

ABSTRACT

**An Italian Subjective Well-being Index:  
the Voice of Twitter Users from 2012 to 2017**

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Since 2012, driven by the desire to propose a subjective well-being index complementary to the traditional measures, with high time and space frequency, our team evaluates, analysing Twitter data, a composite index that captures various aspects and dimensions of individual and collective life. The Twitter data analysis is carried on with a human supervised sentiment analysis method, the Integrated Sentiment Analysis (iSA) algorithm, where a (even non random) sample of texts is first classified by human coders, in order to create a training set, and then the rest of the corpus is classified by the machine learning method.

The Subjective Well-being Index (SWBI) is a multidimensional indicator whose components were inspired by the dimensions adopted for the Happy Planet Index provided by the New Economic Foundation. In detail, it consists of eight dimensions that describe three different areas: personal well-being, social well-being and well-being at work.

The Italian Subjective Well-being Index (SWBI<sub>ITA</sub>), that we propose here, audits the Italian subjective well-being revealed by tweets acquired via the public Twitter API, written in the Italian language, and posted from Italy from January 2012 to December 2017. Around 1 to 5% of the data includes geo-referenced information, which allows us to provide an index at local level. It should be noted, as a feature of this index, that SWBI<sub>ITA</sub> is not the result of the aggregation of individual well-being measurement, but it directly estimates the aggregate composition of sentiment within the Italian society.

In this work, after a weighting procedure adopted to partially overcome the selection bias caused by the use of data from social network, we describe the SWBI<sub>ITA</sub> dimensions in the considered period at the regional level. Moreover we compare our results with the currently available data provided by Italian official statistics, emphasizing novelties, similarities and differences.

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