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Evaluation of Consumer Confidence Indicators Using Social Media and Administrative Data

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Consumer confidence is an important economic indicator assessed by a survey. The administration of the Consumer Confidence Index (CCI) lies under the purview of Eurostat, the statistical office of the European Union, with monthly calculations conducted across all member countries. The State Data Agency (Statistics Lithuania) is responsible for conducting the corresponding survey in Lithuania. The main objective of the consumer opinion statistical survey is to obtain information regarding consumers' intentions to make purchases, their saving capabilities, and their perceptions of the economic situation and its influence on their intentions. Social media platforms and administrative registers are alternative data sources that can improve the estimation. Social media platforms allow individuals to openly express their opinions and experiences, while administrative data can provide a comprehensive and objective source of information. This study examines the relationships between traditional survey-based indicators and consumer sentiment expressed on social media platforms. It investigates social media using data from X (Twitter) that is retrieved using the official Twitter API. We create a Social Media Indicator (SMI) using sentiment analysis on tweet text as auxiliary data for our time series analysis of CCI. This study also explores the potential of using administrative data, including key economic indicators like unemployment, inflation, and income data, as auxiliary variables to enhance the forecasting accuracy of CCIs. In general, obtaining data for research from popular social platforms such as Facebook and Instagram is challenging due to stringent privacy policies and data protection regulations. The data are easily available from X, but this platform is not

popular in Lithuania. Therefore, the representativeness of X data raises special issues in our study. Nevertheless, we aim to integrate the traditional survey data, social media sentiment, and essential economic data, while addressing challenges and uncertainties. We also examine the CCI nowcasting possibilities using the constructed SMI.