Statistic Regression and Open Data Approach for Identifying Economic Indicators That Influence e-Commerce

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Abstract : This paper presents a statistical approach to identify explanatory variables linearly related to e-commerce sales. The proposed methodology allows specifying a regression model in order to quantify the relevance between openly available data (economic and demographic) and national e-commerce sales. The proposed methodology consists in collecting data, preselecting input variables, performing regressions for choosing variables and models, testing and validating. The usefulness of the proposed approach is twofold: on the one hand, it allows identifying the variables that influence e- commerce sales with an accessible approach. And on the other hand, it can be used to model future sales from the input variables. Results show that e-commerce is linearly dependent on 11 economic and demographic indicators.