Sales forecasting models: a comparative study for the Brazilian retail segment in the period of social isolation caused by covid-19

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A company's sales number is directly associated with its sales. Billing is the main source of funds for a company, always using it in order to maximize them. In unfavorable microeconomic or macroeconomic situations, the business entity may reduce its sales to dangerous levels, compromising its entire liquidity structure. In crisis situations, tools that assist in the projection of billing or the number of sales, become essential for the company's planning, thus enabling the chances of avoiding a situation of low liquidity. Sales forecasting, or demand forecasting, allows better efficiency in decision making, as it provides quality information to managers. In studies on the decision-making process in business administration, forecasting models are useful for estimating, for example, the number of sales of a company, a variable used to determine the companies' revenue. In this way, having a reliable estimate on the number of sales and company revenues in the months of social isolation propagated by the pandemic of COVID-19, helps at least two economic agents in decision-making: company managers and government entities. Thus, the present work aims to carry out a comparative study of two time series forecasting models, of the SARIMA and VAR class, for sales planning in the Brazilian retail sector from March 2020 to July 2020. It is expected to discover which model is more efficient to predict economic shocks, that is, an abrupt oscillation behavior of the time series, caused by some phenomenon.

Palavras-chave: Sales. Forecast. COVID-19.