Predicting Emerging Agricultural Investment Opportunities: The Potential of Structural Evolution Index

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Abstract : The agricultural sector is characterized by continuous transformation, driven by factors such as demographic shifts, evolving consumer preferences, climate change, and migration trends. This dynamic environment presents complex challenges for key stakeholders including farmers, governments, and investors, who must navigate these changes to achieve optimal investment returns. To effectively predict market trends and uncover promising investment opportunities, a systematic, data-driven approach is essential. This paper introduces the Structural Evolution Index (SEI), a machine learning-based methodology. SEI is specifically designed to analyse long-term trends and forecast the potential of emerging agricultural products for investment. Versatile in application, it evaluates various agricultural metrics such as production, yield, trade, land use, and consumption, providing a comprehensive view of the evolution within agricultural markets. By harnessing data from the UN Food and Agricultural Organisation (FAOSTAT), this study demonstrates the SEI's capabilities through Comparative Exploratory Analysis and evaluation of international trade in agricultural products, focusing on Malaysia and Singapore. The SEI methodology reveals intricate patterns and transitions within the agricultural sector, enabling stakeholders to strategically identify and capitalize on emerging markets. This predictive framework is a powerful tool for decision-makers, offering crucial insights that help anticipate market shifts and align investments with anticipated returns.

Conference Title : ICDAFA 2024 : International Conference on Data Analytics in Food and Agriculture
Conference Location : Tokyo, Japan
Conference Dates : June 03-04, 2024