STATISTICAL COMMISSION and   **STATISTICAL OFFICE OF THE**
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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]

1.   Since 1987, all census data have been produced annually based on data in administrative registers. Each year, Statistics Finland produces demographic and employment statistics, building, dwelling, household and family statistics and statistics on housing conditions. The most important of these registers are the Central Population Register (CPR; total number of residents, demographics, 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:

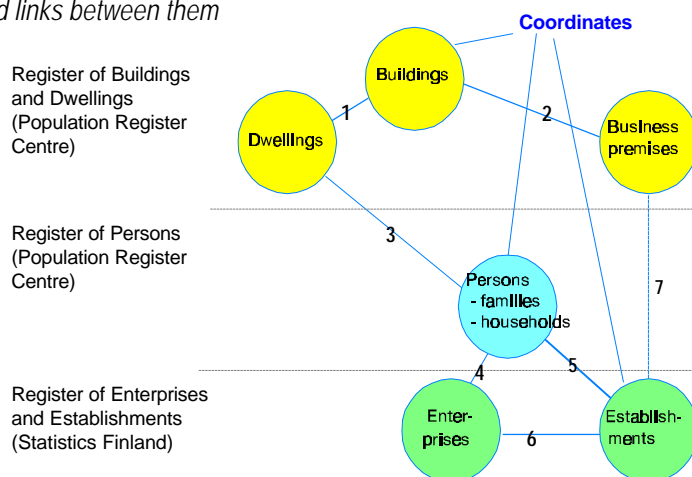|				
1. Municipal code	3 digits		5. Building number	3 digits
2. Village code	3 digits		6. Door code	1 digit
3. Real estate code	4 digits		7. Dwelling number	3 digits
4. Checking number	1 digit			

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

2 Prepared by Pekka Myrskylä &Kaija Ruotsalainen.

Code numbers 1 through 4 inclusive 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, volume, 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
continuously updated data link to his/her dwelling. A household-dwelling unit
comprises all individuals with the same domicile code (living in the same
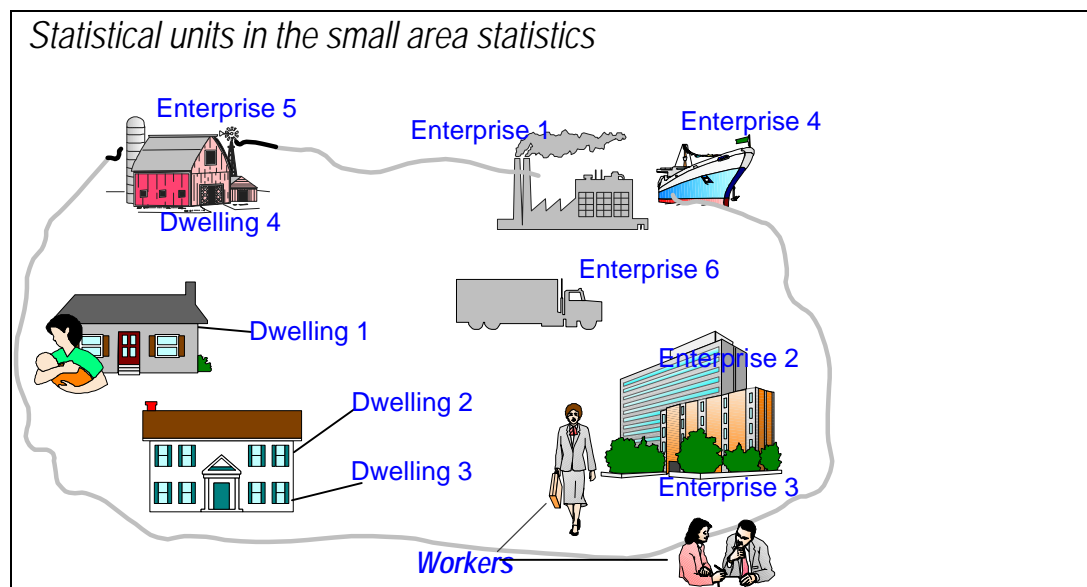dwelling).

3.   REE includes all private sector enterprises and their establishments, as
well as government establishments. 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.

