A FUZZY DEMATEL METHOD TO ANALYZE THE ENTREPRENEURIAL ECOSYSTEMS

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Introdução
Entrepreneurship drives economic growth, closely tied to the environment and individual actions. Creating supportive local climates requires public and private sector decisions influenced by local attitudes and opportunities. A holistic approach includes improving access to information, networks, and financing. Entrepreneurial Ecosystems (EE) help understand high-growth entrepreneurship by considering personal and systemic factors (Audretsch et al., 2022).

Problema de Pesquisa e Objetivo
The Ukraine-Russia conflict challenges Russian entrepreneurship, emphasizing innovation. Complex Adaptive Systems (CAS) and EE involve interacting agents and unpredictable behaviors. Empirical evidence on EE is limited and often focuses on early stages (Carter and Pezeshkan, 2023). Russia's unique opportunities, suggesting a novel approach to enhance EE globally. This study uses the fuzzy DEMATEL method to identify key factors in EE development in Russia, based on data from fifteen experts.

Fundamentação Teórica
The need for locally tailored solutions in EE. Key factors include Regulatory Environment, Infrastructure, Market, Innovation, Capital, Human Capital, and Culture (Stam and van de Ven, 2021). CAS theory views systems as interacting elements with unpredictable behaviors ecosystem. EE involves diverse agents without centralized control. Success relies on interactions, especially during crises. The complexity approach helps understand EE dynamics and navigate future challenges.

Metodologia
Employing a quantitative approach, the fuzzy DEMATEL method was applied to data from an electronic survey of fifteen Russian experts in urban EE. The survey assessed the relevance and influence of factors such as the Regulatory Environment, Infrastructure, Market, Access to Capital, Innovation, Human Capital, and Entrepreneurial Culture. The fuzzy DEMATEL model was implemented to convert imprecise expert evaluations into precise values for a direct influence matrix, using a fuzzy linguistic scale to assess mutual influences between factors.

Análise dos Resultados
Analyzing the fuzzy DEMATEL interrelationship graph and IRM diagram, we find that in the Russian EE context, the Regulatory Environment (IT1) in Quadrant II is a key driving factor with significant influence on other factors. Access to capital (IT4), also in Quadrant II, drives and influences other factors. Human capital (IT6), in Quadrant II but with less influence, affects other EE factors. Innovation (IT5) in Quadrant IV is highly prominent but primarily influenced by other factors. Improving innovation requires strengthening the regulatory environment, access to capital, and human capital.

Conclusão
This study highlights the pivotal role of the regulatory environment, access to capital, and human capital in driving innovation within EE, especially in turbulent contexts, as demonstrated by the fuzzy DEMATEL analysis applied to the Russian case. This study provides a pioneering approach to understanding the factors influencing EE development, especially in turbulent contexts like Russia,

using the fuzzy DEMATEL method, thus enhancing decision-making capabilities within the dynamic scope of entrepreneurship and its inherent embeddedness in contextual features.

Referências Bibliográficas

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