towards the use of administrative data by the national statistical institutes. There are also signs of positive development of legislation towards more flexible use of data for statistics. For instance the new European Community on the protection of individuals with regard to the processing of personal data includes a principle that data collected for a specific statistics can be used also in compiling other statistics by the statistical institution (see Official Journal of the European Communities C 93 Vol. 38 13 April 1995).

2.2. An integrated infrastructure of basic registers is necessary for an entirely register based census

Population and housing census, according to UN recommendations, covers 100 percent a set of statistical units - persons, families, households, work places, buildings and dwellings - in such a way that the data on the statistical units can be connected with each other: persons with families, households, dwellings and work places, dwellings with buildings etc. In order to be able to carry out population and housing census entirely on the basis of administrative data the national statistical institute has to have access to a set of administrative records which covers totally those statistical units and provides the necessary links between the units.

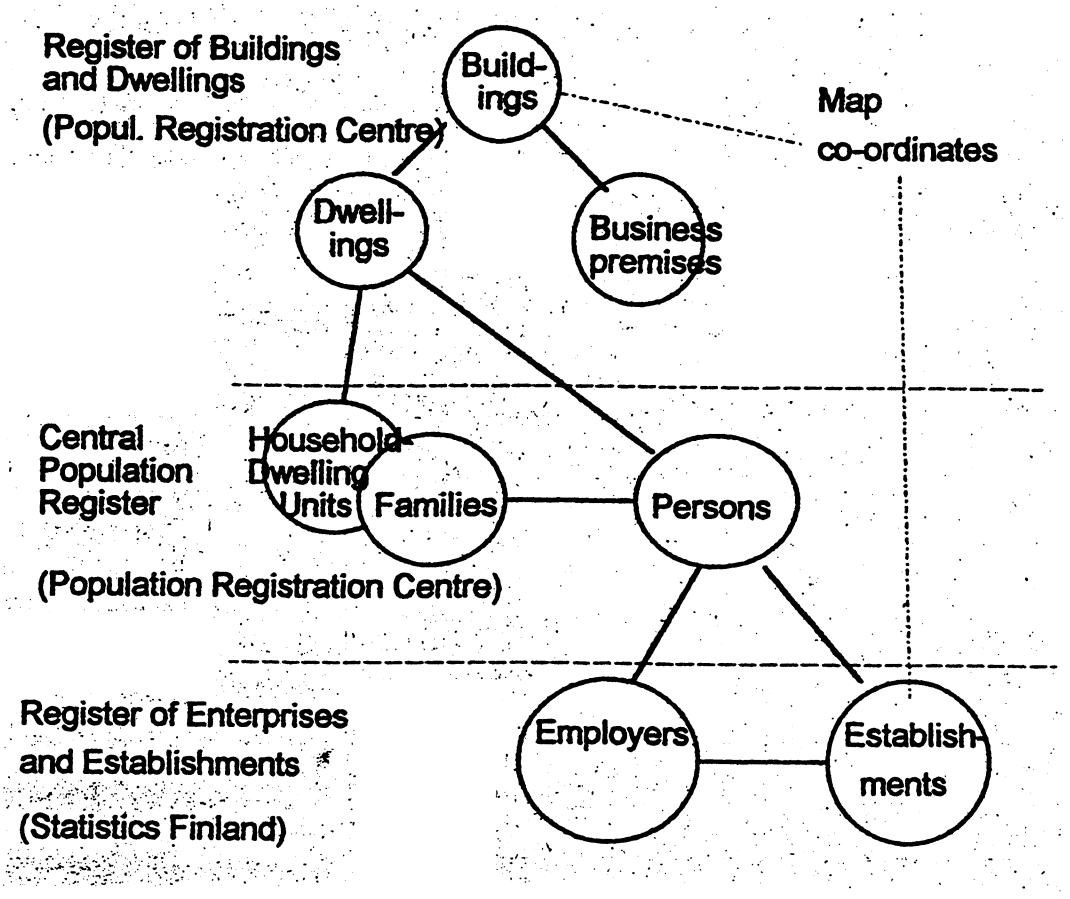
The Finnish population census system draws on three basic registers maintained by society giving identification data and central characteristics data on the population census target units and the links between them. These units comprise individuals, families, households, buildings (and summer cottages), dwellings (and business premises), enterprises and establishments (see Harala, 1995).

The Central Population Register contains data on all persons resident in Finland along with their membership of families and households. The Building and Dwelling Register of the Population

Register Centre contains unit data and characteristics on all buildings, dwellings and business premises. The Statistics Finland Register of Enterprises and Establishments in turn contains data on enterprises and the places where they operate The register includes also public sector units and self employed persons. Each of the registers uses standard identification numbers and the units can by means of these numbers be linked together, i.e. persons can be linked with the building and dwelling where they live and the enterprise (or other employer) and place where they work. All units can be located by means of map coordinates, thereby permitting maximum possible flexibility in the production of regional statistics.

The The basic registers their units and connections between these units formed by the set of unique identification codes are shown in the figure 2.

Figure 2. Statistical Units of the Register Based Census System and Links between them



In addition to these basic registers the population census used some thirty other registers. These files included for example:

- the tax files, providing data on a person's income, type of income and employer in order to determine, among other things, the main type of activity and type of job (branch, employer sector, location of workplace).

- the employees' pension insurance files, providing data on the duration and type of employment in order to determine the main type of activity and employment

- the pension registers of the Social Insurance Institution, providing data on how long individuals had been retired

- the unemployment register maintained by the Ministry of Labour, giving data on the number of times people had been unemployed

- various student registers, providing data on study at different educational establishments in the year and at the time of the census

- the military service register of the Defence Forces, providing data on national servicemen.

These registers can be called specialized registers, because they have been established for specific administrative purposes, whereas the three basic registers are multipurpose registers established for . variety of purposes (on concepts of basic register and specialized register see also Thygesen 1995).

2.3. Stepwise development

The first modern population census was carried out in Finland in 1950 on the basis of the census law from 1938. Before that time national population statistics were compiled at ten years intervals on the basis of parish records. In 1950 census data were collected d by enumerators and in 1960 by -local population commissions, one in each municipality. Then the Central Population Register (CPR) with uniform person number was established on the basis of manually kept district registers in 1969.

Already in the 1970 population census the CPR was used to preprint names, person numbers and addresses on census forms. CPR Taxation register was used as a source of income data. After 1970 population end housing censuses have been carried out every five year and the number of data derived from registers and administrative records has been increasing. An important development was the establishment of the national register of buildings and dwellings in connection with the 1980 census. In the 1985 census only a few questions on economic activity of population were asked on census form. The rest of the data were derived from registers and administrative records. Finally, establishment of the register based omployment statistics in 1987 made it possible to carry out 1990 census entirely on the basis of registers and administrative records (see Myrskylä 1991).
The development of the use of administrative data has been gradual and it took 20 years before the whole census process could be relayed on registers and administrative data. The overall development has been very similar in all the Nordic countries (see Laihonen - Myrskylä, 1987).

2.4. New methods and approaches are needed

Traditional way of using administrative data in compiling statistics is direct tabulation of data after possible checking and correcting procedures. Current population statistics in Finland is an example of this kind of use. Population statistics is compiled directly on the basis of the Central Population Register. In the traditional setting the quality of statistics is directly dependable of the quality of administrative data and changes in administrative data usually cause breaks in statistical time series. In cases when variable is added into an administrative data system the administrative body governing the data system seldom has any special motivation in keeping up the quality of statistical data.

Register based employment statistics in Denmark, Finland and Sweden represent a new kind of use of administrative data which is characterized by use of multiple sources of administrative data. That means using all the existing and available data on a given variable when no single source covers the population to be described (see Danmarks Statistik, 1995, p. 63).

In the Finnish and Swedish register based employment statistics so called "register estimation method" is used. It means that the value of a statistical variable (according to statistical concept) is beeing given to each unit of the population using multiple data sources and a set of decision rules. The set of decision rules are defined using a reference sample survey as the means of calibration. In the Finnish and Swedish register based employment statistics interview based labour force survey (LFS) is used as a reference survey.

2.5. Quality of register based statistics

All data except data on economic activity were received from registers and administrative records in the 1985 census. Therefore building up.a completely register based census was a matter of completing the existing register system with a module providing the missing data on the economic activity of population. That is why the system of register based employment statistics was established 'in 1987 . Very similiar systems were built up in Denmark in 1980 and in Sweeden in 1985.

The quality of the Finnish register based employment data was thoroughly checked during the planning of the system.

The first total check was made in connection with the 1985 census. Then it was possible to compare census form data and register based data for the whole population in ages 15 - 74 years. Comparison covered main type of activity, occupational status and lead form of employer of gainfully enployed persons. Because there was the two sets of parallel data for the whole population in the working age, it was possible to study how the register based data behaved at small area level and in different population groups. The results were encouraging (see Korpi 1989).

In addition, when the register based employment statistics was finally established as an annual system, there were three annual runs of the system (1987, 1988 and 1989) before using the system in the first entirely register based census in 1990.

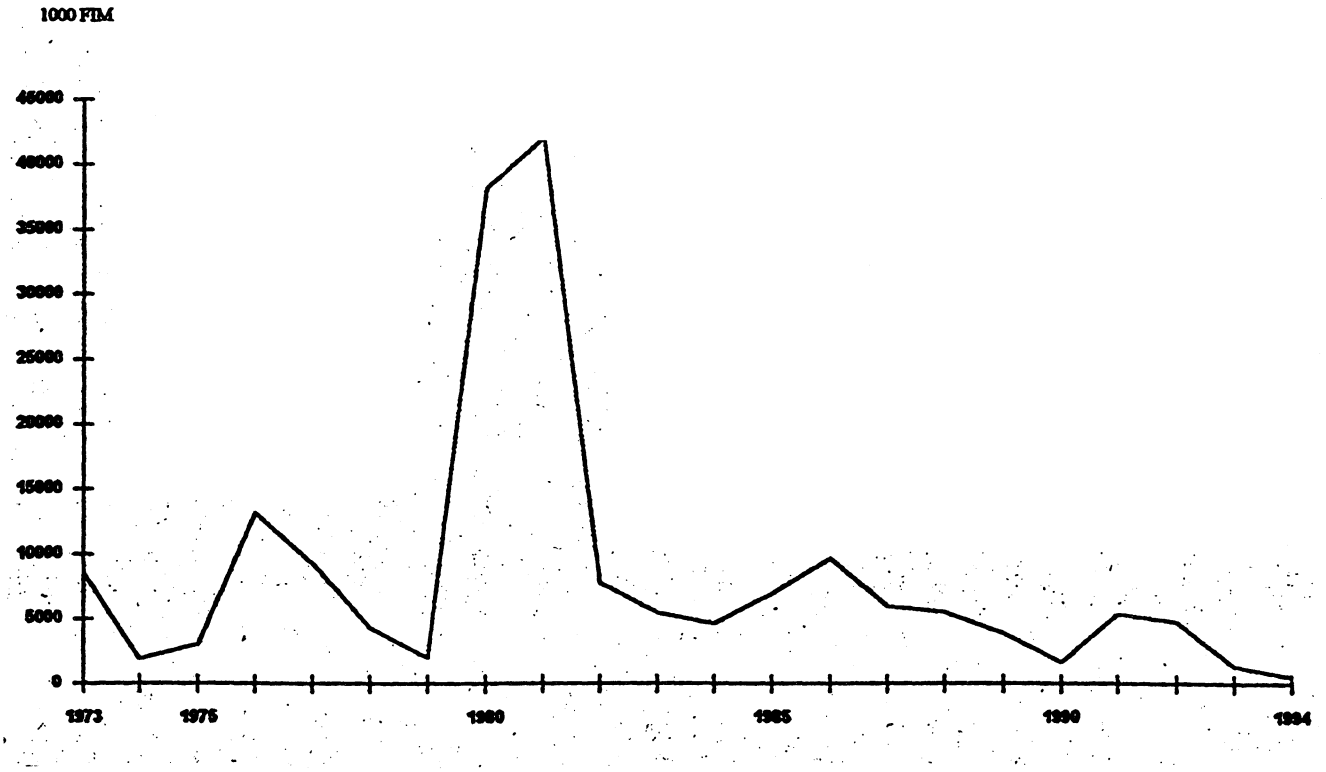
Finally, in connexion with the register based population and housing census 1990, an extensive, independent evaluation survey was made covering all the central items of the census. The survey was based on a sample of 20000 real estates, which icluded 23000 buildings, 45000 dwellings and 96000 residents.- Register data were used for preprinting of survey forms, but otherwise data collection of building data, dwelling and housing data and data on economic activity of persons was carried out independent of regisr data. Data collection was carried out by mail-out mail-back method completed by non-response interview as in the 1980 census. The overall result of the evaluation survey was that the data quality of all the main census items was roughly at the same level asin the recent traditional censuses (see Heimonen 1994).

