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Adriatic Common Indicators
Methodology sheet (October 2004)



Title: Population, education, safety

Subject of the measuring:

- 8.1 density of population
- 8.2 average of members for each family
- 8.3 achievement at secondary school
- 8.4 average life expectancy
- 8.5 total reported crimes

8.1 density of population

Headline indicator: ???

1. Definition

Population density can be used as a measurement of any tangible item. However it is most frequently applied to living organisms. Population density is often expressed in terms of organisms per unit area.

For human beings, population density is the number of persons per unit of area (which may include or exclude inland water), though it may also be expressed in relation to habitable, inhabited, productive (or potentially productive) or cultivated area.

Population density is a often reported and commonly compared statistic for places around the world.

Population density provides a useful means for comparing population distribution. Density can be computed for any area – as long as one knows the size of the land area and the population within that area. The population density of cities, states, entire continents, and even the world can be computed.

2. Questions?

Which is the density of population in my territory? Which is the population density in different areas of my territory?

3. Context

The territories with highest population densities around the world share a relatively small area and an exceptionally high urbanization level, with an economically specialized city population

drawing also on rural resources outside the area, illustrating the difference between high population density and overpopulation.

The most densely populated large state is Bangladesh, where 134 million people live in a highly agricultural area around the lower Ganges river, with a national population density in excess of 900 persons per km². World overall population density presently averages 42 persons per km².

Cities with exceptionally high population densities are often considered to be overpopulated, though the extent to which this is the case depends on factors like quality of housing and infrastructure or access to resources. Most of the largest densely-populated cities are in southern and eastern Asia, though Cairo and Lagos in Africa also fall into the category.

City population is however, heavily dependent on the definition used for the urban area: densities will be far higher for the central municipality than when more recently-developed and as yet administratively unincorporated suburbs are included, as in the concepts of agglomeration or metropolitan area, the latter including sometimes neighbouring cities.

4. Unit of measurement

It is frequently measured in persons per square mile or persons per square kilometer or hectare, which can be obtained simply by dividing the number of persons by the land area measured in square miles or in square kilometers or hectares.

Total area population/land area in square miles (or square kilometers or hectares).

5. Form of reporting / presentation

Population density is reported using thematic map of the territory or of the urban area considered

6. Keywords

density, population/inhabitant, size of the area

8.2 Average of members for each family

1. Definition

A family nucleus is defined in the narrow sense as two or more persons within a private or institutional household who are related as husband and wife, as cohabiting partners, or as parent and child. Thus a family comprises a couple without children, or a couple with one or more children (not necessarily common), or a lone parent with one or more children.

The indicator "Average of member for each family" is obtained by dividing the number of people in families by the total number of families (or families householders)

2. Questions?

Which is the average of members for each family? How is growing the population? In which term the local population is organized?

3. Context

The average of members for each family depends on different factors :

- 1) **different social levels :**
- 2) **country development**
- 3) **education level**

It is important to distinguish between family and cohabitation (religious institution, hospice and house of refuge, etc). Usually, these lasts are not included in this rate.

According with the previous definition, the family nucleus include :

One person:

Pensioner
Other

One family and no others:

All pensioners
Married couple households: No children
Married couple households: All children non-dependent
Cohabiting couple households: No children
Cohabiting couple households: With dependent children
Cohabiting couple households: All children non-dependent
Lone parent households: With dependent children
Lone parent households: All children non-dependent

Other households:

With dependent children
All student
All pensioner
Other

4. Unit of measurement

Number of people in families / total number of families.

5. Keywords

family, size, households.

8.3 Achievement at Secondary School

1. Definitions

N° of students in the secondary school
N° of students concluding the secondary school (N° of students/N° students certified)

2. Questions?

How many people in my territory have a secondary school certification?

3. Context

It is possible to analyze the number of students entered to the school and it could be related to:

- a) family economic condition and to the local contest and geographical contest.
- b) Parents education level;
- c) Student sex;
- d) Government capacity to incentive and subsidies the studing at secondary school for poor people

Other possibilities are related to analyze student curriculum to know:

- a) Age of the student at the finish of secondary school;
- b) N° of years necessary to achieve the diploma;
- c) Type of school;
- d) Sex and geographical contest

4. Unit of measurement

% of people with a secondary school diploma related to n° of entered the secondary school

5. Keywords

Students, incentives, subsidies.

