

Nowcasting TiVA indicators: improving timeliness of trade data

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Abstract

Trade in value added (TiVA) indicators are among the key data sources used to monitor countries' integration into global supply chains. However, TiVA indicators are published with a significant lag - often two or three years long - which reduces their relevance for gauging the current state of the economy. This paper aims to provide timelier insights into the international fragmentation of production by exploring new ways of nowcasting TiVA indicators. By combining standard and machine learning approaches, the models aim to nowcast five TiVA indicators for a panel of 41 economies for 2020 - 2022 on economy-wide level and for 24 sectors. The analysis uses a wide range of explanatory variables capturing domestic business cycles and global economic developments to predict TiVA indicators published by the OECD. The approach selects the best model to nowcast the indicators for each country and each country-sector pair based on the out-of-sample, one-year ahead predictive performance relative to the first-order autoregressive benchmark model. The results show that both standard and machine learning algorithms significantly improve compared to the benchmark model. Furthermore, the models show high predictive accuracy when compared to 2020 TiVA indicators that became available in the process of writing this paper.