2.6. Cost reduction, minimizing of respondent burden and enhancement of product variety as the main motives to use administrative data

Reduction of census costs and elimination of great variations in census staff were the main motives to introduce an entirely register based census system in Finland. The initiative came from the Ministry of Finance in 1980. Development and investment phase lasted from 1981 to 1988 and the costs of that phase (without the costs of 1985 census) were 20 million FIM.

Cost reduction of the first full scale register based census in 1990 was great, endeed. As compared with total expenditures of the 1980 census the corresponding expenditures of the 1990 census were only about one tenth as can be seen in figure 3.

Figure 3: Expenditures of Population and Housing Censuses in Finland 1973-1994



REFERENCES

1. Danmark Statistik: Statistics on persons in Denmark, ECSC-EC-EAEC, Brussels, Luxenbourg, 1995

2. Eggerickx, Thierry - Begeot, Francois: Les recensements en Europe dans les années 1990, Population, 6, 1993, 1705- 1732.

3. Harala, Riitta: Evaluation of the results of the register based population and housing census 1990 in Finland, Statistical Journal of the United Nations ECE 12 (1995) 63 - 72, IOS Press.

4. Heimonen, Jorma: Evaluation study of the 1990 census, Statistics Finland, Population Census Volume 9B, Helsinki 1994.

5. Herberger, L.: Problems surrounding the planning and execution of the 1987 population census in the Federal Republic of Germany. A paper presented at the 1988 meeting of the Population Association of America in New Orleans.

6. International Statistical Institute: Declaration of Professional Ethics, International Statistical Review (1986) 54, 2 pp. 227-242.

7. Korpi, Helena: Main Type of Activity and Occupational Status in the 1985 Census: Register-based Parallel Data, Statistics Finland, Studies nr. 152, Helsinki 1989.

AVAILABILITY AND USE OF ADMINISTRATIVE RECORD SYSTEMS IN THE ECE- REGION - INVENTORY OF THE MAIN ADMINISTRATIVE SOURCES AND REGISTERS BEING USED FOR STATISTICAL PURPOSES BY COUNTRIES IN THE ECE-REGION[1]

By Ib Thomsen, Elisabetta Vassenden and Britt Laberg, Statistics Norway

1. Introduction and background

It is a major concern of most statistical agencies to reduce cost of production and response burden, and at the same time maintain a comprehensive and consistent high quality system of social and demographic statistics. To reach these goals several statistical agencies in the region are increasing their use of data already collected for administrative purposes. The present inventory of the main administrative sources and registers may be seen as a first step towards an analysis of the advantages in relation to cost and flexibility of using administrative registers. The inventory is based on the answers to a brief questionnaire completed by a number of ECE countries at the ECE Work Session on the use of administrative sources and registers for social and demographic statistics, held in Geneva on 23-25 January 1995. Answers to this questionnaire have been received from the following counties: Austria, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Israel, Italy, Luxembourg, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovenia, Spain, Sweden, Switzerland, The United Kingdom and The United States. From member states of the European Community, Norway, Switzerland and The United States further information was collected through visits or from written reports on the use of registers. The discussion presented here is based on the answers to the short questionnaire as well as the follow-up study .

In the appendix the responses from each country to the questionnaire is given in some detail. In table 1 and 2 an attempt is made to convert the responses into synoptic overview tables. Table 1 is divided into four sections: Basic registers, Reference number, Registers on special issues and Use of registers in the 1990 round of censuses.

2. Availability and use of population registers

It is seen that most countries have a local and/or central population register. However when evaluating their usefulness in statistics production a number of factors have to bee taken into account. When doing such an evaluation it is natural to start with the two countries which have managed to produce census statistics based on register data exclusively: Denmark and Finland. The system of well co-ordinated basic registers in these two countries is a result of 30 years systematic work in several governmental agencies. At the same time a legislative framework is set up to govern the exchange of information between the agencies, including the statistical agency, such that privacy and confidentiality is protected to secure public acceptance of the record system and its use.

The system in Denmark and Finland have the following essential features:

(i) A central Population Register, CPR, with address for each person and an obligation to report when the address is changed. The register is maintained at the local level, which is linked to the CPR through a permanent personal identification number. This number is assigned to a person at birth or on arrival in the country for migrants.

[1] This inventory was presented and discussed at the ECE-Work Session on the use of administrative sources and registers in Geneva 11-13 November 1996. Based on written comments from the participants it is updated at the end of February 1997.

(ii) A building/dwelling register with a permanent dwelling number, which is part of the address in the CPR. This secures the link between persons and place of residence, and it also establishes the household

(iii) The personal identification number is used in a number of public registers: Tax-return forms, social security registers etc.

(iv) A Central Business Register, CBR, with a permanent identification number. The register contains information about location, form of ownership, sector of activity and size.

(v) There is a link between each person and the CBR, such that employment status, sector of activity and work place can be determined by linking the CBR with one or several of the registers listed in table 1 under registers on special issues and to the population registers.

The institutional and legislative framework has been changed in the two countries to facilitate the use of administrative registers in statistics production. New laws have been given and institutional arrangements have been established in order to secure statisticians access to administrative registers and link them for statistical purposes. In addition to having access to administrative data, the statistical agency has a possibility to influence the contents of a register and even the design of the overall system of public administrative records.

Only a few countries are in the same position as Finland and Denmark. In Norway and Sweden the situation is similar, but no dwelling register is established yet. Other countries where the population registers are extensively used in the census work are The Netherlands, Belgium, Slovenia.
Within a large group of countries with population registers with addresses, the availability and accessibility varies very much. In some countries high quality population registers exist, but are not accessible for statistical purposes, while in other countries a lot of work has to be done before an efficient system of basic registers is established.

Finally there is a group of large countries like for instance Canada, France, UK, and the United States, where there are no registers with current address. An interesting development is taken place in the United States and Canada, where a register of addresses now is being set up in collaboration with the national mail services. Even though this cannot substitute a central population register with current addresses, it seems to be a cost reducing tool when taking a census and in population statistics in general. To build and maintain such a register exclusively for statistical purposes does not seem cost-effective. However, by sharing with an other institution such a register may become cost-effective for both institutions.

3. Restrictions on the use and linkage of registers on special issues

Concerning registers on special issues surprisingly many are available in many countries. However, the actual availability of such records to the national statistical services differs from country to country for legal, institutional or technical reasons. In most countries registers are used in production of statistics, but in most countries linkage at micro level between different sources is not done due to legal or other restrictions. Such restrictions are e.g.

- Specification of the purpose of data collection
- Restriction of the use of data to a specified purpose
- Restrictions of combining data from different sources through record linkage

Such restrictions hamper the effective use of administrative data in the statistical service and even rule out possibilities to produce new statistics based on combined information from a large number of surveys and administrative data sources. Furthermore, quality control of the register information becomes difficult and inefficient as linkage of information is restricted.

These restrictions are often explained by data protection (confidentiality and integrity) reasons. These reasons may be questioned because in statistics one is not interested in individuals but in properties and parameters for the whole population, or larger sub-populations. Neither are there any legal or other consequences to individuals as is usually the case with administrative use of data. In those countries where the use of administrative data for statistical purposes is allowed, the flow of micro data is strictly "one way": From administration to statistical service.

Besides legal differences, there are differences in the infrastructure of the administrative data systems between different countries. In countries with centralised registers and widespread use of uniform identification codes it is easier to utilise administrative data for statistical purposes than in countries where unit level administrative records are mainly kept by local or regional authorities and identification codes of persons and enterprises differ from system to system In centralised systems the data have often also better internal comparability than in decentralised systems. However, it should be recognised that technical difficulties of decentralisation and lack of uniform identifiers can be overcome by the modern data transfer, data network, data management and record linkage techniques.

In spite of the legal and institutional restrictions, awareness of the potential of the use of administrative data in statistics production has been growing during resent years, especially concerning cost implications when government budgets are being cut everywhere. Within public administration in general the real potentials of the use of a well co-ordinated record system combined with laws and regulations to secure privacy and confidentiality are also more widely seen from the proper perspective of modern information technology. This has led to increasing interest towards the use of administrative data by most national statistical agencies. There are also signs that this has lead to a development of legislation towards more flexible use of administrative data for statistical and administrative purposes. For instance the European Community directive on the protection of privacy includes a principle that the data collected for a specific statistic may be used when compiling other statistics.

4. Advantages and disadvantages of using registers in statistics production

There are the following important advantages of using administrative record systems:

- Possibility to considerable reductions of costs and response burden as compared to a separate data collection by a national statistical agency. From Finland it is reported that 93% of all basic data of the statistical service comes from administrative sources and only about 7% is collected directly by Statistics Finland. However, this 7% stands for about 30% of the total cost of statistics production. Also a number of other countries report considerable reductions in collection costs due to the use of administrative data.
- Entirely new kind of statistics can be produced by using administrative data which have 100% coverage of statistical units. Different kinds of longitudinal flow statistics are good examples of such new statistics. Such statistics is difficult to produce from sample based data because of measurement and sampling errors. Another example is that statistics can be produced for small areas/groups. The limit is dictated by confidentiality and not by sample size, which is usually the case.
- Quality of traditional survey statistics can be substantially improved through combining them with administrative data:
  - The questionnaire may be shortened by adding information from administrative registers
  - Sampling errors may be reduced by using register data as supplementary information and use tailor made estimation methods.
  - Biases introduced by non-response may be reduced.
  - Statistics may be produced for small area by combining the survey data with administrative data.

- The most important disadvantage is lack of flexibility concerning the choice of definitions. In case of the definition of a household, for instance the "de jure" definition will usually get priority over "de facto" in the register, while the opposite is the case in demography. The concepts in the registers are determined by the administrative needs and regulations. They do not necessarily correspond to the statistical concepts which should have been used, even less so to the current international standards.
- Some variables are very hard or impossible to find in any existing register. Examples are "means of transport" and occupation.
- It is impossible to gather subjective assessments and evaluations via administrative registers. Such information is important when measuring the well being of a population and market evaluations of the business community.