8.4 Average Life Expectancy

1. Definitions

It is necessary to distinguish between the life expectancy at birth and at certain ages.

The life expectancy at birth is the average number of years a newborn infant would be expected to live if health and living conditions at the time of its birth remained the same throughout its life. It reflects the health of a country's people and quality of care they receive when they are sick. It explains the health and living conditions of each individuals, and it also reflects the health , the economic and the care system conditions of each county.

The life expectancy at certain ages mean number of years still to be lived by a person who have reached a certain exact age, if subjected throughout the rest of his life to the current mortality conditions (age specific probabilities of dying).

2. Questions?

How is the life expectancy ion my country ? which are the differences around the world ? (around the Adriatic Region ?)

3. Unit of measurement

The Life expectancy is calculated by EUROSTAT (European statistics Institution) as the average further number of years that a person of a specified age can expect to live, assuming that the age-specific mortality levels remain constant (i.e. the rates observed for the period under review). Life expectancy tables are based on the probability of dying according to Farr's death rate method:

$$q_x = M_x / (B_x + (M_x/2))$$

where:

M_x is the number of deaths at the age of x to under x+1 years in the reported period

B_x is the average population aged x to under x+1 in the base period

q_x is the death probability from age x to x+1.

Life expectancy is normally expressed as the number of years a person may expect to live, starting from age 0. Also other ages can be chosen as a starting point: The life expectancy a certain age is the number of years a person of a certain age may expect to live, if mortality patterns remain unchanged. Life expectancy is normally calculated for all age levels and for males, females and total population.

4. Keywords

life, years, social economic and environmental conditions.

8.5 Total Reported Crimes

1. Definitions

A crime is an act which violates a law of a government, nation-state, or jurisdiction, for which there is no successful defense. there must be a simultaneous concurrence of both actus reus ("guilty action") and mens rea ("guilty mind") for a crime to have been committed; except in crimes of strict liability. In order for prosecution, some laws require proof of causality, relating the defendant's actions to the criminal event in question. In addition, some laws require that attendant circumstances have occurred, in order for a crime to have occurred. Also, in order for a crime to be prosecuted, corpus delicti (or "proof of a crime") must be established.

A crime can be the action of violating or breaking the law, having the intention of doing so or helping others in the process; in some systems the simple association for organizing a crime is punished, even if the fact is not verified and usually for many crimes the attempt too is punished, even if the crime is not completed.

Crimes can be divided into several (overlapping) categories: computer offences, crimes against persons, crimes against property, crimes against state security, drug offences, sexual offences, and weapon offences. Crimes are also be grouped by severity, some common categorical terms being: felonies, indictable offences, infractions, misdemeanors, and summary offences. An inchoate offense is a planned or attempted crime, which the offender was not able to carry out prior to arrest.

2. Questions?

Which is the level of safety in my city? How many crimes are reported? Which is the part of my population that is more crime inclined?

3. Measurement

Crime rate are generated to analyze crime statistics. The most common source of such statistics are records reported to the police. It is possible to consider the number of crimes declared, the number of crimes sentenced, the number of prisoners, etc.

The crime rate is :

$$\text{Crime Rate : } \frac{\text{Crimes in an area}}{\text{Population in that area}} * 100.000$$

4. Keywords

Crimes, reported crimes, sentenced crimes.

FOR ALL THE INDICATORS:

1. Exemples of similar application

Population density, the average of members for each family, the life expectancy and the total reported crimes are referred to the population so they are provide by ISTAT (Italian Institute of Statistics) during the decennial census. Moreover local authority monitoring and control the evolution of this data monthly or annually.

The number of people that achieve a secondary school diploma is a data referred to students so, it is provide by the Ministry of Education and Research (this is valid for Italy, maybe in other country it could be entrust to other institution).

2. Target

Actions taken in order to encourage the increase of life expectancy, the n° of members for each family, the achievement of secondary school and the decrease of crimes do not establish in general, specific targets. They are related to particular procedures adopted by local authority .

3. Frequency of Measurement

- a) Annual
- b) Annual (sometimes the data are available with the national census every 10 years)
- c) Triennial
- d) Annual
- e) Annual