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Economic impact of the COVID-19 pandemic on production industry: a nonparametric comparative analysis

Kelly Patricia Murillo¹

¹Universidade de Aveiro, Portugal

ABSTRACT

The outbreak of COVID-19 and containment measures introduced by the EU Member States had a significant impact on the EU's industrial production. Being the industry sector plays an essential role in the economy of any country, it is important to study in details the factors that influencing positive/negative in the behavior. The data from Eurostat indicate that the value of sold production registered a small decrease in 2019, then dropped more sharply in 2020 and the year 2021 showed increases in production in all the industrial activity groups. In this work, is adopted a non-parametric approach that combines mathematics tools and techniques for benchmarking analysis for to analyze the behavior of the industry of European countries. In addition, some metrics/indexes are introduced for a comparative analysis of the manufacturing sector, before, during and after the pandemic. The results allow a characterization of the financial structure of the countries, in terms of economic performance.

KEYWORDS non-parametric model; benchmarking; manufacturing sector; European countries

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