5. The role of the statistical agencies

As it follows from the discussion given above, a register based statistical system is only elements of a much larger issue, namely rationalisation of public administration through use of modern information technology. As mentioned above, several administrative registers and record systems are available in most countries. However, in some countries they are not organised in a way that make the best use of modern information technology. In other countries, use of existing information is discouraged by laws and practices which prevent information to be shared between various agencies. The development of a well co-ordinated administrative record system is obviously not the responsibility of a statistical agency alone, but experiences from Scandinavia seem to indicate that the statistical agency is in a special position to evaluate the record system as a whole, as opposed to each agency responsible for specific parts of the system. Statisticians should therefore present long term strategies for the development of a comprehensive system of administrative record system. Important elements in such a strategy could be:

(i) Any long term plan for statistics production should include a cost benefit analysis of the use of registers. Especially in connection with larger projects as a census, plans should be presented showing potential savings associated with eventual use of registers

(ii) Compared to the costs of statistics production, the investments needed to establish a record system could be rather high. It is therefor clear that the savings in statistics production can never justify the establishment of an administrative record system. The statistical agency therefore needs to identify other agency with similar interests in a well co-ordinated administrative record system. Such agencies do exist. In many countries there are ministries which are responsible for the development of efficient use of modern IT technology in the public sector. The statistical agency should be in constant contact with this body in order to make sure that the overall design of the record system will be made as useful for statistical purposes as possible. Experiences from Scandinavian countries clearly indicate that the two agencies have surprisingly many common interests.

Another group of individuals and organisations where the statisticians may find similar views on he use of registers, is the research community. The rich data banks which can be established based on information from registers represent a great potential in economics, epidemiology and other areas of social research. Researchers within these areas often play an important role in the public discussions on social issues.

(iii) The statistician should be careful not to «overload» the register system. Experiences show clearly that information which is only collected for statistical purposes should not be collected by an administrative system. In cases where it is done the quality of such information is usually poor, and will deteriorate over time.

(iv) The statistical agency should present to the general public the potentials for reduction of the response burden through sharing data between various agencies. At the same time point out the laws and regulations governing this exchange of data, together with a description of the technical procedures used to secure privacy. Especially the business community is becoming more and more aware of this aspect. In Norway it was the business community who took the initiative to expand the existing business register into a register of legal units, which could serve primarily administrative but also statistical needs.

(v) When a statistical agency negotiate with an administrative body about possible use of their data for statistical purposes, it is often an advantage to have something to "pay back" with. The obvious to offer is the statistics produced. Another product could be some kind of quality evaluation based on combination of the register with other sources available to the statistical agency only. Such information has of cause to be given at some aggregate level.

6. Report from Eurostat's 3. Mondorf-seminar

The third session of the seminar on the future of social statistics was held at Mondorf-les-baines, Luxembourg on 25 and 26 January 1996. One of the themes discussed was: «Strategies for using administrative data in developing social statistics». Based on the discussions Eurostat has formulated the following preliminary conclusions.

The strategy is composed of three sections:

(i) Legislative support at Community level

- Future European statistical legislation must clearly enable national statisticians to access administrative data in their countries.
- Measures must be taken at European level to make it compulsory to consult statisticians (as is the case in Denmark, Norway and Canada) before any modification to an administrative file used for statistical purposes.

(ii) Technical support

Eurostat should promote:

- research into the statistical use of administrative data
- the exchange of experience between countries, particularly between countries at different levels of experience in the use of files.

(iii) Strengthening the harmonisation of the European statistical system

The European social statistical system must be based on:

- a complete system of common standards (concepts and classifications) determined by Eurostat in co-operation with the Member States, which would gradually have to be incorporated into the administrative data
- a limited set of Community surveys of households (labour force survey, family budget survey, European household panel), the principle of which has already been accepted, but where co-ordination and integration should be strengthened by gradually implementing appropriate target structures.
- flexible use of data from national administrative data in order to:
  * improve the efficacy of sample surveys
  * supplement, at individual level, data from harmonised surveys
  * combine administrative data with survey data in order to meet European requirements for output harmonised social statistics

The action programme

(a) Organisation by Eurostat, at the start of 1997, of a seminar on the use of administrative sources for statistical purposes, which will look at the problems of access and confidentiality and arrange an exchange of experience between the various countries.

(b) Development and promotion of a system of European standards in the field of social statistics, particularly as regards:
   - key concepts and definitions: household, family, etc.
   - nomenclatures: classifications of occupations, training levels and specialities, socio-economic classifications, etc.

(c) Strengthening the co-ordination and integration of the surveys making up the core of Community social statistics (labour force survey, family budget survey, European household panel) thanks to the development of a generalised mechanism and the use of standard definitions, classifications and modules.

Expanding requirements, dwindling resources and methodological advances make it necessary to continually assess which survey and module configurations would be the best for future years. This item, which had emerged from the discussions at the Mondorf 2 meeting, could not be on the agenda of the 1997 Mondorf meeting.

Co-ordination and integration of surveys making up the core would be continued, within the framework of the relevant working parties, thanks to the gradual implementation of appropriate target structures. Other social surveys, such as the time-use-survey, would use the concepts and definitions from the core surveys.

(d) Continuation of the study of the possibilities offered by the methods of data reconciliation and social accounts, particularly employment accounts, with a view to producing consistent and internationally comparable estimates on the basis of administrative files and other available data. A good way to proceed might be the writing of a European handbook on data reconciliation.

(e) Promoting a matching at individual level between administrative files and surveys (for example the matching achieved between the Danish population register and the European household panel) and the use of files to study social dynamics.

Table 1. Availability and use of administrative registers

Basis registers	A	* B	CAN	CH	CZ	D	DK	E	F	FIN	GR	H	I	* IRL	ISR	L	LAT	N	NL	P	POL	ROM	RU S	S	SLO	UK	US
Local population register			x	x		x	x	x		x	x		x		x	x	x	x	x		x			x		x	
Central population register	x	x			x		x		x	x		x	x		x	x	x	x		x	x			x	x		
Register of dwellings		x		x			x		x[1]	x									x		x				x		
Business register			x	x		x	x		x	x	x	x	x			x		x	x	x	x	x		x	x	x	x
Reference number																											
Personal reference number			x		x		x	x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x
Business reference number			x	x			x		x[2]	x		x				x		x		x	x	x		x	x		
Registers on special issues																											
Health register	x		x				x			x		x					x			x	x	x	x	x	x	x	
Tax register			x				x		x	x								x		x		x		x	x	x	
Education register	x		x				x		x[3]	x		x				x		x	x	x	x		x	x	x		
Social security			x				x		x			x			x	x		x	x	x		x	x	x	x	x	x
Criminal registers	x		x				x			x							x						x	x			
Employment/ unemployment			x			x	x		x	x						x		x	x	x			x	x	x		
Use of registers in connection with censuses																											
Register used in the '90 census	x	x		x	x	x	x		x	x			x		x			x			x		x	x			x
Business register used in '90 census				x			x		x															x			

* No information regarding the current project received. The information is collected from other sources.

1) The occupancy tax register does constitute a dwelling register. It is used in the Census.

2) Business register is maintained by INSEE.

3) Maintained at the local level. The education ministry is not allowed to use PIN.

Table 2. Legislation on data

	A	CAN	CH	CZ	D	DK	E	F	FIN	GR	H	I
Legislation on data protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
General law covering collection of statistics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal constraints restricting use of ID for direct matching for statistical purposes	No legal provision for statistical use	Restricted use of ID-number	Restricted use of ID-number	Must be made anonymous	Only within social insur-ance	None	?	ID-number used only within SS-agencies	None	Yes	Decision of consti-tutional Court	Yes

	ISR	L	LAT	N	NL	P	POL	ROM	RUS	S	SLO	UK	US
Legislation on data protection	Yes	Yes	Yes	Yes	Privacy law	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
General law covering collection of statistics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Govern ment's decision	Yes	Yes	No	No
Legal constraints restricting use of ID for direct matching for statistical purposes	None	No matching	None	Few restric-tions	Restricted use of ID-number	No linkage except BIN	New law being prepared	ID not used		Special law for every register. Few restric-tions	None	None	Special law for every register

Country: AUSTRIA
Contact: Richard Gisser, head of population statistics dept.
Tel.: +43 1 71128 7209
Fax: +43 1 7182401

Address: Austrian Central Statistical Office (ÖSTAT)
Hintere Zollamtsstrasse 2 b
Postfach 1000
A-1033 Wien

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. fordirect matching for statistical purposes
Social security number	Nearly universal	No legal provision for statistical use

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Population Census	Decennial collection from all statistical units	Centralised	Population & housing census	None. Housing: households and persons arranged by housing unit	Anonymised data may be passed to statistical services of the nine Länder	None
Births, deaths and marriages	Current by events, monthly reporting to ÖSTAT	Local registers (1343 offices)	Vital statistics	Name & date of birth, none for marriages	Matching only for stat. purposes (infant deaths to births, deaths to cancer cases). Anonymised data to qualified users	None
Divorces	Current by events, quarterly reporting to ÖSTAT	Centralised (national computing centre)	Vital statistics	None	No matching. Restricted transfer of data	None
Naturalisations	Current by events, quarterly reporting to ÖSTAT	Decentralised (9 Länder administrations)	Demographic statistics	None	No matching. Restricted transfer of data	None
Migrations	Current by events, quart. or semestr. reporting to ÖSTAT	Local registers (2351 offices)	Migration statistics (start 1 April 1995)	Date of birth, sex and citiz. to check internal migr.	No matching. Data to be transferred by law to Länder and municipalities	Not applicable
Hospital discharges	Current by events, annual reporting to ÖSTAT	Centralised (Hospital Co-operation Fund)	Hospital discharge statistics	None	No matching. No transfer of data	Timeliness (delay in reporting)
Austrian Cancer Register	Current by new cases, monthly reporting by ca. 300 units (mainly hospitals)	Centralised (ÖSTAT)	Cancer statistics	Name and date of birth	Matching of new to previously reported cases, and of cancer cases to deaths. Very restricted transfer (only own data to reporting units)	Coverage. So-called death-certificate-only cases are regularly added

Austria (cont.)

