

Business and Economics Mathematics

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1. Description (200–1650 Characters)

Nowadays, the field of economics is a versatile one and of extraordinary importance for both practitioners and theorists. The Special Issue of “Business and Economics Mathematics” in *Mathematics Journal* aims to provide readers with rigorous information and mathematical and econometric models covering areas of major interest, such as the impact of the COVID-19 pandemic on stock markets, mathematical analysis of global competition in electronic payments, econometric modeling of collaborative public management, and changes caused by the pandemic in terms of consumer behavior. The Special Issue of Business and Economics Mathematics also contains valuable articles on investment strategy modeling, techniques for improving data governance, and generalized linear models for data relationships. The entrepreneurial field is approached through various proposals for corporate decision-making models and highlighting the motivational factors in entrepreneurship.

2. Preface

The article written by Shen et al. [1] proposes a very interesting approach to the effect of the employment density on the Shanghai and Tokyo consumer goods industry in the context of new manufacturing. The paper analyzes the impact of employment density of the consumer goods industry in Shanghai and Tokyo on economic development and specifically examines which categories of consumer goods industry have considerable development space and the greatest impact on economic development.

The article published by Blanco-Mesa et al. [2] aims to use subjective information to analyze the forgotten factors that influence the motivation of Boyacenses to become entrepreneurs. The findings showed that economic, psychological, and cultural motivators act as mediating variables to explain a cause–effect relationship in the motivation to start an entrepreneurial activity.

The purpose of this study proposed by Lu et al. [3] is to form a decision-making model to ensure the financial competitiveness of enterprises in the context of stochastic analysis. Their study demonstrates stochastic analysis implementation in companies of the 2nd and 3rd degrees of internationalization based on multiple regression and factorial analysis of variance.

In the context of the COVID-19 pandemic, the article written by Tonnoir et al. [4] deals with the construction of a mathematical model for economic aspects in the context of variable productivity in time. Through this mathematical model, they propose to maximize revenues in pandemic conditions in order to limit the economic consequences of the lockdown. They extend previous approaches from the literature by adding some generalization options, and the proposed model can be applied in lockdown cases and seasonal situations.

The article published by Calancea et al. [5] proposes the use of FAIR principles to additionally offer business entities a way to define commonly agreed upon supply, access, and ownership procedures. Business-specific transactions proposed to modify the semantic



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model are validated using their own blockchain-based technologies. As a result, the security and integrity of the FAIR data in the collaboration process are ensured.

An interesting contribution comes from the article written by Fávero et al. [6]. The manuscript explores an underused mathematical, analytical methodology in the social sciences. The authors present guidelines for the estimation of zero-inflated generalized linear mixed models. That is, models where the outcome variable presents an excess number of zeros and the dataset has a structure where observations are correlated in ways that require random effects.

In the context of the COVID-19 pandemic, the purpose of the article by Valaskova et al. [7] is to identify the negative areas of consumer life that have been affected by the pandemic, including changes to their financial situations, their different purchasing preferences due to store and product availability, and the impacts on shopping patterns. The research confirms that the COVID-19 pandemic has changed normal consumer behavior, created new shopping habits, and forced consumers to devote more time to the decision-making process, considering the need for shopping and focusing only on purchases of essential consumer goods and reducing the frequency of shopping.

The article published by Betzuen Zalbidegoitia et al. [8] has a very clear purpose: based on the data from the longest-living populations in the world, the authors want to establish whether the longevity of those populations is accelerating or decelerating, compared by sex, and whether that occurs at the same intensity at different stages of a person's life in each case. If the indicator showed differences in intensity, it would be a benchmark for the insurance and financial industry, providing it with information to market different products.

The objective of the article written by Martínez Avila et al. [9] was to determine the mediating effect of shared knowledge and organizational commitment in the relationship between organizational values and collaborative public management. The research is based both on the Theory of Resources and Capacities and the theoretical perspective based on knowledge. The hypotheses proposed were supported by the use of structural equation models based on composites (PLS-SEM).

Cai et al. [10] have a solid contribution to the field of knowledge with their article analyzing the global competition between payment systems from a mathematical interpretation approach. The study seeks to present a mathematical interpretation of the perception of new entrants to the global payments market on whether FinTech's innovations promote competitiveness in the market.

This paper, published by Aziz et al. [11], explores the impact of the COVID-19 pandemic on the connectedness of stock indexes in the group of developed and emerging economies known as the ASEAN+3. Using a frequency domain methodology, the authors find evidence that return spillovers mostly occur in the short term, while volatility connectedness is more pronounced in the long term.

As the Guest Editors of the Special Issue, we are grateful to all authors who contributed their articles. We would also like to express our gratitude to all reviewers for their valuable comments on the improvement of the submitted papers.

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Short Biography of Author

Octavian Dospinescu is a Ph.D. Assoc. Prof. at University Alexandru Ioan Cuza, Iasi, Romania. He has a Ph.D. in Cybernetics and Statistics and a post-postdoctoral thesis in e-payments systems. He published more than 30 scientific articles and 10 books. He was a visiting professor at universities in Spain, Poland, Slovakia, and Cyprus. His research areas include business information systems, web systems, computer programming, and systems integration.