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ORGANIZATIONAL SUSTAINABILITY SCORE – PROBABILITY APPROACH USING FUZZY LOGIC

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Abstract

Sustainability has become a pressing issue for the current dynamic context, but also for future development perspectives. Organizational sustainability evaluation represents a complex statistical approach, presented in the literature as sometimes contradictory and unclear, but characterized by a current need for flexible statistical methods and techniques, which have a wider spectrum of applicability. The research purpose is to improve the evaluation process of organizational sustainability, by combining fundamental research with applied research. To achieve this purpose, the studied population is represented by Romanian companies listed on a regulated capital market (Bucharest Stock Exchange). Thus, to evaluate and to model, the final sample proposed for analysis includes 30 large companies – interval 2010-2019. The research results aim to complete the organizational sustainability literature, by proposing a new methodology to assess organizational sustainability. Apart from its main aims, supported by an empirical study, the article present, and estimate the components associated with organizational sustainability dimensions and to obtain, in a computational environment (MATLAB software – fuzzy logic), probability diagrams associated with the organizational sustainability score. Hence, this work provides, on a solid holistically approach, an effective and viable instrument that could estimate a real organizational sustainability score.

Key words: chemical oxygen demand, fish pond, mineralization, nutrients, pH

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