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Students	Semestral update by events (enrol.)	Centralised (at Ministry of Science)	Stat. of higher education	Matriculation number	Matching to survey on first enrolments and graduations. Anonymised data to qualified users	None
Criminal convicts	Current by events (convictions), annual reporting to ÖSTAT	Centralised (penal register at Ministry of Interior)	Criminality stat. (new cases & repeated convictions)	Internal identification number	No matching. No transfer of data	None

Country: CANADA
Contact: Joanne Pilon
Tel.: +1 613 951 8659
Fax: +1 613 951 5365

Address: Statistics Canada
Ottawa, Canada
K1A OT6

Legislation on data protection:

General law covering collection of statistics:

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
Social Insurance Number	Individuals with insurable employment (although Prince Edward Island requires all newborns to be assigned a SIN)	Some limitations specific to administrative purposes

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Worker's compensation boards claim files	Annual	Centralised	Work injuries statistics	Social Insurance Number	Restricted	Uniformity across provinces
Unemployment Insurance claim file	Monthly	Centralised	Unemployment insurance statistics	Social Insurance Number	Restricted	None
Revenue Canada Taxation file (businesses)	Monthly	Centralised	Financial & taxation stat. for enterprises; Corporation & Labour Unions Return Act; to develop survey frames and to supplement survey data	Corporation nr; name, address & postal code also available	Very restricted to use within Statistics Canada	Source file not well edited or organised for statistical purposes since original use is administrative
List of dealers and local phone books	Quarterly	Local	Farm input price index	Address	Restricted	None
Collective agreements between construction trade unions and local contractors labour relations associations	Depends on length of agreements, many annual	Local (usually city level)	Unionised construction labour wage rates & indexes for specific trades	None	None	Coverage of non-unionised workers in same trades; inability to estimate all supplementary benefits
Signed contracts between provincial highway depts and road construction contractors	As contracts awarded	Local (provincial)	National & provincial highway construction price indexes	None	Provisions of the Statistics Act	Evaluation of quality change over time due to wide variation in possible local working, soil & terrain conditions; maintaining relevance of index given annual variation in highway constr. programs

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Rates published by the Bank of Canada	Monthly	Centralised	Indexes to depict specific interest rate & exchange rate movements	None	None; published sources	None
Canada Customs Import declarations	Weekly/monthly	Individual ports of entry. Summary data collected & processed centrally	Merchandise trade accounts on customs basis. Also basis for BOP based trade flows and is input to marine transp. stat.	Business number used for imports/exports	None	Commodity classification error
Exports (US shipments): US customs-based data	Twice monthly	Individual ports of exit. Summary data collected & processed centrally	Merchandise trade accounts on customs basis. Also basis for BOP based trade flows and is input to marine transp. stat.	Business number used for imports/exports	None	
Exports (non-US shipments): Export declar. & summary export reports	Daily or weekly	Individual ports of exit. Summary data collected & processed centrally	Merchandise trade accounts on customs basis. Also basis for BOP based trade flows and is input to marine transp. stat.	Business number used for imports/exports	None	Non-reporting for non-US shipment
Police records, police-reported crime	Monthly, event	Centralised	Crime statistics	Respondent code	None	None
Police records, homicide	Current, event	Centralised	Homicide statistics	File ID-number	Data released in aggregate form only	Accused criminal status at time of offence
Police personnel and expenditures records	Annual	Centralised	Police personnel & expenditure data	Respondent code	?Yes + Statistics Act	None
Adult correctional services records	Annual	Centralised	Stat. on offender population & characteristics	None	Statistics Act	Definition of some units
Adult correctional services personnel and expenditure records	Annual	Centralised	Stat. on costs of correctional services	None	Statistics Act	Definition of some units
Aggregate data on young offenders	Monthly	Centralised	Young Offender Key Indicator Report Survey	None	None	None
Aggregate data on adult population of correctional facilities	Monthly	Centralised	Statistics on offender population	None	Statistics Act	None
Provincial operational data bases (youth custody and community services) - microdata	Annual	Provincial level	Youth custody & probation characteristics	Unique client identifier	Not approved for public release	Missing some non-custody data
Legal Aid resources and caseload	Annual	Centralised	Legal Aid services statistics	Province/territory/federal	None	Data gaps
Courts resources, expenditures & personnel	Annual	Centralised	Courts personnel & expenditures stat.	Province/territory/federal	Restricted	Comparability

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Youth court records	Current, monthly	Local level	Youth court stat.	Accused identifier	Confidentiality of accused	None
Adult criminal court records	Monthly	Centralised	Adult criminal court statistics	Accused identifier	Confidentiality must be maintained	None
Taxation records (T1 file, unincorporated businesses, & T2 file, incorporated businesses	Annual	Centralised	Benchmark financial information for non-surveyed businesses	Taxation number & name for inc. business and SIN for uninc. busin.	Controlled access within Statistics Canada only	Spurious changes in industrial classification; change in fiscal year end of businesses; incomplete in-coming files; transcription errors; definition of units; problem estimating output by province of origin; Generally Accepted Accounting Principles not always consistent with National Accounting
Taxation records for individuals with positive gross revenue or non-zero net income and for corporations with sales of $25,000+	Annual	Centralised	Farm financial statistics, input to Canadian System of national Accounts	SIN	Matching must be approved by a committee	Major issues arise from fact that purpose of taxation records is to assess income, not generate stat., i.e. different categories, definitions, etc.
Taxation records for firms claiming a research and development tax credit	Monthly	Centralised	Complement the R&D Survey frame; assist in estimating non-responses of R&D performers	Taxation account number	Restricted	Delays in obtaining current data
BBM Bureau of Measurement (audience ratings for stations/programmes)	Event	Centralised	Create radio listening and TV viewing data banks	Exact address on original but data bank limited to geogr. coding	None	Data unique to each survey & not relatable to any other base
Federal government public accounts, revised estimates and annual reports of special funds	Annual	Federal government	Expenditure, revenue & balance sheet statistics	Organised by gov. dept, program & sub-program	Statistics Act	Matching of program entities from one year to another is by name only, no unique ID nr.
Provincial, territorial government public accounts, estimates, revised estimates and annual reports of special funds	Annual	Provincial/ territorial	Expenditure, revenue and balance sheet statistics	Organised by gov. dept, program & sub-program	Statistics Act	Matching of program entities form one year to another is by name only, no unique ID nr.

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Departments of municipal affairs reports	Annual	Local	Expenditure, revenue & balance sheet statistics	Revenue organised by source, expenditures by function/sub-function	Statistics Act	Matching of program entities from one year to another is by name only, no unique ID nr. Differences in reporting conventions from one dept to another, differing concepts in some provinces
Provincial departments of education - financial statements for school boards	Annual	Local school boards	Expenditure, revenue and balance sheet statistics	Name of school board	Statistics Act	Matching of program entities from one year to another is by name only, no unique ID nr. Differences in reporting conventions from one province to the next
Government business enterprise financial statements and annual reports	Annual	Federal, provincial or local	Expenditure, revenue & balance sheet statistics	Name of government business enterprise	Statistics Act	Identification of program entities form one year to another
Federal, provincial and territorial government sub-annual unpublished and published reports	Monthly (federal). Quarterly (provincial)	Federal and provincial/ territorial	Revenue & expend. estimates for system of National Accounts	Organised by gov. dept, program & sub-program or activity	Statistics Act	Identification of program entities from one year to another; problems related to timing of reported transactions
Financial statements of local governments	Annual	Local	Revenue & expend. estimates for system of National Accounts	Revenues organised by source, expend. by function/sub-function	Statistics Act	Differences in reporting conventions
Other provincial reports, e.g. rep. of conservation authorities form Ontario Ministry of Natural Resources, financial statements of Irrigation districts from Manitoba Agriculture, rep. on Northern Remote Communities from Manitoba Northern Affairs	Annual	Local	Revenue & expend. estimates for system of National Accounts & Financial Management System	Revenues organised by source, expenditures by function/sub-function	Statistics Act	Differences in reporting conventions
Federal government employment and wages and salaries	Monthly	Federal government	Employment, wages & salaries data (fed. government)	Department & program activities	Statistics Act	Changing structure of federal gov.

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Provincial/territorial government employment and wages and salaries	Monthly	Provincial	Employment, wages & salaries data (provincial/ territorial gov.)	Department, program & activity codes		Sometimes delays in receiving tapes or paylists
Personal Income Tax file	New file annually	Centralised	Small area socio-demographic data (derived)	Unique social insurance number for each taxfiler, name, address of taxfiler (including postal code)	Statistics Canada obtains file from Revenue Canada - divisions must obtain approval to access & use file	Inadequate socio-demographic data, mailing addresses rather than residential addr. are used, difficulty in achieving intertemporal data comparability due to changes in underlying tax law
Unemployment insurance beneficiary file (register of individuals who qualify for unemployment insurance benefit)	Monthly	Centralised	Small area data on unemployment insurance beneficiaries (derived)	Unique social insurance number for each taxfiler, postal code for each beneficiary	Minimum cell size (i.e. 10) for which data can be released	Difficulty in achieving intertemporal data comparability due to changes in underlying Unemployment Insurance law
Child Tax Benefit file (register of individuals who qualify for Child Tax benefits)	File updated constantly - Statistics Canada receives 2 copies yearly	Centralised	Used to impute children in personal income tax system & to impute Child Tax Benefits received by beneficiaries	Each record has unique Social Insurance nr. for qualifying families, & each record has postal code	No specific constraints on how file can be used	Means-tested program, thus data on some children but not on those in which the family exceeds the maximum allowable to receive benefits
Taxation information on motor carriers of freight	Annual file & updates	Centralised	Quantitative & geogr. stat. on rail freight transport by commodity	No company ID geography at the provincial level	National Transportation Act re: aggregate file: restricted with regard to commodity/ geogr. combinations	Aggregate variables: good. Fairly timely (1994 available in February '95)
Provincial vehicle registrations (provincial governments)	Annual	Provincial/ territorial	Publish vehicle counts by province; used in calculation of fiscal equalisation payments to provinces	None	None - no microdata access	Variations among jurisdictions in definitions (a 'truck' in one province in not a 'truck' in another; personal & commercial trucks combined) make study of certain categories impossible

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Provincial file for administration of fuel tax program	Monthly	Provincial/ territorial	Publish fuel sales by province; used in calculation of fiscal equalisation payments to provinces	None	None - no microdata access	Data for Ontario not reported via this route; sales data from elsewhere in Statistics Canada used to impute sales for this series
Taxation records for manufactures and forestry	Annual	Centralised	Annual survey of manufactures, annual survey of forestry	Tax record number	Very restricted	Delays in obtaining data, reconciliation problems (esp. in case of multi-establishments classified to different Standard Industrial Classification (SIC) codes, classif. problems (wrong codes)
National Energy Board	Monthly summary report	Centralised	Petroleum & electricity stat.	None	None	Timeliness of the data
Summary files from departments of energy of British Columbia, Saskatchewan & Alberta on their royalties payments for crude oil and natural gas	Monthly	Provincial	Used to compile volume & value of production of crude oil & natural gas	None	None	Timeliness of the data
Income Tax Returns	Annual	Centralised	Income distributions, poverty, sources of income	Match using name, address (incl. postal code), date of birth, sex & name of spouse	Informed consent of respondent is sought to use administrative data with survey data. Full confidentiality rules apply resulting in restrictions to output to avoid disclosure	Results from tax file merged with results of interview. Not identical sources with different quality problems. End result should be higher quality (lower attrition, higher response to income survey, lower item non-response), but merging introduces an unknown. Under-coverage of lower income pop. in tax system is not major concern, since interview option still exists

