

PRESUMPTION OF PRODUCER AUTONOMY AND NEURO-ECONOMIC ASPECTS OF THE SEPARATION OF USE FROM OWNERSHIP

Arman MARTIROSYAN

Doctor of Science, Economics, Associate Professor at YSU

Gevorg PETROSYAN

PhD in Economics, Associate Professor at YSU

Armen SIMONYAN

PhD in Economics, Associate Professor at YSU

Key words: producer autonomy, neyroeconomics, ownership, institutionalism, demand, supply

Introduction

In traditional economic theory, significant emphasis is placed on the independence of the buyer or consumer. Essentially, this perspective holds that demand shapes the content, form, and characteristics of the supply offered in the market. However, in today's complex economic landscape and the evolution of economic thought, the influence of supply on shaping demand and refining purchasing power cannot be overlooked.

Beyond the classical assertion that "supply creates its own demand," modern innovative producers often focus on creating products not solely based on what consumers currently wish to buy, but rather on what they should desire. This proactive approach is less prevalent in traditional markets, where consumer preferences might dominate without driving scientific and technological advancements or robust advertising strategies. In more developed economies, overlooking the notion of producer independence is almost impossible, as it may lead to institutional failures that exacerbate issues such as market oversupply or shortages. In this context, implementing transactions that involve sharing ownership rights offers a promising solution. Such arrangements can help maintain a balance within the macroeconomic framework, fostering a more sustainable market environment. By encouraging collaborative consumption and innovative ownership models, we can optimize resource utilization and enhance overall market efficiency.

Methodology

The methodological framework of this study is grounded in the principles of institutional economics, behavioral economics, and neyroeconomics. The research applies an interdisciplinary approach that combines theoretical analysis with comparative and evolutionary perspectives, enabling a comprehensive examination of how psychological, neurobiological, and institutional factors influence economic decision-making and market functioning. First, a theoretical-methodological analysis was conducted to systematize the evolution of key concepts such as homo economicus, homo adaptans, and homo institutus. This involved a critical review of relevant academic literature, including classical economic theories and recent contributions in behavioral and neyroeconomic research.

[March & Simon, 1993; Kahneman et al., 1991; Inshakov, 2005]. Second, the research employed comparative institutional analysis to examine the transformation of ownership and usage rights through mechanisms such as financial and operational leasing, rent-to-own arrangements, and installment purchases. These were analyzed from an evolutionary perspective to assess their role in market surplus realization and equilibrium formation. Third, the study applied neuroeconomic insights by integrating findings from experimental psychology and neuroscience (e.g., MRI-based studies of decision-making processes). These insights provided methodological justification for the bounded and shifting rationality of economic agents under conditions of uncertainty and risk. The study draws on secondary sources reporting empirical experiments in this domain rather than conducting original neurobiological experiments. Finally, the methodology follows an interdisciplinary synthesis, linking economic models with psychological and physiological perspectives. This approach enabled the identification of deviations from classical rationality, reinterpretation of the market equilibrium mechanism, and exploration of the role of collective psychology in shaping entrepreneurial and consumer behavior. By combining institutional, psychological, and neuroeconomic perspectives, the methodology ensures a holistic understanding of contemporary economic processes, highlighting the significance of both individual and collective behavioral patterns in the evolution of economic systems.

Literature review

The evolution of economic thought has increasingly emphasized the role of social, psychological, and institutional factors in shaping market processes. Classical economics, grounded in the rational agent model of homo economicus, assumed that individuals make decisions solely to maximize utility or profit under conditions of perfect rationality. However, this assumption has been widely criticized for oversimplifying human behavior and neglecting socio-cultural and psychological dimensions [Simon, 1955; North, 1990].

Institutional economics has broadened the analytical framework by incorporating the influence of formal and informal rules, norms, and organizations on economic activity [North, 1991; Hodgson, 2006]. Within this context, the concept of homo institutius has emerged, highlighting that economic agents act not in isolation but within institutional structures that shape their preferences and opportunities (Inshakov, 2005). Similarly, Brendeleva (2003) and Martirosyan (2006) emphasized the transformation of ownership rights into usage rights as an institutional innovation that enhances market flexibility and surplus realization. Parallel to institutional approaches, behavioral economics introduced insights from psychology to explain systematic deviations from rational choice theory. Kahneman and Tversky's (1979) prospect theory demonstrated that individuals evaluate outcomes relative to reference points and are subject to loss aversion, while subsequent work revealed anomalies such as the endowment effect and status quo bias [Kahneman et

al., 1991]. These findings underscore that economic decisions are influenced not only by objective utility but also by subjective perception and cognitive biases. More recently, neuroeconomics has provided a physiological foundation for behavioral observations by integrating neuroscience methods, such as brain imaging, into the study of decision-making [Camerer, Loewenstein, & Prelec, 2005]. Research in this field shows that reward processing, risk evaluation, and temporal preferences are mediated by neural mechanisms that vary across individuals, thereby reinforcing the notion of bounded rationality [Voronin, 1987]. This perspective suggests that market equilibrium cannot be explained without considering the neurobiological, psychological heterogeneity of agents.

