ACADEMIC OPINION

by assoc. prof. Ophelia Kaneva, PhD

on the dissertation submitted for the award of the educational and scientific PhD, entitled

APPLICATION OF GAME THEORY AND BEHAVIORAL ECONOMICS IN PUBLIC SECTOR PROCUREMENT PROCESSES

(*"Application of Game Theory and Behavioral Economics in Public Sector Procurement Processes"*)

Lior Yakov Agai

Mode of Study: Independent Study

Academic Supervisor: Assoc. Prof. Marieta Georgieva Stefanova, PhD

Academic Adviser: Assoc. Prof. Kaloyan Iliev Kolev, PhD

The dissertation submitted for evaluation by Lior Yakov Agai addresses a timely and significant research problem with practical implications: the application of game theory and behavioral economics to public procurement processes. The subject is of considerable importance both to the advancement of economic theory and to the improvement of public procurement management and award practices.

The relevance of the research stems from the need to complement traditional models of evaluation and decision-making in public procurement with an understanding of the behavior of economic actors. The author rightly emphasizes the limitations of assuming fully rational behavior and incorporates behavioral dimensions into the analysis of pricing decisions and competitive participation. Particularly noteworthy is the examination of the dual role of price anchoring: both as an informational signal concerning the scale of a procurement contract and as a cognitive reference point influencing perceptions of price acceptability.

The dissertation comprises 243 pages and includes an introduction, three main chapters, a conclusion, a statement of scientific contributions, and a bibliography of 122 sources. Its structure is logical and follows the progression of the research problem, from its theoretical foundations and the development of a methodological framework to empirical testing and the formulation of practical solutions.

The clearly defined research objective, together with the systematic formulation of the research tasks, hypotheses, and methodological approaches, deserves a positive assessment. The study draws on two independent empirical datasets. The first comprises 211 observations and examines bidders' continued participation through retention and attrition indicators, adapting the concept of *Bidder Lifetime Value (BLV*). The second study, based on 65 expert responses, investigates how public procurement professionals perceive price thresholds, using an adapted version of the *Price Sensitivity Meter (PSM*) developed by *Van Westendorp*.

The methodological framework has been developed systematically and with the requisite degree of scientific caution. The author clearly distinguishes between the two empirical datasets and avoids mechanically combining them in the calculations. At the same time, the findings of both studies are synthesized when interpreting the principal results, without making unwarranted claims of definitive causal relationships. This approach demonstrates sound methodological judgment and a responsible acknowledgment of the limitations of empirical research.

A major strength of the dissertation lies in its theoretical, methodological, and applied scientific contributions. The author successfully adapts concepts developed in other areas of economic and behavioral theory to the specific institutional and regulatory environment of public procurement. Particular attention should be given to the proposed *Anchor-Driven Procurement Value Model (ADPVM*), which provides a systematic framework for supporting decisions concerning the pricing information environment: *Opening Price, Estimate, and No Anchor*.

Another contribution is the attempt to integrate the behavioral aspects of price perception with the dynamics of bidder participation. In doing so, the dissertation moves beyond purely descriptive analysis and proposes a model with potential practical applications in the design and management of public procurement procedures.

I also commend the author's emphasis on the governance and ethical constraints associated with the use of behavioral tools. The explicit distinction between using behavioral analysis to enhance transparency and market monitoring, on the one hand, and potentially engaging in covert discrimination, preferential treatment, or the manipulation of market expectations, on the other, adds further value to the proposed model.

As an avenue for further research, I would highlight the need to extend the empirical validity of the findings beyond the specific national context. Since the empirical sample is based on administrative data from Israel covering the period 2020–2025, it would be useful to subject the *ADPVM* model to further testing and validation within the particular regulatory and institutional environment of the European Union, including the framework of Bulgarian public procurement legislation. Future studies could also incorporate additional control variables relating to procurement complexity, sectoral characteristics, and the size of contracting authorities.

These observations are intended as recommendations for the further development of the research and do not diminish the significance or scientific value of the results achieved.

The submitted dissertation abstract demonstrates consistency between the content of the dissertation and its presentation. The stated research objective, tasks, and hypotheses have been addressed systematically throughout the study. The scientific and applied contributions are clearly articulated and arise directly from the research undertaken.

On the basis of the foregoing analysis, I consider Lior Yakov Agai's dissertation to be an independent, timely, and scientifically substantiated study demonstrating in-depth theoretical knowledge, the ability to conduct empirical research independently, and the capacity to generate research findings with practical applications.

The dissertation presents findings that demonstrate scientific originality and practical value. In particular, the integrated *ADPVM* model is of interest both to the development of research into the behavioral aspects of public procurement and to the practice of procurement management.

I consider that the submitted dissertation meets the applicable requirements for the award of the educational and scientific degree of Doctor (PhD) in Professional Field 3.8 Economics, Doctoral Programme in Political Economy.

In view of the above, I give the dissertation a positive assessment and recommend that the scientific jury award Lior Yakov Agai the educational and scientific degree of Doctor (PhD).

Member of the Scientific Jury:

Assoc. Prof. Ophelia Kaneva, PhD

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