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Vital statistics information from provincial/territorial central registration offices	As the event is registered with province/territory & compiled yearly at Stat. Canada	Each province/ territory has a central registration office	Health & socio-demographic data	Complete personal and demographic data	Statistics Act & Provincial/Territorial Legislation	None
Administrative data from hospitals	Record created upon separation from hospital & compiled yearly at Statistics Canada	Local level	Hospital morbidity survey collects data on inpatient hospital experience of Canadian pop. in terms of diseases & surgical procedures; data used to produce health & socio-demographic stat.	Unique number is assigned at the source	Statistics Act & provincial/territorial legislation and/or Acts	Varies across provinces/ territories; timeliness
Administrative data from provincial/territorial cancer registries	Annual	Provincial/ territorial registries	Annual information cancer incidence by pop. characteristics & goeog. region	Unique number is assigned at the source	Statistics Act & provincial/territorial legislation and/or Acts	Timeliness
Administrative data from residential care facilities	Annual	Local level	(Health & socio-demographic data). Annual data on facilities (excl. hospitals) providing some care (personal & health) to residents. The facilities include: homes for the aged, nursing homes, rest homes, personal care homes, plus facilities for the psychotically disabled, developmentally delayed, persons with disabilities, with alcohol/drug problems, transients, delinquents, unmarried mothers & shelter for families in crisis	Unique number is assigned by Statistics Canada	Statistics Act & provincial/territorial legislation and/or Acts	None
Administrative data derived from the Nurses Associations registration forms	Annual registration	Local level	Stat. data on socio-economic & demographic characteristics of nursing profession	Unique number is assigned at the source	Statistics Act & provincial/territorial legislation and/or Acts	None
Taxation file - T1 individual data file	Twice a year	Centralised	Estimates of economic production for unincorporated businesses	Social insurance number, name & address	Statistics Act & Income Tax Act	Timeframe (1st file received 9 months after end of ref. period). Conceptual & definition differences

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
T2 Corporations data file	Monthly	Centralised	Estimates of economic production for incorporated businesses	Corporation number, name & address	Statistics Act & Income Tax Act	Timeframe; conceptual & definition differences
Sample of T1 (individual) and T2 (corporations)	Annual	Centralised	Financial info is transcribed from financial statements attached to returns; estimates of economic production for small & medium-sized corporations & unincorporated businesses	Corporation number, Social insurance number, name & address	Statistics Act & Income Tax Act	Timeframe; conceptual & definition differences
Payroll deductions account file	Monthly		Maintain & update Business Register	Payroll deduction account nr, name & address	Statistics Act & Income Tax Act	
T4 Supplementary and Summary files	Twice a year	Centralised	Update some of the information in Business Register	Payroll deduction account nr, social insurance nr, name & address	Statistics Act & Income Tax Act	
Miscellaneous Information Slips file	Annual	Centralised	Input in different divisions of Stat. Canada & for special studies	Social insurance number, name & address	Statistics Act & Income Tax Act	
Business Registration file	Monthly	Centralised	Maintain & update Stat. Canada's Business Register	Business number, name & address	Statistics Act & Income Tax Act	
Individual universities & colleges -full-time & part-time staff administrative records (from univ.& coll. & the Quebec provincial department of education			Update the University & College Academic Staff Systems (full-time & part-time)			
Provincial and territorial governments department/ authority of education (supplemented by Territories' Public Accounts) - financial info		Provincial/ territorial	Input to the Survey of Uniform Financial System - School Boards			
Quebec provincial government Department of Education - financial data of private, academic elementary and secondary schools		Provincial/ territorial	Supplement data of Survey of Financial Statistics of Private Elementary & Secondary Schools			
Provincial government departments responsible for education (Quebec, Alberta & part of Ontario) - information for individual colleges		Provincial/ territorial	Supplement data of full-time & part-time enrolment & graduates of post-sec. programs of community colleges			

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
All universities - enrolment information. All educational instit. - graduate information			Data for University Student Information System - Enrolm. & Degrees awarded			
Individual staff information from community colleges and trade & vocational colleges (excl. Quebec)			Data for Annual Community College Educational Staff System			
Provincial Government Departments of Education - individual adm. records of full-time educators			Statistics on characteristics of teachers in private & publ. elem. & secondary schools			
Provincial governments department/authority on education - public schools enrolment information			Stat. on elementary-secondary schools enrolment (e.g. age, sex, grade, French language)			
Treasury Board Canada - information on official languages and general training of public servants		Centralised	Input for Survey of Fed. Government Expenditures in support of education			
Provincial governments designated department or authority - salaries of educators			Data on provincial expenditures on education in reform & correctional inst.			
Trade/vocational institutions - individual's aggregate data			Report on Full-time enrolment in trade/ vocational training programs			
Teachers' Associations - contract information on salaries and wages		Provincial/ territorial	Input to Education Price Index - elem. & secondary levels			
Ontario and Quebec community colleges & vocational schools - financial summaries of operating expenditures			Supplement info from Survey of Financial Stat. of Community Colleges & Voc. Schools			
Ontario Ministry of Education - info for publicly-funded inst. & University and degree-granting colleges in all other provinces - aggregate data		Provincial/ territorial	Continuing Education Survey			
Provincial departments responsible for education - aggregate data		Provincial/ territorial	Data on Registered Apprenticeship Training			

Country: CZECH REPUBLIC
Contact: Jaroslav Kraus
Tel.: +
Fax: +422 825 687

Address: Czech Statistical Office
Prague 8
Sokolovska 142

Legislation on data protection: **Socio-economic information act**

General law covering collection of statistics: **Dtto**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
	Census and vital statistics	Personal data must be made anonymous

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Vital statistics records	Monthly	Centralised	Vital statistics	PIN	Socio-economic information act	
Population census	10 years period	Centralised	Demographic & social statistics	PIN	Dtto & Act of census	
Population register		Centralised	None	PIN		For now not for demographic purposes

Country: DENMARK
Contact: Finn Spieker, Register Consultant
Tel.: +45 39173221
Fax: +45 31184801

Address: Danmarks Statistik
Sejrøgade 11
DK-2100 Copenhagen

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	Universal	None
BIN	Universal	None
Exact address	Universal	None

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Central Population Register	Current, event	Centralised	Many	PIN	Yes, cannot be passed on from statistical office	Delays in emigration
Central Business Register	Current, event	Centralised	Many	BIN	Only basic data may be passed on	Definition of units
Buildings and Dwellings Register	Current, event	Centralised	Housing census	Exact address	None	Updating
Tax Register	Annual	Centralised	Income, employm.	PIN, BIN	Restricted	Occupation
Education	Annual	Decentralised	Yes	PIN	Restricted	None
Hospital	Current, event	Centralised	Health statistics	PIN	Very restricted	
Health Services	Current, event	Centralised	Health statistics	PIN	Very restricted	
Cancer Diagnoses	Current, event	Centralised	Health statistics	PIN	Very restricted	None
Road Accidents	Monthly	Decentralised	Accident statistics	PIN	Restricted	
Social Benefits	Current, event	Centralised	Social statistics	PIN	Very restricted	
Crime	Current, event	Centralised	Crime statistics	PIN	Very restricted	
Unemployment	Current, event	Centralised	Unemployment stat.	PIN	Restricted	
Wage Systems	Current, event	Decentralised	Wages, employment	PIN, BIN	Restricted	
Births and Deaths	Current, event	Centralised	Vital statistics	PIN	Restricted	

Country: FINLAND
Contact: Pekka Myrskylä
Tel.: +358 0 1734 3555
Fax: +358 0 1734 3251

Address: Statistics Finland
FIN-00022 Statistics Finland

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
Personal identification number	Universal	None
Business identification number	Universal	None
Domicile code (municipality nr + village nr + real estate or block nr + building nr + dwelling nr)	Universal (given to every person living in same dwelling according to CPR, and to every building and dwelling in BDR)	None

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Central Population Register	Current, event	Centralised & local level	Population, vital & family stat., demogr. data in all person statistics	PIN	Individual data cannot be passed from statistical office	Some delays
Register of buildings and dwellings	Current, event	Centralised	Annual building & dwelling stat.	Domicile code	None	Updating of reparations
All the tax register	Annual	Centralised	Income, employm.	PIN, BIN	See CPR	Occupation data
Education	Annual	Centralised	Education statistics	PIN	See CPR	Ed. of emigrants
Employment registers of: - private sector - local government - state official	Annual	Centralised	Employment	PIN	See CPR	 No part-time wkrs No part-time wkrs None
Register of old-age and invalidity pensions	Current, event	Centralised	Employment, main type activity	PIN	See CPR	None
Various student registers	Annual	Centralised	Main type activity	PIN	See CPR	Interrupted students
Job seekers	Current, event	Centralised	Main type activity	PIN	See CPR	
Register of conscripts	Annual	Centralised	Main type activity	PIN	See CPR	
Register of enterprises and establishments	Annual	Centralised	Employees' industry Business statistics	BIN		
Wage reg. of Employers	Annual	Centralised	Employment stat.	PIN	See CPR	Occupation data
Many other registers as: crime, cancer, wages & salaries,teacher, real estate						

Country: FRANCE

Contact: Michel Jacod, Departement de la Démographie
Tel.; +33 1 4117 5386, fax: +33 1 4117 6741
D. Depardieu (Employment, salaries)
Nicole Roth (Ministry), +33 1 4056 5478

Address: * INSEE, 18 Bd Adolphe Pinard, 75675 Paris Cedex 14
* Ministry of Health and Social Affairs, SESI
1 place de Fontenoy
F-75007 Paris

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	**Coverage**	**Legal constraints restricting use of id. for direct matching for statistical purposes**
See National Population Register below		

Administrative Sources/Specialised Registers

Type of register	**Frequency, method of updating**	**Centralised or at local level**	**Statistical uses**	**Id used.**	**Legal constraints restricting transfer and matching**	**Major quality problems**
Census	No updating	Centralised	Of course	No id.	Matching forbidden	
Electoral file	Permanent update by new registration (age 18 or moving to new 'commune') & by matching with death file	Centralised	Data on migration (could be, not effective now)	PIN, name, place & date of birth	Only to be used by INSEE to inform municipalities of changes	
National Population Register	Permanent update by birth, death files & (for persons born abroad) by SS-agency when the person gets a job	Centralised	Direct use: stat. on names. Indirect: DADS, retiree's panel,....	PIN (named NIR), name, place & date of birth	No use possible outside SS-agencies & some specific operations (e.g. electoral file). ???Prealable authorisation needed, even if reg. is only used for checking personal identity without using PIN	Some immortal. Persons born abroad that have never been employed are not in the register
DADS (Annual declaration of wages by employers)	Annual flow of period of employment over the previous year	Centralised	National: distrib. of salaries/different criteria. Local: empl. stock & flow. Moves: professional & geogr. mobility	PIN	Confidential authority: PIN is of internal use, to merge different jobs for one person. File *cannot* be matched with other administrative data	
Interscheme retiree's panel (pensions & former activity)	Every 4-5 years	Centralised	Links between pension & former activity, overall view of retirees' situation (aggregation of different kinds of pensions), longitudinal studies	Serial number derived from PIN	Law. Acceptance of the CNIL to use the PIN at the intermediate stage	No stat. standards (nomenclatures). No control of completeness of the task. Only person level, not household. Limited kind of information (administrative)

Country: GERMANY
Contact: Hans Gerd Siedt
Tel.: +49 611 75 2845
Fax: +49 611 72 4000

Address: Federal Statistical Office
Gustav Stresemann Ring 11
65180 Wiesbaden
Germany

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
SSN	80% of economically active persons	Usage only within social insurance system

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Population Registers	Event	Local level	Communal migration stat., intercensal pop. estimation, stat. of vital events	Name, address	Special law required	Individual moral of registration, deficits in reg. laws, co-operation between communities
Persons Engaged	Event	Centralised	Personal, insurance-related & economic characteristics of persons engaged	SSN	Evaluated jointly by Federal Ministry of Labour and Federal Statistical Office	Covers 80% of economically active persons