The literature thus converges on the idea that economic behavior cannot be reduced to a purely rational calculus. Instead, it emerges from the interplay of institutional arrangements, psychological motivations, and neurobiological processes. This interdisciplinary synthesis allows for a more comprehensive understanding of contemporary economic dynamics, where the autonomy of both producers and consumers is conditioned by evolving institutional and behavioral contexts.

Scientific novelty

In the contemporary stage of economic development, the realization of market surpluses is explained through the encouragement of transactions that separate ownership from usage rights. Illustrative examples include financial and operational leasing, rent-to-own agreements, and installment purchases, institutional formats and neuroeconomic foundations of which are examined from an evolutionary perspective. Within this framework, the signaling, orienting, and balancing functions of prices are fully manifested through the interaction of the autonomy assumptions of both producers and consumers.

Analysis

At the current stage of economic development, the psychology of the producer acquires particular significance, whereas in the past it could have been overlooked. The key understanding is that today's producer carries out economic activity as a result of multi-million investments. Production facilities must be technically equipped and modernized; otherwise, profitability levels will decline. This process entails psychological nuances: under everyday conditions of risk and uncertainty, an entrepreneur with a conservative mindset, risk aversion, and avoidance of innovative approaches may terminate entrepreneurial activity altogether. Within such interrelations, the "counter-hypothesis of producer autonomy" is presented as a counterpart to the classically accepted assumption of consumer autonomy [March & Simon, 1993]. However, it would be more effective to analyze these assumptions jointly rather than fetishizing one of them. Consequently, the focus shifts toward not only the individual but also society as a whole – entrepreneurial and "consumer" activity, collective psychology, and the principles of social psychology in economic development. Thus, the object of economics expands, and the interpretation

of the concept of *homo economicus* is transformed. In line with these developments, the ideas of *homo adaptans* and *homo institutus* are introduced [Brendeleva, 2003; Inshakov, 2005]. The evolution of social relations generates new needs, the satisfaction of which requires social cooperation. Accordingly, the economic agent should not be viewed as detached from the socio-cultural environment, and economic conduct may deviate from rationality. Driven by constant prospects of gain, loss, or the risk of loss, individuals alter their evaluations of wealth increments, both in absolute and marginal terms. Human perception is marked by asymmetry: successes are often undervalued compared to “unachieved” goals or failures. Within this discourse, institutional-psychological and neuro-economic perspectives introduce new approaches to valuation and perception [Kahneman et al., 1991].

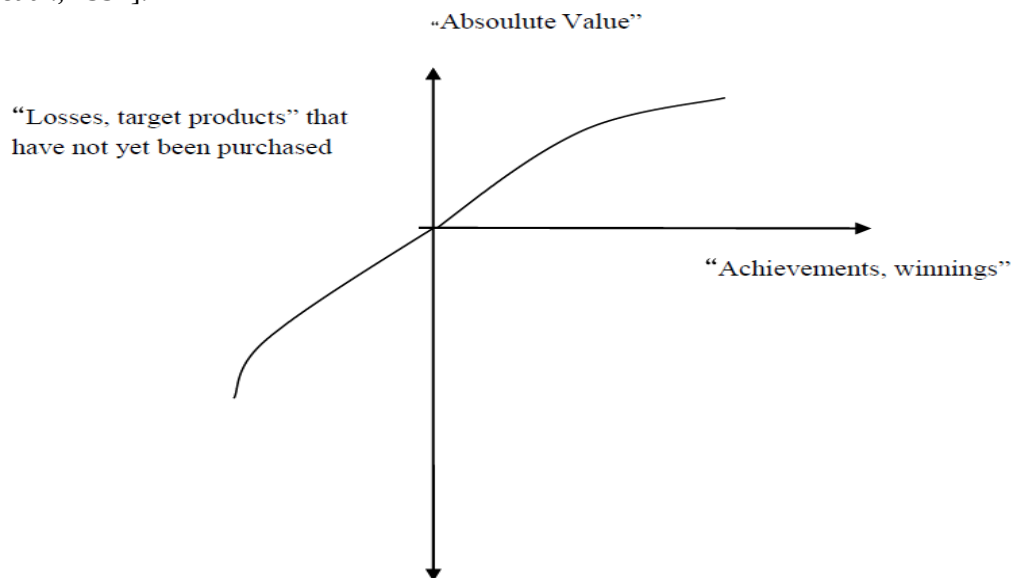


Figure 1. Contemporary approaches to value assessment.

