Objective and Subjective Approaches in Mapping Happiness using SDG data and Gross National Happiness Index (GNHI)

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Abstract:

The goal of development in all countries is to make all citizen to be happy. To measure the success of development, regular happiness mapping is conducted. The Indonesian Central Bureau of Statistics has begun national happiness mapping, but it is still very basic.

Meanwhile, happiness is a multidimensional issue. Half of it is objective, and the other half is subjective. The objective approach is done without asking the individuals whether they are happy. This approach uses data from the Sustainable Development Goals (SDGs) achievements. However, this data is generally available at the meso level, which is the city level. Figure-1 is an example of an Objective Map of Happiness Index on West Java, Indonesia.
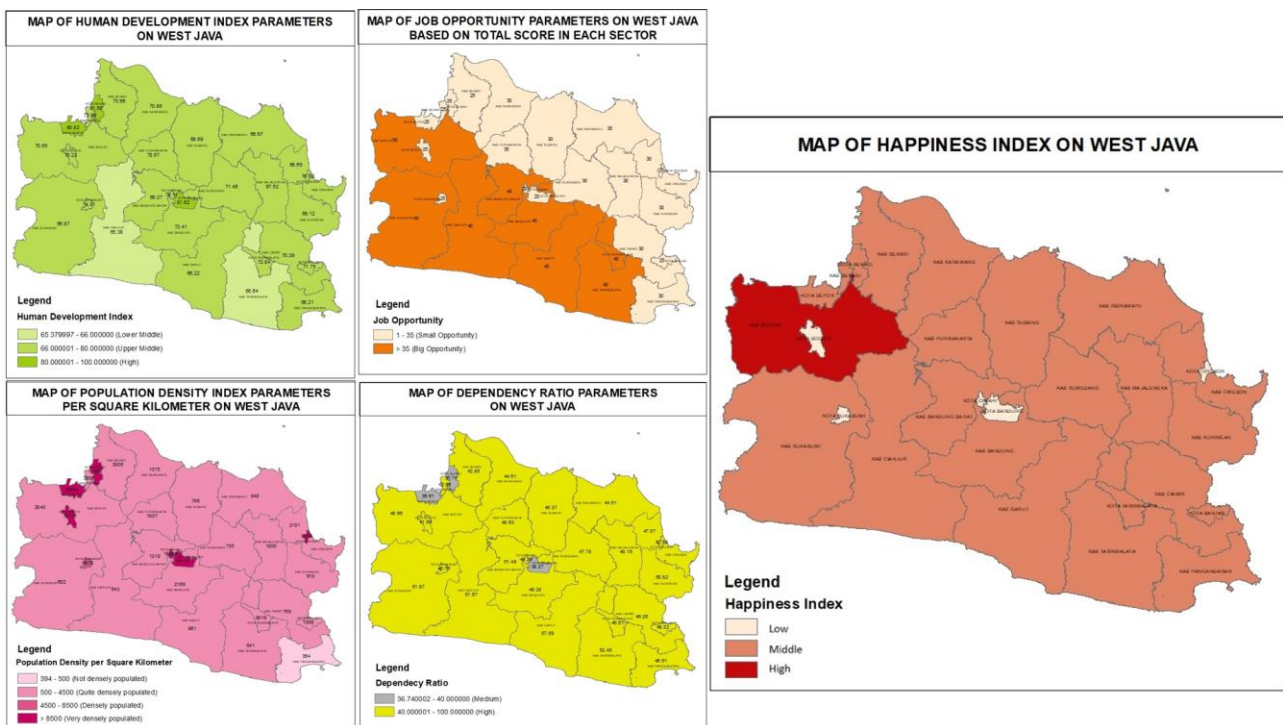
Figure 1. Objective Map of Happiness on West Java, based on data of Sustainable Development Goals

To determine whether the people there are truly happy, survey interviews are conducted with a sample of the population. They are asked about several aspects according to the Gross National Happiness Index (GNHI) standard. The result is a subjective approach. Since this involves detailed and costly surveys, it can only be tried in Yogyakarta City, a not-too-large city in the central of Java Island. This city is considered by many to be quite happy, although only in the middle in the rank of happy city. Figure-2 is an example of a Subjective Map of Happiness Index on City of Yogyakarta Indonesia.

