

Big Data Sources for Private Consumption Estimation: Evidence from Credit and Debit Card Records

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Abstract

Recent research has shown that big data sources provide timely granular information of human behavior. Compared to traditional survey-based statistics which rely on individuals properly recalling and reporting their actions, big data allow to track human activity with no (or few) measurement errors and low costs. This paper explores the usefulness of credit and debit card data to estimate private consumption. Little research has been done in this field due to the difficult access to these records. Using data from one-year anonymized individual credit and debit card records in one the largest cities in Latin America, patterns of private consumption are analyzed. Data on credit/debit card transactions are disaggregated by user' socio-demographic profile (i.e., age, gender, income, residence), expenditure group (35 categories), and shopping district. Records also detail when the transaction took place (day/month/year). Properties of these data will be assessed and compared with traditional survey-based sources. Moreover, sample selection bias associated with this particular big data source will be analyzed.

Keywords: *Big data; credit card records; private consumption, selection bias.*
