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CONFERENCE OF EUROPEAN STATISTICIANS

Joint ECE-EUROSTAT work session
on Population and Housing Censuses [1]
(Dublin, Ireland, 9-11 November 1998)

Study topic 3

ANNUAL SYSTEM OF SMALL AREA STATISTICS BASED ON ADMINISTRATIVE RECORDS AND REGISTERS

Supporting paper prepared by Statistics Finland [2]

Summary

1. Since 1987, all Census data have been produced annually based on data in administrative regi sters. Each year, Statistics Finland produces demographic and employment statistics, building, dwelling, household and family statistics and statistics on housing conditions. The most impo rtant of these registers are the Central Population Register (CPR; total number of residents, dem ographics, families), the Register of Buildings and Dwellings (RBD; buildings, dwellings or premises), and the Register of Enterprises and Establishments (REE; all private sector enterprises and public sector establishments). Additional data sources used include registers of work pensions, taxation, the unemployed, pensioners, and students.

2. The RBD contains data of importance in defining area statistics. The information is linked via identification data to other statistical units. Units are identified through their person number, building number and enterprise number. Every building has its own building number comprised by the following parts:

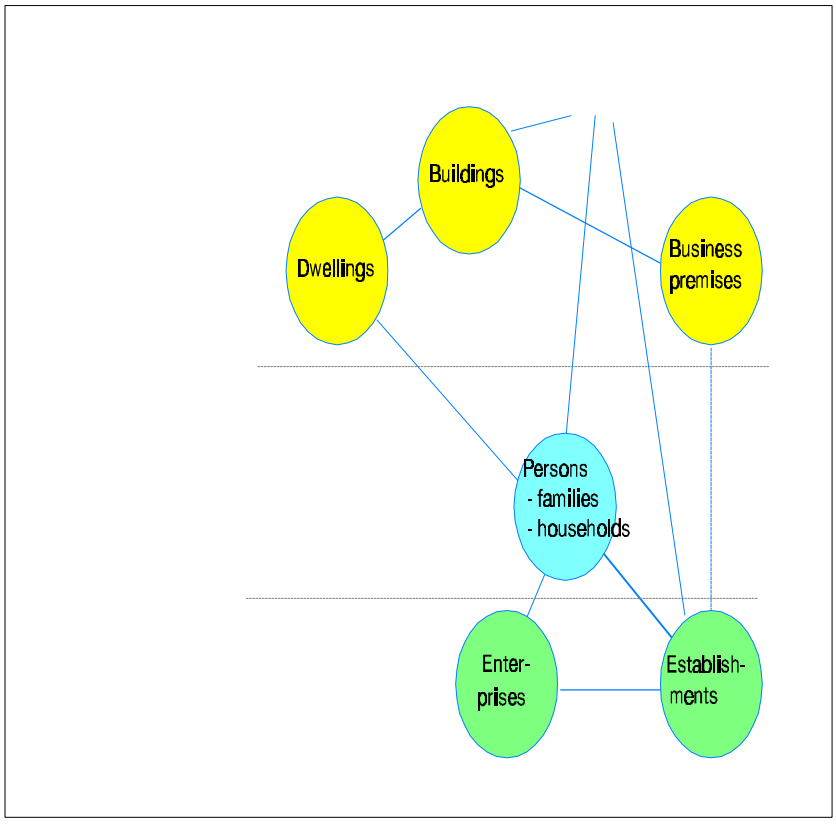
1. Municipal code	3 digits	5. Building number	3 digits
2. Village code	3 digits	6. Door code	1 digit
3 Real estate code	4 digits	7. Dwelling number	3 digits
4. Checking number	1 digit		

1 The papers which are prepared for this work session will be treated in the same manner , as papers that are prepared for seminars.

2 Prepared by Pekka Myrskylä & Kaija Ruotsalainen.

3. Code numbers 1 through 4 together form the real estate number, codes 1 through 5 the building number. Every apartment is given a code consisting of the building number, plus the numbers that identify the apartment numbers 6 and 7. The numbers 1 through 7 together form the dwelling number, which is used as the domicile code for individuals in the CPR. The RBD contains the data on buildings and dwellings, such as building year, completion year, building material, vo lume, number of floors, number of rooms, floor area, heating system, equipment, etc., as well as the map co-ordinates for each building. The co-ordinate data are needed for the production of small area statistics. Every individual with a permanent residence in Finland is registered into the CPR. Every person's record contains his/her person number, as well as his/her domicile code, which is the same as the dwelling number. If the person moves to a new dwelling, the register authority corrects the domicile code accordingly. This provides the individual with a contin uously updated data link to his/her dwelling. A household -dwell ing unit comprises all individuals with the same domicile code (living in the same dwelling).

4. REE includes all private sector enterprises and their establishments, as well as government e stablishments. Municipal establishments are recorded in a separate data register. These registers provide information on branch of industry, type of ownership, legal form and institutional sector of employment.



Statistical units like persons, buildings, dwelling establishments are linked together via different codes. All dwellings and premises (Links 1 and 2) are linked to a building via a building code maintained by the CPR. The building code provides the co-ordinates for the respective unit. Persons (3) and dwellings (buildings and map co-ordinates) are linked via domicile codes.

5. Working persons are annually linked (4,5) with employment organisation and their establishments. Links for some business premises (7) and establishments are obtained via organisation codes. With the help of the address it is possible to link the establishment with the real estate number and co-ordinates in the RBD. In the case of some entrepreneurs, like farmers, the industry is deduced from pension insurance data and from the type of income. And the location of the establishment is the home address of the entrepreneur.

6. There are three ways to produce small area statistics:

a) ***Administrative areas***: municipalities, provinces (counties), the entire country, etc. The dwelling number/ domicile code are used to link the statistical units to the correct municipality, and, by combining several municipalities, to higher level areas.

b) ***Sub-areas defined by the municipalities***: area borders defined by municipalities are digitised into machine readable form. Persons, work places, buildings, dwellings, etc. pertaining to these areas are linked to them using the co-ordinate data.

c) ***Map square procedure***: The map can be analysed by choosing the preferred square form (1 km x 1 km, 0.5 km x 0.5 km, or 0.25 km x 0.25 km) and selecting the number of squares to be analysed. The units pertaining to the selected square are then linked to it: individuals, work places, buildings, dwellings, etc. After the user has chosen the preferred area, the borders are digitised and the selected statistics are produced. The buildings within the area are linked to the persons living in the buildings and to the enterprises and establishments having their premises within the buildings. As all e mployed persons are linked to the enterprise and establishment where they are employed, the linking provides information on the number of persons employed, and their field of work, within the chosen area.

7. Annual statistics are based on material comprising the whole country, the whole population all workers and all the enterprises. Regional data can be produced for any areal classifications. The following regional divisions are applied in the production of annual statistics: whole country, 12 counties, 5 NUTS2-areas, 88 NUTS3-areas (provinces), 20 regional planning areas and 455 munic ipalities. And by using map-co-ordinates we can go deeper within municipalities: 10 000 sub-areas within municipalities, 950 localities (urban areas), 3000 postal code areas, 320 000 map squares (1 km x 1 km) etc.