

Measuring and Forecasting Job-Search in Italy using Machine Learning

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Abstract

The Social Media are becoming more and more important to allow to measure phenomena which are very difficult to measure on a different way. In this sense these data can become relevant indicators which could be used in the analysis of the business cycle. In this work we will consider data related job-search queries on Google, in order to measure the intensity of the job-search behavior over the time. From the queries we are able to identify how vary during the business cycle the job-search behavior using Google. These behaviors are very relevant because they can lead to changes in job positions (transition from unemployed to the employed but also transitions on the job employed-employed). So forecasting this behavior we can have tools to interpret and analyze the business cycle. Finally we consider a forecasting approach based on Machine Learning in order to predict over the time the job-search behavior. The different forecasting approach considered are compared and finally validated by considering the forecast adequacy of the different predictions obtained.

Keywords: *Job-search; labor market; business-cycle; forecasting; machine-learning; forecast adequacy.*