Country: GREECE

Address: Agisilaou str. 43-45
GR-301 66 Athens

Contact: Hara Zikeer
Head of the Vital statistics section
Tel.: +301 5235243
Fax: +301 5234669

Legislation on data protection: **Yes, law for NSSG**

General law covering collection of statistics: **Yes, law about the Registers**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Population Register	Monthly collection from all units (Marriages, births and deaths)	Local level (municipalities and Comunes)	Yes	Name and address	In this fase the transfer of data is done by mail	None

Country: HUNGARY
Contact: Á. Mészáros
Tel.: +361 212 6212
Fax: +361 212 6679

Address: Hungarian Central Statistical Office
H-1525 Budapest

Legislation on data protection: **Yes, Law on Protection on Personal Data**

General law covering collection of statistics: **Yes, Law on Statistics**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	All population	Decision of constitutional Court, Law on Personal Data Protection
BIN	Universal	Only basic data may be passed on from the register

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
HCSO Business Register	Monthly	Partly decentr.	Many	BIN	Used for statistics only	No local units
Register of non-profit organisations (HCSO)	Annual	Centralised	Survey of non-profit organisations	Exact address	None	Delayed reporting on dissolution of organisations
Unemployment (National Labour Centre)	Current - monthly report	Local offices and centralised	Yes	Name & address	No individual data may be passed on	Coverage & definition problems
List and elementary data on educational and cultural institutions	Annual	Centralised	Many	Exact address	None	Cultural units' coverage (theatres, museums etc.)
Property price register of office for computation of duties	Annual	Local level	Social statistics	Exact address	None	Underestimation of prices
Inventory of property on local municipalities	Quarterly	Local level	Government, social statistics	Locality name	None	None
Central population register	Current, event	Centralised		PIN	Yes	
Land use register	Annual	Both			Open	
Local government budget	Annual	Both			Statistical Office only	
National register of physicians	Current	National & county level	Yes	Registration number	Law on data privacy	Undisciplined reporting, problems of harmonisation
Records by family doctors	Current (by cases)	Local	Yes	Social security card number	Law on data privacy	Undisciplined reporting, problems of harmonisation

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Special registers of selected diseases (cancer, TB, venereal and skin diseases, psychiatric cases, alcoholism)	Current (by cases)	Centr. (cancer), local (others)	Yes	Patients' card	Law on data privacy	Problems of contact
Registers on creche and resident nursery children	Current	Centralised & by institution	Yes	Based on personal data	Law on handling of health data (1992)	
Several reg. on different kinds of social benefits & persons receiving those (child care allowance, support for unemployed, support for maintenance of dwelling, care & death allowances, aid for homeless & handicapped)	Current or periodic	Local government	Yes	Automatised & manual, based on personal data	See above	
Drug use	By cases	Local	Yes	Identif. of Social Security	Law on data privacy	
Cases of disability to work	By cases	Local	Yes	See above	See above	
Register of hospital treatments	By decades	Centralised	Yes	See above	See above	
Counselling on protection of family and women	By cases	Local	Yes	See above	See above	
Other registers (on public guardianship, epidemics, damages in work, vaccination etc.)	By cases or periodic	Local	Yes	Name, address or card of registration	See above	

Country: ISRAEL
Contact: E. Ben Moshe, Director Pop.Census Planning Team
Tel.: +972 2 553474
Fax: +972 2 553591

Address: Central Bureau of Statistics
P.O. Box 13115
91130 Jerusalem
Israel

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
Unique ID number (IN)	95% of the population. Non-permanent residents not included (long-term tourists and foreign workers)	No constraints for the CBS

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Population Register	Periodically (with some delay)	Centralised	Mainly based on reported *changes* (flows)	PIN	No legal constraints for the CBS	Undercoverage: ~2-5%. Overcoverage: ~10%. Unupdated addresses
National Insurance (Social Security)	Monthly	Centralised	Social security, wages, labour stat.	PIN	No legal constraints for the CBS	Only reported workers & recipees of social security payments are included
Census (1983) (incomplete)	4/6/1983	Centralised	Census statistics	PIN	No legal constraints for the CBS	Undercoverage: ~2%
Census (1995) (forthcoming)	4/11/1995	Centralised	Census statistics	PIN	No legal constraints for the CBS	Not yet

Country: ITALY

Address: Via A. Rava 150
00162 Roma

Contact: Luca Calzola or Gaetano Fazio
Tel.: +39 6 5963011
Fax: +

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Population census	Every 10 years Periodic collection from all units	Centralised	Yes	No identification at individual level	The transfer of individual files are possible only among the member of the SISTAN (national statistical system which include ISTAT and local administration)	Coverage and missing values and comparability
Local population register	Updated by deaths, births, migrations, mariages and censuses	Local level (at level of commune)	Yes	None It is not possible to transfer and match data	Some files are not on computers	

Country: LUXEMBOURG
Contact: Jean Langers
Tel.: +352 478 4250
Fax: +352 464289

Address: Statec
B.p. 304
L-2013 Luxembourg

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	Universal	No matching for statistical purposes
BIN	Universal	

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Central Population Register	Current, event	Centralised	For the time being cannot be matched with other sources (perhaps more regulations in near future)	PIN	For the time being cannot be matched with other sources (perhaps more regulations in near future)	Too many foreigners (underevaluation of departures)
Central Business Register	Current, event	Centralised	Base for statistical registers	BIN	For the time being cannot be matched with other sources (perhaps more regulations in near future)	Classification by local unit, NACE
Social Security	Current, event	Centralised	Employment, wages	PIN, BIN	For the time being cannot be matched with other sources (perhaps more regulations in near future)	Classification by local unit, NACE
Unemployment	Monthly	Centralised				
Education	?		?			

Country: NETHERLANDS
Contact: Hanneke Imbens (Education and social security)
Kees Prins (Population)
Tel.: +
Fax: +

Address:
P.O. Box 959
2270 Voorburg
Netherlands

Legislation on data protection: **A privacy law**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
Social-fiscal number	Taxpayers + persons insured under employee insurance	-----
A-number	Total population	Only available in population register (internal id.). The SOFI number will be available in the population register from 1996 onwards

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Municipal Population Registers	Current, event	Local	Many	PIN (A-number)	Restricted	Delays in emigration, address not always actual
Students at Vocational Colleges	Annual	Centralised	Education statistics	-----	Restricted	-----
Employment Office Files	Monthly	Centralised	Registered unemployment estimates	Address, date of birth, sex	Restricted	Labour market position
Unemployment Benefits (from municipalities) (from social sec. funds)	 Annual Monthly	 Local pr. branch	 Social security statistics	 PIN (SOFInr) -----	 Restricted -----	----- Delays in registration

Country: NORWAY
Contact: Elisabetta Vassenden (education, population),
tel.: +47 62885285, fax: +47 62885289, e-mail: elv@ssb.no
Harald Utne (labour market), tel.: +47 22864784,

fax: +47 22864996, e-mail: hut@ssb.no

Svein Gåsemyr (general), tel.: +47 22864684,
fax: +47 22864998

Address: Statistics Norway
Pb. 8131 Dep, N-0030 Oslo, or:
Pb. 1260, N-2201 Kongsvinger
Norway

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes, Statistics Act of 1989**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	Universal	General authorisation by Data Inspectorate
BIN	Universal	General authorisation by Data Inspectorate

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Central Population Register	Current, event	Centralised	Population statistics	PIN	Concession by Data Inspectorate necessary	Some delay in reporting
Population Statistics System	Annual or more often	Centralised	Basic registers for many stat.	PIN	Anonymised data may be transferred, concession by Data Insp. necessary	Few
Central Business Register	Current, event	Centralised	Basic register for many stat.	BIN	See above	Public sector, small units
Building & Address Reg.	Current, event	Centralised	Regional statistics	Nr. code	See above	Link CPR
Education Registers	Annual	Decentralised	Education statistics	PIN	See above	Foreign education
Tax Registers	Annual	Centralised	Income, employm.	PIN, BIN	See above	-----
Income Registers	Annual	Centralised	Income	PIN	See above	-----
Register of Employees	Current, event	Centralised	Employment	PIN, BIN	See above	Delay in reporting
Reg. of Unemployment	Current, event	Centralised	Unemployment	PIN	See above	None
Wage Registers	Annual	Centralised	Wages	PIN, BIN	See above	Coverage, general quality
Social Security	Annual	Centralised	Social statistics	PIN	See above	
Person Account Data System	Annual (based on the above)	Centralised	Socio-demogr. stat., censuses	PIN, BIN	See above	
Immigration Authorities' Register	Event	Centralised	Reason for immigration	PIN	See above	Lack some PINs, some quality problems

Country: POLAND

Address: Al, Niepodlegkosci 208
00-925 Warsaw

Contact:
Tel.: +48 (22) 251703
Fax: +48 (22) 253435

Legislation on data protection: **Yes, Law on Protection Peronal Data (1995)**

General law covering collection of statistics: **Yes, Act on Statistics, 1983; and prepared the new version of Act on Public Statistics, 1995.**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Population Census /microcensus/	Every ten years /Every five years/	At local level	The basis for potential estimates of population	None	In the future: Law on Protection Personal Data /during collection and data processing/	None
Administrative records	Current evidence of demographic phenomena /birth, death, marriage, divorce/	At local level-communities	The main source for statistics of biths, deaths, marriages and divorces	PIN (last introduced to two administrative records) /birth-PIN of mother and father, marriage/	As above and the Act on Public Statistics	The vital statistics is complete but estimation of bias and errors in administrative is very difficult
Central Population Register, PESEL	Registration of demographic, administrative and territorial changes concerning population	At local level 4 municipalities	The basic source for migration statistics /internal and partly international migration	PIN number for each person which is registered for permanent residence in Poland	Law on Register and Identity Cards Law on Foreigners, Law on Citizenship	Reliability of data collected first of all for administrative purposes can't be sufficient for needs of population statistics
Special sample surveys	Periodically, collection from sample units	At national level or on voivodship level	The source of information on socio-economic determinants of demographic and social phenomina and processes	None	Law on Protection Personal Data	Good quality only at the national level
Health and education records	Yearly, by use of statistical forms, collection from all units	At local level - communities	The basis for education and health care statistics	The identity number REGON, that received all units /establishments/ at the moment of their creation.	None	The statistical observation on official private activity physicians is very difficult. For this reason can appear the biased results of surveys.

