

Report on Amazon's Project - statistical evaluation on socioeconomic variables across Germany

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Abstract

In this report we define a proxy that can explain Germany's precariousness at the district level by relating socio-economic variables to the distribution of parcel centers for the years 2011 and 2019. This precariousness indicator is an aggregated indicator which is composed by 5 socio-economic variables and its consequent normalization processes. These 5 socio-economic variables, which are mainly related to unemployment, form the normalized indicator "precariousness" on a scale from 0 (less) to 8 (most), with equal weighting. The challenge in this project is to webscrape all relevant logistics centres of different competitors in the courier industry and map them on a district level in order to later, when matching the socioeconomic indicators with this dataset, highlight the regions where Amazon operates. Therefore, we could raise the question whether Amazon operates systematically in regions with relative precariousness or not. To answer this question, we address the chosen socio-economic variables by running descriptive statistics by looking at how the standard deviations perform. Consequently, we examine the collinearity of the 5 variables by means of a correlation matrix and PCA. Finally, we compare the two resulting maps for 2011 and 2019 and assess their precariousness.

Keywords: webscraping, normalization, georeferenced, statistics.
