

Equitable and Sustainable Well-being indicators for small areas

Keywords: Well-being indicators, Sustainable Development Goals, SDGs, Rome, Statistics

The aim of this paper is to describe methods and results about the evaluation of Equitable and Sustainable Well-being indicators for the Municipality of Rome. Rome is the first city in Italy to present a structured report on this subject. This work is framed within the discussion about sustainability at national and global level.

1. INTRODUCTION

Since 2010, the Italian National Institute of Statistics (Istat) elaborated a set of indicators, called Equitable and Sustainable Well-being (ESW), to measure the progress of Italian society not only from an economic point of view, but also from a social and environmental perspective [1].

This year, for the first time, the Municipality of Rome (Roma Capitale) valorised 75 indicators related to the roman well-being conditions [2].

This work is framed within the discussion about sustainability at global level. Since 2000 were introduced the Millennium Development Goals (MDGs), measurable, universally-agreed objectives for tackling extreme poverty and hunger, preventing deadly diseases, and expanding primary education to all children, among other development priorities. In 2012, at the United Nations Conference on Sustainable Development in Rio de Janeiro, the current 17 Sustainable Development Goals (SDGs) replaced the MDGs [3].

2. FROM GLOBAL TO LOCAL

ESW is evaluated with respect of 12 dimension (or domains): Health, Education & training, Employment & life time conciliation, Social relationship, Politics & Institutions, Security, Subjective well-being, Landscape & cultural heritage, Environment, Innovation, research & creativity, Quality services and 129 indicators that can either directly impact on well-being (e.g.: health, employment, economic well-being) or indirectly (e.g. phenomena that generally enable citizen well-being).

Within these 129 indicators, based on the available sources, Rome is the first municipality in Italy that calculated 75 indicators to express the local conditions and compare them, in some cases with regional and national situation, in other cases with large municipalities.

Rome chose to define three groups of indicators: (i) “original indicators”, e.g. same Istat indicators for data sources and definition; (ii) “modified indicators”, e.g. inspired by original indicators but transformed depending on data availability or data source; (iii) “added indicators”, e.g. new indicators representing complementary aspects useful at defining urban reality.

3. RESULTS

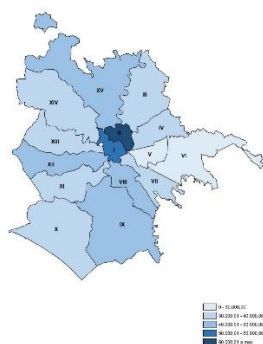
Life expectancy, child mortality, mortality from road accidents, cancer mortality, mortality dementias are the 5 indicators of the health domain. Compared with Lazio Region and Italy, Rome presents a better situation referring to mortality caused by road accidents and dementias, and worse situation for life expectancy and cancer mortality.

Referring to graduated people, long life learning participation and NEET (Not engaged in Education, Employment or Training) indicators, the Rome’s well-being profile on the

education & training dimension appears overall better than the regional and national average.

10 indicators were calculated for the employment & life time conciliation domain. Compared with Lazio Region and Italy, in Rome there are more employed people and they are more afraid of losing their job.

Rome has a better economical well-being than the regional and national average. The declared average income was calculated not only for the whole city but also for each “small urban area”. The figure below shows the comparison (dark blue areas are more rich than light blue areas).



The level of satisfaction about social relationship is an essential component of individual well-being. Roman people is satisfied for family relationships (in line with national average) and friendships (better than national average).

3,9 out of 10 represents the level of trust in Institutions. Referring to the comparison with other Municipalities, the City of Rome pays more attention at quotas for women into the City Council. Unfortunately Rome has a higher level of overcrowding in its prisons (113,6 for each 100 available places) than the national average (108,8 for each 100 available places).

Within the security domain, the crime rate (murders, theft in dwelling, pickpocketing, robberies, rapes) in Rome is lower than the average of other large Italian Municipalities.