Both of these aspects are also analyzed spatially and visualized cartographically using QGIS and Arc/GIS. Autocorrelation techniques are used to see the relationship between happy districts and their surroundings. The results are then visualized cartographically, although it is possible to display them interactively.
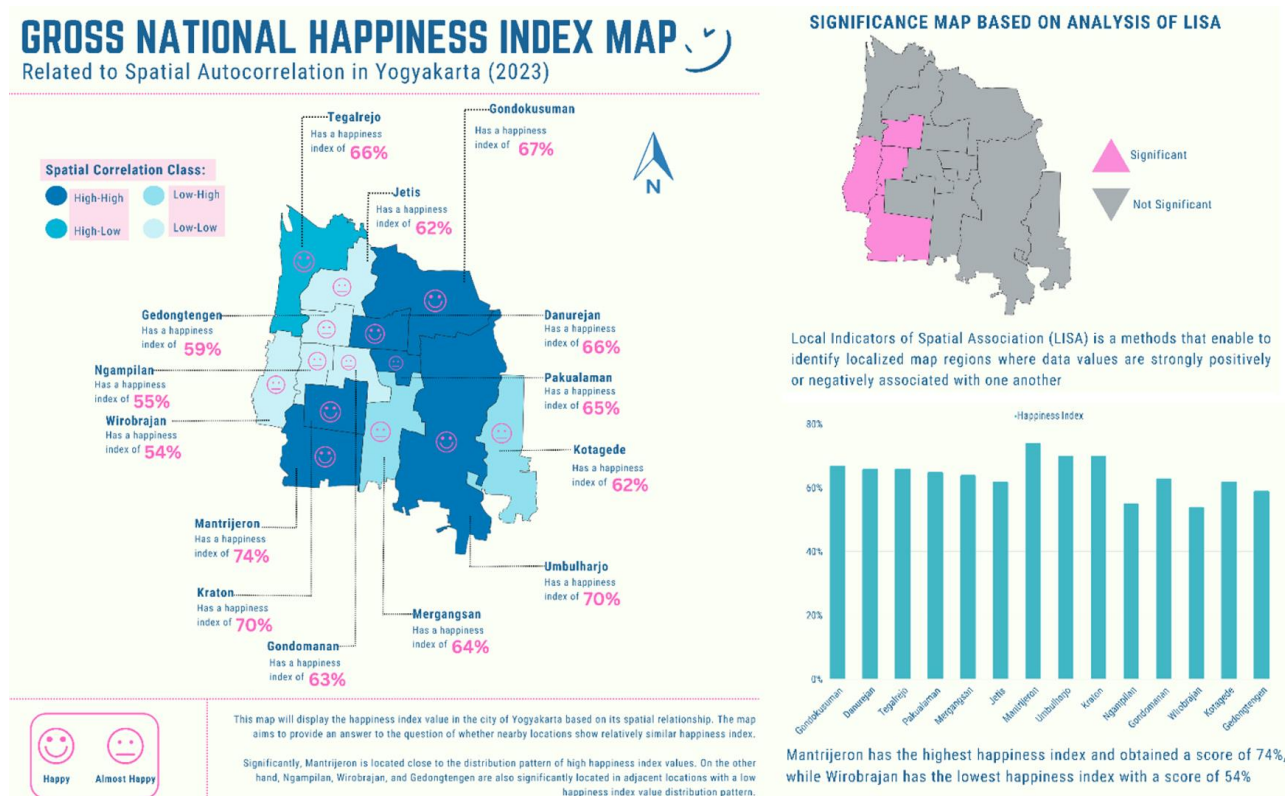

Figure 2. Subjective Map of Happiness on City of Yogyakarta, based on GNHI methods

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