

Modeling strategic interactions in education quality management: a game theory approach

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Abstract

This study develops a game-theoretic model to analyze the interaction between universities and state/public authorities in the context of quality management in Ukraine. The objective of the study was to identify optimal strategies for both parties and to evaluate the impact of these strategies on the quality of educational services. The modeling results showed that in the current environment, the strategy of activity imitation can gain universities the maximum benefit. This indicates the existence of “institutional traps” that prevent real improvements in the quality of education in Ukraine. The study uses game theory methods, including Nash equilibrium analysis, as well as qualitative analysis to interpret the results. Based on the findings, recommendations were made on the reforms necessary objected to improving the quality of education, including granting universities’ real autonomy and revising the control system. The overall conclusions emphasize the importance of systemic changes, without which the Ukrainian education system may continue to degrade, with negative consequences for the country's economy.

Keywords: *game theory, education quality management, strategic interaction, model, Nash equilibrium*