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Territorial Division Register includes the following systems: 1) Identifier numbers and the name of the territorial division unit	The registers are updated when the changes of the territorial division are announced. Each new unit applying for the registration is given a unique identity number. This system makes possible maintaining the existing identifier numer unchanged	Centralised	The registers are used in all statistical surveys in which groups of units and classification by administrative units i.e. voivodships, districts, towns are necessary	The strict identification of all existing voivodships, districts and towns in the country	There are no legal regulations concerning the availability of the identifying numbers that belongs to respective territorial division systems. The identifiers are meant to intergrate different information systems	The main problem connected with managing the register is country territorial instability. The form and number of administrative numbers are changed often.
2) Identifier numbers and the name of the places	When changes in the administrative system are announced	Centralised	The register is used in the process of identification of the addresses of the units covered by surveys. The register is also used in the processing of the results coming from different surveys	The identification by the type concern all towns existing in a country		The important matter is a process of supplying information. The obtained information is very often incorrect.
3) The register of statistical area districts and the register of census area	Every year.	Voivodship level	Two-level structure of geogr. stat. units and system of identifiers used in order to conduct population census and sample surveys. Sample frame for sample surveys	Borders of units marked at the maps. Main criterion is size of district		
4) Addresses of streets and buildings identification system (introduced now)	Every year on the basis of the same data as used in the process of statistical area districts updating	Decentralised at voivodship level	Identify statistical information of towns and units. A present survey frame will be improved	This identification concerns the 3 above mentioned systems. An identification of streets and buildings is applied in this system		

Country: PORTUGAL
Contact: Fernando Casimiro
Tel.: +351 1 8470050
Fax: +351 1 8491109

Address: National Statistical Institute
Av. António José de Almeida
1007 Lisboa Codex
Portugal

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	Usually for people aged 10 and older	No linkage of files
Social security PIN	Economically active and retired population	No linkage of files
Electoral PIN	People aged 18 and older	No linkage of files
Tax PIN	Economically active and retired population	No linkage of files
Driver PIN	Drivers	No linkage of files
BIN	Universal	None

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Central Population Register	Current for demographic event, otherwise depending on age	Centralised	Data on nationality and other	PIN	Very restricted	Usually for people aged 10 and older. Little updating of socio-economic characteristics
Electoral Register	Annual, event	Local	Political representatives & elections	Electoral PIN	Very restricted	Change of residence, updating of deaths
Central Business Register	Current, event	Centralised	Many	BIN	Restricted	None
Social Security Beneficiary	Current, event	Centralised & local	Social security statistics	Social security PIN	Restricted	No coverage of some economic activities
Social Security Payers	Monthly, event	Regional level	Social sec. stat.	Social sec.PIN	Restricted	None
Professional Diseases	Current, event	Centralised	Social sec. stat.	Social sec.PIN	Restricted	None
Solidarity Institutions	Quarterly, event	Centralised	Social sec. stat.	Name, addr.	Restricted	None
People working on Enterprises	Annual, event	Centralised	Employment & wages statistics	BIN	Restricted	None
Social Balance	Annual, event	Centralised	Employment & wages statistics	BIN	Restricted	No coverage of enterprises w/ less than 100 people
Unemployment	Current, event	Centr. & local	Unemployment	PIN	Restricted	None

Portugal (cont.)

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Tax Register	Annual, event	Centralised	Income	Tax PIN	Very restricted	None
Health Service	Current, event	Local	Local health stat.	Social sec.PIN	Very restricted	None
Education	Annual, event	Centralised	Education stat.	PIN	Restricted	None
Cancer diagnosis	Current, event	Local	Health stat.	Local number	Very restricted	None
Social Security for Public Servants	Current, event	Centralised	Health stat.	Specific PIN	Restricted	None
Working accidents	Monthly, event	Centralised	Working accidents	Specific nr.	Restricted	None

Country: REPUBLIC OF LATVIA
Contact: Edmunds Vaskis, fax: +371 7830137
Uldis Usackis (population), tel: +371 7284537, fax: +371 7830137

Address: Central Statistical Bureau of Latvia
1 Lacpiesa St
Riga, LV 1301
Latvia

Legislation on data protection: **Yes, Act on State Statistics, adopted 1 June 1993, and Act on Population register, adopted 11 December 1991**

General law covering collection of statistics: **Yes, Act on State Statistics, adopted 1 June 1993**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
Yes	94%	No

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Physicians register	To requirement the whole year round	Centralised at Bureau of Health Statistics	To calculate pop. morbidity & rate of physicians by different specialities	Person id. number (11 digits)	No restrictions	No data on physicians not working in their speciality
Cancer register	See above	Centralised at the Cancer Centre	To calculate pop. morbidity & cases of malignant neopl.	Name, address	No restrictions	
Tuberculosis register	See above	Centr. at Centre for TB & Pulm. Diseases	To calculate population morbidity	Name, address	No restrictions	
Pensioners data file	Monthly	Centr. at Ministry of Welfare	To calculate average pensions	Name, address	No restrictions	
Register of health institutions and utilisation of hospital beds	To requirement the whole year round	Centralised at the Bureau of Health Statistics	To calculate rate of health care insti. & hospital beds pr. population	Institution name	No restrictions	
Crime register	Monthly	Ministry of Interior	For stat. analyses and publications	Name, address	No	
Population register	Urban localities: every 3 days, rural districts: weekly	Regional data bases & central pop. register	For statistical calculations	Person id. number (11 digits)	Act on State Statistics and Act on Population register	Register is still under development
Vital statistics data file	Quarterly	Centr. in CBS	Vital statistics	None	Act on State Statistics and Act on Population register	No
Migration stat. data file	Monthly	Centr. in CBS	Migration stat.	None	Act on State Statistics and Act on Population register	No
1989 Population Census	Periodic collection from all units	Centralised in CBS	Scientific needs (AGEING project), basis for next census data comparing	None	Act on State Statistics and Act on Population register	No

Country: ROMANIA
Contact: Adrian Damachi, Register expert
Tel.: +40 1 6134253
Fax: +40 1 3124873

Address: National Commission for Statistics
16, Libertatii Avenue
Bucharest
Romania

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	Partial (30 generations)	Not yet statistically used

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Trade Register	Current, event	Centralised & decentralised	Many	BIN	Public	Definition of active units
Tax Register	Current, event	Centralised & decentralised	Many	BIN	Nonrestricted, fee payable	Main activity & wager number not available
Social benefits (children allowance)	Current, event	Centralised	Social stat.	PIN	None	
Pension system	Current, event	Centralised	Social stat.	PIN	Restricted	
Health services	Current, event	Centralised	Social stat.	Address		
Births, deaths and marriages	Monthly	Centralised	Vital stat.	Form nr. from civil status register	None	Reliability for demographic characteristics declared free
Central Statistical Business Register	Monthly	Centralised	Economic stat.	Address, BIN1 (from Trade Reg.), BIN2 (from Tax Register)	Very restricted	Updating number of employees

Country:	RUSSIAN FEDERATION	Address:	State Committee of the Russian Federation of Statistics
Contact:	Vera P. Aleksandrova, Deputy Chief Demographic Statistics & Population Census Department		Mayashitskaya 39 103450 Moscow
Tel.:	+7 095 9288584		Russian Federation
Fax:	+7 095 2074640		

Legislation on data protection: **Yes, on personal (private) data protection**

General law covering collection of statistics: **There is Government's decision**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Population Census and Administrative Records of Vital Events & Migrants	Current, event	Decentralised	Demographic and social statistics	Name and address	Restricted	Some incomplete registration of death & migration
Education	Annual	Decentralised	Education statistics	Name and address		
Hospital	Current, event	Decentralised	Health statistics	Name and address		
Health Services	Current, event	Decentralised	Health statistics	Name and address		
Road Accidents	Current, event	Decentralised	Accident statistics	Name and address		
Social Benefits	Current, event	Decentralised	Social statistics	Name and address		
Crime	Current, event	Decentralised	Crime statistics	Name and address		
Unemployment	Current, event	Decentralised	Unemployment statistics	Name and address		
Wage System	Current, event	Decentralised	Wages and employment stat.	Name and address		

Country: SLOVENIA
Contact: Irena Trsinar, advisor to director for the CRP
Tel: +386 61 322449
Fax: +386 61 302370

Address: Statistical Office of the Republic of Slovenia
Vozarski Pot 12
1000 Ljubljana
Slovenia

Legislation on data Protection: Yes, 1990
General law covering collection of statistics: Yes, 1995

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	Citizen (foreigners in plan by new law on CRP)	None
BIN	Universal	None
Territorial codes, to house number level	Code: community, settlement, street, house nr	None
Centroid (geographic co-ordinates x,y)	All houses	None

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used	Legal constraints restricting transfer and matching	Major quality problems
Central Population Register (CPR)	Vital events: daily Migration: weekly	Centralised.,	Population stat., sampling, other	PIN	Allowed exclusively if so directed by a law (according to law on personal data protection)	Lack of data on foreigners, permanent - temp. residents (duality)
Business Register	Current, event	Centralised	Many	BIN	None	Collection of data
Reg. of TerritorialUnits	Current, event	Centralised	For all surveys, for control & GIS	Address (house nr) Centroid	None	New local organis. (admin.) 1..1.95
Health Insurance Register	Current, event	Centralised	Stat.reg.on employment	PIN	Restricted	Distribution by activity and territory Coverage (no PIN for foreigners)
Birth-death Register	Current, event	Centralised	Vital statistics	PIN	Allowed excl. by law	None
Health Files	Current, event	Decentr. & centr.	Health statistics	with (out) PIN	Very restricted	
Job-seekers Register	Current, event	Decentr. & centr	Labour statistics	with PIN	Very restricted	Not according to ILO definitions
Register of state scolarships	Annual	Centralised	Stat.on recipients	with PIN	Very restricted	
Register of students	Annual	Decentralised	Stat on students	with PIN	Very restricted	
Social Assistance Benefits	Current	Centralised	Income of households, Stat.on recipiants	PIN	Very restricted	
Family Support Benefits	Current	Centralised	Stat. on recipients Income of households	PIN	Very restricted	
Register of Taxpayers	Annual	Centralised	Income stat.	PIN	Very restricted	Income of selfemployed is understimated
Pension Insurance	Current	Centralised	Pension stat., income statistics	PIN	Very restricted	

Country:	SPAIN	Address:	Instituto Nacional de Estadistica
Contact:			Paseo de la Castellana 183
Tel.:	+		Madrid
Fax:	+		Spain

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	Universal	?

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Municipal Population Register	Current, event (renewed every 5 years)	Local level	?	Name, surname, address, PIN	?	?
Civil Registers (births, deaths, marriages)	Current, event	Local level	Vital statistics	Name, surname, address, PIN	?	?

