City environment and quality of living analysis

1. Introduction and problem description

Quality of Life (QoL) is a very complex term and concept described in different approaches and methodologies. Quality of life is the general well-being of individuals and societies, outlining negative and positive features of life. It observes life satisfaction, including everything from physical health, family, education, employment, wealth, safety, security to freedom, religious beliefs and the environment[1].

City environment and infrastructure are the most important domains influencing citizens' quality of life. For example, in Merser[2] report defining quality of living ranking of 231 cities of the world there are several infrastructural and environmental factors for QoL evaluation:

- Recreation
- Housing
- Consumer goods availability
- Public services and transport
- Natural environment
- Socio-cultural environment
- School and education
- Medical and health consideration.

On the other hand, continuous improvements of living standards through city infrastructure and environment development is one of the important goals of local city governments or city councils.

To determine the successful city development strategy or long-term city development program you need to have answers to several questions:

- What is the current level of city infrastructure and environment development?
- What is the best practice in other cities or what are the main environmental and infrastructural characteristics of cities with high QoL rank?
- What is the difference between my city and the city chosen as standard?
- What are the priorities for my city development to increase citizens quality of life?

In my research I will try to find out an approach that could help to answer these questions.

First of all, I will examine the key characteristics of cities environment with high quality level score. For example, we could choose Vienna which tops the ranking for the 10th year running according to Mercer report. It would be interesting to build a generic profile of a city with high QoL after performing such analysis for cities with top five QoL ranks.

Then I would try to examine characteristics of a city environment for cities with medium and low QoL rank and will try to understand what is the difference between Vienna infrastructure characteristics and these selected cities characteristics.

Finally, I plan to formulate some recommendations regarding city development priorities for the selected city, for example, Moscow.

I assume that my analysis could be interesting for local city government representatives or consulting firms providing services for city development program formation.

2. Data description

To perform analysis described in previous section the following data will be used.

1. As I mentioned before, I will explore cities from the Mercer report with cities ranking by quality of living. I will build corresponding data frame using published on their site. It would be a table containing Country or region name, City name and QoL Rank.
2. For cities infrastructure and environment exploration I will use the Foursquare data and API and pay special attention to different venue types density and their distribution in the city.
3. Also I need to define geographical coordinates of cities. I found very good free World Cities Database[3] on simplemaps site containing geographical coordinates and other useful data (for example, population) of about 13 thousand cities in the world.
4. Also I may use some other sources to refine the collected data or prepare it manually.

3. References

[1] Quality of life from Wikipedia, https://en.wikipedia.org/wiki/Quality_of_life

[2] Mercer, Quality of living city ranking https://mobilityexchange.mercer.com/Insights/quality-of-living-rankings

[3] World Cities Database, https://simplemaps.com/data/world-cities