By evaluating their own personal well-being, roman citizens declare greater satisfaction for their spare time than the rest of the other Italian citizens and greater concern about future perspectives. 21.5% of people in Rome are worry about their future against 16.2% in Lazio Region and 15.3% in Italy.

Landscape & cultural heritage is an indirect indicator for well-being evaluation, that assumes special relevance in Rome, given the huge archaeological, museum and landscape heritage. The City of Rome spends 18.2 euro per-capita for museums, libraries, art galleries against the national average of 10.2 euro. The Municipality of Rome has 8 millions sq.m. of historic gardens and plants, 1,6 sq.m. each 100 sq.m. against 1.9 sq.m. each 100 sq.m of national average.

The high number of people who live in Rome and the consistent commuting (students and workers) and tourist flows that gravitate on its territory, cause strong pressure on the natural environment, which inevitably is reflected on some environmental indicators more than in other urban areas less exposed to anthropic solicitations to which Rome is subjected. The well-being profile of this domain, therefore, presents a diversified picture. 158,3 green sq. m. are available for each roman citizen, against 63,8 green sq. m. of national average and 145,8 green sq. m. of other municipality's average (Rome is only surpassed by Venice). The loss of water coming from the water network is equal to 46.6% of the total volume of water fed into the network, against 39.1% of the total in Italy and 36.8% of the average of the other large municipalities. The differentiated waste's rate is equal to 42%, therefore lower than the total Italy (54.5%) and higher than the average of

the other large municipalities (38.8%). The electric and hybrid, gas and bi-fuel cars are in Rome 7.6%, less than 8.7% in Italy and than 9.5%, that is the average of the other large municipalities,

Referring to data scientists and employees in creative companies, Rome presents a better situation than the regional and Italian average.

Finally, it was taken into consideration the quality services domain.

Ten indicators are referred to the quality of transport services. The average of kilometres travelled by citizens in Rome each year by using the local public transport is 6.823 against 4.503 of national average and 4.060 of other large Municipalities average. In Rome, people prefer to travel with subway than bus or tram. Referring to taxi licences, in Rome are released 26,9 licenses each 10.000 resident people, against 14,8 of the average of other large municipalities and 12,5 of Italian average. In Rome there is a quota of fast track lower than the average of the other large municipalities (8.7 km per 100 sq km of surface area against 32.6 of the large municipalities). City of Rome offers better childhood services than the national and other large municipalities average: 28,7% children until 2 years old go to municipal kindergartens against a national average of 12,6% and other municipality average of 18,6% (only Firenze 34,7% and Bologna 38,5% have a better average than Rome).

Referring to photovoltaic systems, in Rome there are 78,5 each 10 sq km against the average of other large municipalities of 58,1.

Worse than the other large municipalities are the services referred to: number of charging columns for electric cars, density of cycle paths, availability of pedestrian areas.

4. DATA SOURCES, METHODS AND DATA UPDATES

As shown in the whole report [2], the main data sources are administrative data taken from National Institute of Statistics (Istat), Municipality of Rome, Italian National Institute of Insurance for Accidents at Work (INAIL), Ministry of Economy and Finance, Ministry of the Interior Affairs, Ministry of Justice. This report will be yearly updated. The local indicators were calculated through the small areas estimation method.

5. CONCLUSIONS

This report on Equitable and Sustainable Well-being of Rome wants to be the first of a long series. We want to increase the quality and quantity of indicators and calculate their value on the 15 small areas that compose the whole city. This report has to be considered a tool that gives to policy makers the opportunity to take decisions based on the available data and information.

REFERENCES

- [1] <https://www.istat.it/it/benessere-e-sostenibilit%C3%A0>
- [2] https://www.comune.roma.it/web-resources/cms/documents/BES_Slides_vers_Completa_finale.pdf
- [3] <http://www.undp.org/content/undp/en/home/sustainable-development-goals/background.html>