*Units belonging to the register based statistical system
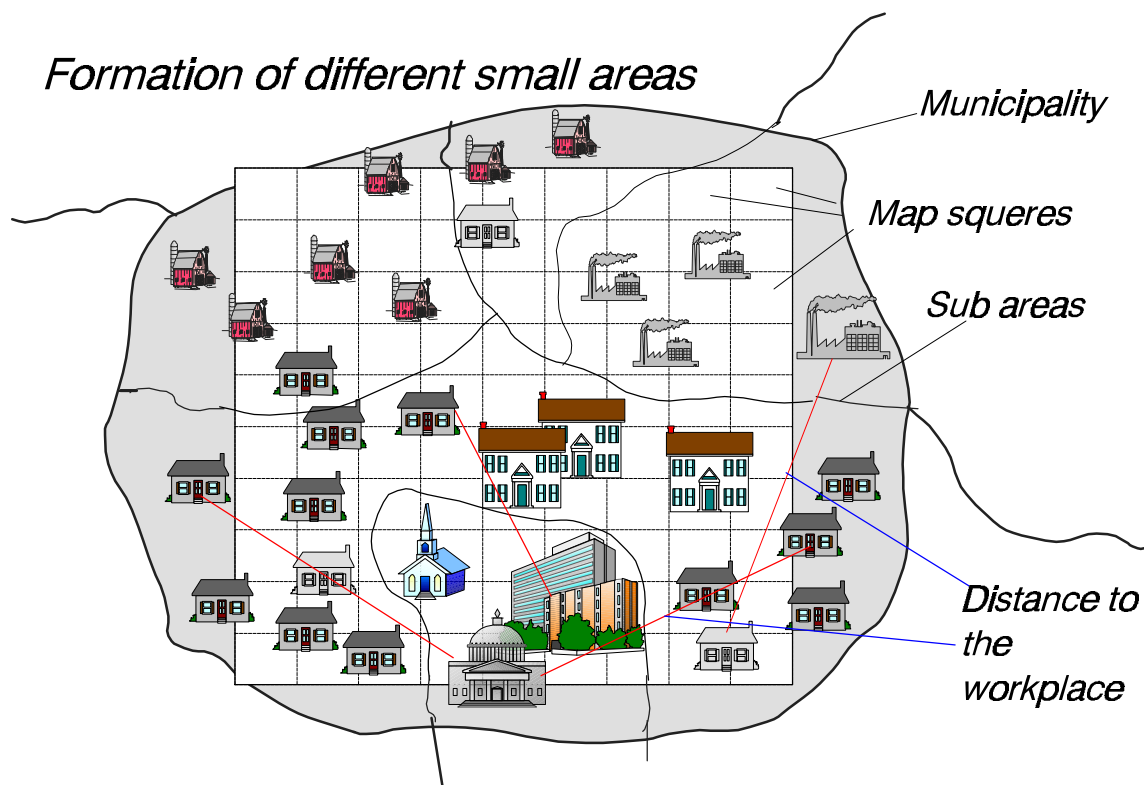and links between them*

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.
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.

Statistical units in the small area statistics

4.   There are three ways to produce small area statistics:
      1.   **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.
      2.   **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.
      3.   **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.

5.   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 employed 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.

Formation of different small areas

6.   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 area 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 municipalities. 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.

Tables by municipalities and sub-regions

Economic activity of population

Tables by municipalities

> R-Tables are printed for
> Swedish-speaking and bilingual
> municipalities only; S-Tables
> only for the municipalities of
> Enontekiö, Inari, Sodankylä
> and Utsjoki (with Sami-
> speaking population).

Population and labour force

K 100   General information on the
        population, labour force and
        workplaces compared with the
        whole country, province,
        region, sub-regional unit and
        municipalities of the same
        size category

K 101   Population by main type of
        activity, sex, marital status
        and age (5 yrs)

K 101R Swedish-speaking population by
        main type of activity, sex,
        marital status and age (5 yrs)

K 101S Sami-speaking population by
        main type of activity, sex,
        marital status and age
        (5 yrs)

K 102   Employed labour force by
        industry
        (2-3 digits), sex and age (5
        yrs)

K 102R Swedish-speaking employed
        labour force by industry (2-3-
        digit), sex and age
        (5 yrs)

K 103   Employed labour force by
        industry
        (17 categories), occupational
        status and sex

K 104   Employed labour force by
        occupation
        (3 digits), sex and income
        subject to state taxation

K 105   Employed labour force by
        socio-economic status (2
        digits), sex and age
        (5 yrs)

K 106   Population aged over 15 by
        main type of activity, level
        of education, sex and age (5
        yrs)

K 106R Swedish-speaking population
        aged over 15 by main type of
        activity, level of education,
        sex and age (5 yrs)

K 107   Population aged over 15 by
        education (3 digits) and sex,
        employed and unemployed labour
        force separately

K 108   Employed labour force by field
        and level of education and
        industry (10 categories)

K 109   Unemployed by field and level
        of education and industry (10
        categories)

K 110   Employed labour force by
        industry, occupational status,
        type of income, sex and income
        subject to state taxation in
        1995

K 111   Employed labour force by
        industry, occupational status,
        sex and net income in 1995

K 112   Unemployed by level of
        education, sex and duration of
        unemployment

K 113   Population by main type of
         activity and industry, persons
         employed through labour policy
         schemes or in labour market
         training at year-end 1994 and
         1995 separately

K 114   Employed labour force by
         industry and sex in 1987-1995

Employment

K 120   Employed labour force resident
         in the municipality by
         location of workplace, sex and
         industry (17 categories) and
         net commuting and revenue by
         municipality

K 121   Persons working in the
         municipality by home
         municipality, sex and industry
         (17 categories) and net
         commuting and revenue by
         municipality

K 122   Employed labour force from
         outside the municipality by
         industry (10 categories), sex
         and age (5 yrs)

K 123   Persons employed outside home
         municipality by industry (10
         categories), sex and age (5
         yrs)

K 124   Persons working in the
         municipality by industry, sex,
         occupational status and
         employer sector