Country: SWEDEN

Contact: Ingrid Melin (population), tel: +46 19176596, fax.: +46 19176942, e-mail: i.melin@scb.se
Hans Pettersson (welfare & social stat.), tel.: +46 87834885, fax: +46 87834772, e-mail: h.pettersson@scb.se
Elisabet Eklund (income), tel.: +46 19176752, fax: +46 19177086
Anita Ullberg (VAT, business), tel.: +46 87834650
Rolf Selander, Kim Nyman (environment & agriculture), tel.: +46 19177058
Karin Winqvist (school stat.)tel.: +46 19176474, fax: +46 19177084, e-mail:k.winquist@scb.se
Hans Eriksson (longitudinal data), tel.: +46 87834825, fax: +46 87834812/86615261
Lars Olov Sundh (transition education/labour market), tel.: +46 19176664
Kerstin Båsjö (student panels), tel.: +46 19176123
Madeleine Bastin(occup. accidents)tel.+46 87834654,fax:+46 87834916, e-mail:m.bastin@scb.se
Ronnie Andersson (education reg., higher education), tel.: +46 19176593

Address: Statistics Sweden
S-11581 Stockholm, or:
S-70189 Örebro Sweden

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes (collection of DATA)**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
PIN	The whole population	Special law for every register

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Reg. of persons found guilty of offences	Annual	Centralised	Analysis of relapse risks	PIN	Restricted	
Reg. of children subject to public care	Quarterly	Centralised	Longit. analysis of event, history analysis of risk factors	PIN	Restricted	Rather large underreporting of events
Reg. of persons receiving social assistance	Annual	Centralised	Studies of dependency on social assistance	PIN	Restricted	
Reg. of causes of death	Annual	Centralised	Epidemiological studies, matchings	PIN	Restricted	Classification problems
Combined register of death cause & occupation 1961-70, 1971-80, (1981-90 under preparation)	10-year period	Centralised	Analysis of occupational mortality	PIN	Restricted	Classification problems
Fertility register	Annual	Centralised	Analysis of fertility trends & fertility differentials	PIN	Restricted	
Register of income and assets	Annual	Centralised	Base register for a number of statistical products (ULF, INKOPAK; TAXOPAK)	PIN	Restricted	

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Income Verification Register	Three times a year	Centralised	Regional empl. stat., regional accounts, national accounts, income statistics	PIN, organisation nr, address	Secrecy law, data law	Marging with other registers, incomplete forms, coverage errors
Central Population Register	Weekly	Centralised	Basic register for population stat., sample frame, background data, info about names & addresses	PIN, address	Secrecy law, data law	Overcoverage, incomplete civil status variable, measurement errors
Assessment for Taxes on Real Property Register	Annual	Centralised	Sample frame, real property statistics	PIN, organisation nr, address	Secrecy law	No major problems
VAT-register	Every two months	Centralised	VAT-stat. (regional figures), auxiliary info for estimations	Organisation number	Secrecy law	Activity classification
Central Business Register	Every two weeks - 1-2 times a year: info on employees	Centralised	Sampling frame, official central register, info about addresses	Organisation nr, local unit number	Secrecy law. Special legal act for official part of the register (SFS 1986:549)	Updated info on size classes (activity classes & addresses)
Vehicle Register	Annual	Centralised	Sample frame, market research, national accounts, transport information system	PIN, vehicle registration number	Data Protection Law	Late registrations
Farm Register	Annual	Centralised	Sample frame, agriculture stat., address sales, administrative info.	Farm identification number	Data Protection Law	Measurement errors
Register over schools	Annual, mail questionnaire	Centralised	Population, tables	Id. number for schools	Statute for the education system	Reorganisation in municipalities
Register over teachers	Annual, mail questionnaire	Centralised	Follow-up tables	PIN	Statute for the education system	Reorganisation in municipalities
Compulsory school, pupils and classes	Annual, mail questionnaire	Centralised	Follow-up tables	Id-number for schools & classes	Statute for the education system	
Compulsory school, grade 9	Annual, mail questionnaire	Centralised	Follow-up tables	PIN	Statute for the education system	
Schools for mentally retarded pupils	Annual, mail questionnaire	Centralised	Follow-up tables	PIN	Statute for the education system	
Special schools for visually & auditorially disabled children	Annual, mail questionnaire	Centralised	Follow-up tables	PIN	Statute for the education system	
Upper secondary school, applicants & admitted	Annual, mail questionnaire	Centralised	Follow-up tables	PIN	Statute for the education system	

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Upper secondary school, enrolled pupils	Annual, register from Central Study Assistance Committee	Centralised	Follow-up tables	PIN	Statute for the education system	
Upper secondary school, graduated pupils	Annual, leaving certificates	Centralised	Follow-up tables	PIN	Statute for the education system	
Education for immigrants in the Swedish language	Annual, mail questionnaire	Centralised	Follow-up tables	PIN	Statute for the education system	
Municipal Adult Education	Annual, mail questionnaire	Centralised	Follow-up tables	PIN	Statute for the education system	
People's colleges	4 times a year, mail questionnaire	Centralised	Follow-up tables	Id. number for schools	Statute for the education system	
Pupils with native languages other than Swedish	Annual, mail questionnaire	Centralised	Follow-up tables	Id. number for schools	Statute for the education system	
Schools for mentally retarded adults	Annual, mail questionnaire	Centralised	Follow-up tables	Id. number for schools	Statute for the education system	
Census & education data (longitudinal data from 1970, 1975, 1980, 1985 and 1990 censuses)	Every 5 years	Centralised	Several, mainly flow analysis	PIN	Permission from 'datainspektionen' needed for matching. Micro-data must not be distributed	
Employment & education data (longit. 1985-93)	Annual	Centralised	Several, mainly flow analysis	PIN	Permission from 'datainspektionen' needed for matching. Micro-data must not be distributed	
Teacher register (longitudinal, 1980, 1985-1993)	Annual	Centralised	Several, mainly flow analysis	PIN	Permission from 'datainspektionen' needed for matching. Micro-data must not be distributed	
Transition from education to labour market	Annual	Local in Statistics Sweden	Variation, changes of activity, income, branch of industry 1985-1993	PIN	Matching by PIN only within Statistics Sweden	Noy yet notified. Under development
Student panels for longitudinal studies	Annual	Local in Statistics Sweden & Univ. of Gothenburg	Continuous school system evaluation	PIN (not in Gothenburg)	Matching by PIN only within Statistics Sweden	Various matching problems against other registers
Register on reported occupational accidents and diseases	Annual	Data collected by social insurance offices. National Board of Safety & Health is responsible for the register	Stat. on commuting accidents & occupational accidents & diseases. Many different users	PIN, id. nr of establishment	Under the authority of the National Board of Safety & Health	Nonresponse. Overcoverage

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Education register	Annual	Centralised	Educational attainment. Statistics on groups, e.g. teachers, engineers. Backgroung data	PIN	Secrecy law, data law	Information on education of immigrants is incomplete
Higher education register	Term (twice a year)	Centralised	Stat. on students at univ. & univ. colleges, both basic higher education & postgraduate studies. Sample frame	PIN	Secrecy law, data law	Coverage errors
University & university colleges staff register	Annual	Centralised	Staff statistics. Sample frame	PIN	Secrecy law, data law	Coverage errors. Faculty classification
Education attendance register	Annual	Centralised	Education attendance statistics	PIN	Secrecy law, data law	Coverage errors

Country: SWITZERLAND

Contact: Buscher Marco, Section BHS (Pop. census) +41 31 3228829
Cotter Stephane, Section BEU (Vital stat., annual pop. stat. and migration)
Mangold Hans, Section UNT (Census on establishments)
Amacher Paul, Section SCHUL (Education)
Baurhofer Hans, Section RECHT (Criminal stat.)
Spahler Thomas, Section GES (Health stat.)
Bandi T., Office fédérale des assurances sociales (Social security statistics)

Address: Bundesamt für Statistik
Schwartorstrasse 53
CH-3003 Bern

Legislation on data protection: **Yes**

General law covering collection of statistics: **Yes**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
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Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Communal Residents Registers	Current, event	Local (>3000 communes)	Supporting census operation & control	Address, names	None, but id. has to be deleted by the FSO, once Census operation is finished	Harmonisation (content), defin. of characteristics (e.g. household & family definition), contain only few census-relevant information, actualisation (time lags)
Central Alien Register (ZAR)	Current, event	Centralised	Supporting census operation & control	Address, names	See above	See above
Buildings and Dwellings Registers	Current, event	Small amount of communal or cantonal registers	Supporting census operation & control	Exact address	Restricted	See above
Register of Civil Registrars + Communal Residents Reg. + ZAR	Current, event	Local, local, centralised	Vital stat., annual population stat., migration stat.	Names + commune or aggregate data	Restricted	None, needs rebasing by census
Central Business Register (BUR) of the FSO	Current, event and periodic collection	Centralised	Many (census on agriculture, industries, business & establishments)	BIN, address	Restricted	None

Country: UNITED KINGDOM
Contact: David Pearce
Tel.: +44 171 396 2001
Fax: +44 171 396 2057

Address: Office of Population Censuses & Surveys (OPCS)
St Catherine's House
10 Kingsway
London WC2B 6JP
United Kingdom

Legislation on data protection: **Yes**

General law covering collection of statistics: **No, there is no comprehensive law covering all statistics, though there are a number of laws which cover areas of statistical collection such as the Statistics of Trade Act**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes
National Insurance Number	People in employment or self employment in recent years	Restrictions apply to databases rather than the identification number
National Health Service (NHS) number	All UK born people (issued at birth), migrants on first registration with doctor	None

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
Tax records stat. sample	Annual	Centralised	Budget planning & tax policy advice, distributional analyses of tax, tax forecasts, national accounts	National Insurance number, tax reference number	No identifiable data can be used outside Inland Revenues, unless expressly allowed by law	Coverage reflects legal & administr. requirements, not statistical ones. There are delays in recording events (changes of employer etc.)
Survey of household income and expenditure	Annual	Centralised	Advice on distributional effect of fiscal policy	Postal address	File available for use outside statistical department is anonymised	70% response rate (voluntary survey) & relatively small sample size introduces problems of reliability & bias
Social security contributions, earnings, pension rights, employment	Annual	Centralised	Used extensively for pensions policy analysis	National Insurance number	Can be used only within Department of Social Security	Some problems of non-response in employment file
Health service register	Current, event	Centralised	Internal migration, epidemiology	NHS nr., name, date of birth	No identifiable data can be released outside NHS Division	List inflated since deaths & migrants not always removed
Electoral register	Annual by postal or door-to-door data collection	Local	Small area migration, numbers of electors	Name, address	None (full register is published)	Non-registration, non-removal on deaths or outward migrants

Country: UNITED STATES
Contact: Linda W. Gordon, Statistics Division, INS
Donald M. Bay, E-mail: DBAY@AG.GOV
James A. Weed

Address: Washington DC 20536
tel.:202-376-3008, fax: 202-376-3083
tel: 202-720-2707, fax: 202-720-9013
tel: 301-436-8951, fax: 301-436-7066

Legislation on data protection: **Yes, U.S. Privacy Act, Title 7 of US Code and Section 308 (d) of the Public Health Service Act (42 USC 242m)**

General law covering collection of statistics: **Yes and no**

Id. number	Coverage	Legal constraints restricting use of id. for direct matching for statistical purposes

Administrative Sources/Specialised Registers

Type of register	Frequency, method of updating	Centralised or at local level	Statistical uses	Id used.	Legal constraints restricting transfer and matching	Major quality problems
INS Central Index of foreignborn persons	Constantly as events occur affecting a person's immigration status	Centralised	Extracts are used to produce summary statistics	Name, date of birth, A-number	U.S. Privacy Act	Completeness of coverage, completeness of some data fields
Register of farms and farm operators	Continuous updating from ongoing surveys and a wide variety of list sources	Centralised database, updated and accessed locally	Production statistics on agriculture Farm family demographic and economic statistics	Name, address, EIN, SSN	Titel 7 of US Code Title 18 of US Code	Under coverage of small farms
Vital records: - births - deaths - marriage - divorce	Annual collection by local units (States and Territories of the U.S.) as events occur	Records are maintained at State and local levels; derived statistical data provided to CSO by States	Statistic on natality, mortality, marriage, divorce. Used by demographer epidemiologists and researchers - used for analysis and health policy	Name and addresses, social security number. CSO has only State file numbers	Individual State laws provide primary protection for confidentiality of individual decedents or partners. Federal laws protect confidentiality of information provided to CSO.	Not all States report all data items. Not all States submit data on marriage and divorce.

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Returadresse:
Statistisk sentralbyrå
Postboks 8131 Dep.
N-0033 Oslo

Statistics Norway
P.O.B. 8131 Dep.
N-0033 Oslo

Tel: +47-22 86 45 00
Fax: +47-22 86 49 73

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