K 125   Persons working in the
         municipality by level of
         education, sex and age (5 yrs)

Preliminary data by municipalities

Population and labour force

EK 100   Population by main type of
         activity, sex and age (5 yrs)

EK 101   Employed labour force by
         industry (2-3 digits), sex and
         age (5 yrs)

Employment

EK 120   Persons working in the
         municipality by industry (2-3
         digits), sex and age (5 yrs)

Tables by sub-regions

Population and labour force

O 100   General information on sub-
         regions

O 101   Population by sex, age, main
         type of activity and
         occupational status

O 101R   Swedish-speaking population by
         sex, age, main type of
         activity and occupational
         status

O 102   Labour force by sex and socio-
         economic status

O 103   Population and labour force by
         sex, income subject to state
         taxation in 1995 and industry

O 104   Population aged over 15 by sex
         and income subject to state
         taxation in 1995 (median
         income)

O 105   Population aged over 15,
         labour force separately, by
         sex and level of education

Employment

O 120   Persons working in the area by industry

O 121   Persons working in the area by location of workplace, industry (2-3 digits), sex and home municipality

O 122   Employed labour force by place of residence, industry (2-3 digits), location of workplace and sex

Household-dwelling units and families

Tables by municipalities

K 200   Household-dwelling units by structure and number of persons

K 201   Household-dwelling units by sex of reference person, marital status and age and number of persons in household-dwelling unit

K 202   Household-dwelling units by income subject to state taxation in 1995, net income and number of persons

K 210   Families and families with children by language of spouses/parents

K 211   Children by age and type of family

K 212   Families by type, main type of activity of parents/spouses and number of children under 18 and 7

K 213   Families and families with children by industry of

Preliminary data by sub-regions

EO 100 Population by sex, age (5 yrs), main type of activity and occupational status

Table by urban settlement

T 100   General information about urban settlements   .

husband/father and wife/mother

K 214   Families by income subject to state taxation in 1995, net income and disposable income and number of persons

Tables by sub-regions

O 200   Household-dwelling units with people over 65 by age of youngest and oldest resident

O 210   Population by sex, age and family status

O 211   Families and families with children by type of family and number of children

O 212   Children by type of family, parents' main type of activity and age of child

O 213   Families by income subject to state taxation in 1995 and disposable income

Housing conditions

Tables by municipalities

K 300   Dwelling population by sex, age and level of housing

K 301   Household-dwelling units by type of building, tenure status and number of persons

K 302   Household-dwelling units by type of building, tenure status and number of rooms

K 303   Household-dwelling units by type of building, tenure status, living space and income subject to state taxation in 1995

K 304   Household-dwelling units by tenure status, living space and age of reference person

K 305   Household-dwelling units by tenure status, type of building and level of housing

K 306   Household-dwelling units by stage in life, tenure status and living space

Preliminary data by municipalities

E 300   Household-dwelling units by number of persons and dwelling density

E 301   Household-dwelling units by number of persons and type of dwelling

E 302   Household-dwelling units by floor area of dwelling and number of persons

E 303   Household-dwelling units by type of building, level of housing and number of persons

E 304   Elderly household-dwelling units and persons living in such units by type of building and level of housing

Tables by sub-regions

O 300   Household-dwelling units by type of building and number of persons

O 301   Elderly household-dwelling units by age of reference person, floor area of dwelling, standard of equipment and car ownership

O 302   Household-dwelling units by level of housing and number of persons

O 303   Household-dwelling units by level of housing and tenure status

O 304   Household-dwelling units and elderly household-dwelling units by living space, income subject to state taxation in 1995 and car ownership

Building and dwelling stock

Tables by municipalities

Dwellings

K 400   General information about dwelling stock in municipality compared with the whole country, province, region, sub-regional unit and municipalities in the same size category

K 401   Dwellings by type of building, age of residents and tenure status

K 402   Dwellings by occupancy, number of rooms and type of building; overcrowded dwellings and average floor area separately

K 403   Dwellings by tenure status, facilities and number of rooms

K 404   Dwellings by category of floor area, type of building and occupancy

Buildings

K 410   Buildings and dwellings by intended use and year of construction

K 411   Buildings by intended use, heating system and source of heat

K 412   Buildings by intended use and facilities

Business premises

K 420   Business premises by intended use and year of construction

K 421   Business premises by intended use and occupant's industry

Free-time residences

K 430   Free-time residences by facilities, floor area and year of construction

K 431   Free-time residences by year of construction and owner's home municipality

K 432   Free-time residences owned by private persons by location and year of construction

Tables by sub-regions

Dwellings

O 400   Dwellings by type of building, standard of equipment and year of building

O 401   Dwellings by tenure status, type of building and standard of equipment

O 402   Dwellings by type of dwelling, type of building and tenure status

O 403   Dwellings and dwelling population by facilities in dwelling

Buildings

O 410   Buildings by intended use and year of construction

O 411   Buildings by intended use, heating system and source of heat

Business premises

O 420   Business premises by
        intended use and year of
        construction

Free-time residences

O 430   Free-time residences
        according to year of
        construction