Over time, individuals tend to undervalue their achievements and possessions, while the “unpossessed” is perceived as a loss. Goods not yet purchased may carry higher “value” from a psychological evaluation perspective. From neurobiological and physiological standpoints, the brain regions responsible for satisfaction and dissatisfaction function according to fundamentally different mechanisms. If the activity of one of these centers is disrupted, the decisions of an economic agent undergo fundamental change. For instance, from a neurophysiological standpoint, the perception of a phenomenon or image in the brain unfolds within sensory structures, whose integrity depends largely on momentary perceptions, emotions, and impressions. Consequently, the subject of analysis becomes holistic units – *gestalts* - within which elements may alter their characteristics. From a methodological perspective, this introduces new approaches to identifying causal relationships and interdependencies between system-forming elements, as well as between

endogenous and exogenous factors. Conditional and unconditional reflexes may differ significantly in timing, depending on an individual's neurobiological and neurophysiological typology. Overlooking such differences may have given rise to the classical notion of an undifferentiated economic agent driven by the "impulse" of minimizing costs or maximizing returns. Yet, as physiology emphasizes the typological features of higher nervous activity should be reflected in all bodily functions [Voronin L, 1987].

It becomes evident that even in identical situations, economic agents may react differently, thus deviating from the prescribed path of maximizing self-interest. Classical economic literature has often failed to properly account for this fact, assuming instead that all agents behave uniformly according to the formula of minimizing costs (production or consumption), maximizing utility, or maximizing profit. From this standpoint, even the mechanism of market equilibrium can be reinterpreted. Attempts have been made to integrate economic, psychological, neurobiological, and neurophysiological analyses when explaining the emergence, application, and evolution of economic transactions [Martirosyan A., 2006].

Phenomena such as the Veblen and Giffen effects, as well as the spiral and cobweb models of supply and demand, illustrate divergent trajectories of market development. In such contexts, transactions fragmenting ownership into usage rights may significantly alter the way market equilibrium is established.

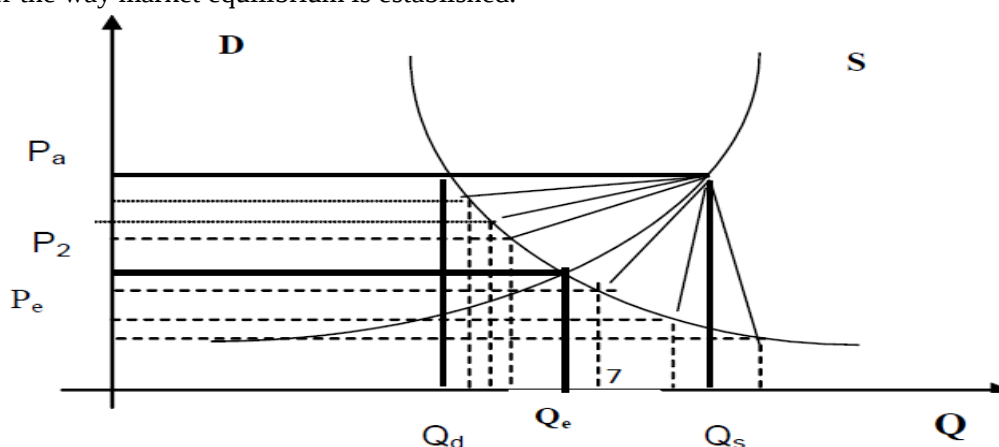


Figure 2. Realization of market surplus.

It is conventionally accepted that at price P_a , a quantitative gap arises between the supplied and demanded quantities (Q_s and Q_d). Based on the rationality assumption of classical theory, another factor can be introduced into the model – the principle of alternative time perception. For example, in Armenia's economy, the agricultural machinery market, and more broadly the means of production markets worldwide, exhibit a trend toward transactions fragmenting ownership into usage rights. In this framework, at price P_a , the demand curve along its entire length represents the "opportunity" of using produced

goods by many agents, even if not immediately owned. This model allows producers to secure normal, even economic profits, as transactions conducted below price P_a can still yield positive effects of volume growth. Such arrangements benefit all parties, providing utility, profitability, and satisfaction of needs. For users, it opens opportunities to employ means of production and earn profits while making regular payments, thereby enabling eventual access to more expensive goods beyond current budget constraints.

In classical economics, equilibrium (E) is treated as inevitable – where supply and demand intersect at equilibrium price (P_e) and quantity (Q_e) – under conditions of perfect competition and laissez-faire. When equilibrium is disrupted, theory asserts that balance will eventually be restored, regardless of whether prices rise or fall. However, this overlooks the fact that disruptions entail social, institutional, and psychological challenges. Ancient philosophers noted that in social relations, “everything flows and changes.”

From a neurophysiological perspective, the dominance of “usage rights” over “physiological ownership” is observable even at the level of visual perception. The retinal image is inverted and reduced, yet conscious experience corrects it through accumulated life practice. This parallels the broader principle that humans, consciously or unconsciously, constantly exercise “usage rights” in relation to both ideas, material goods they do not own.

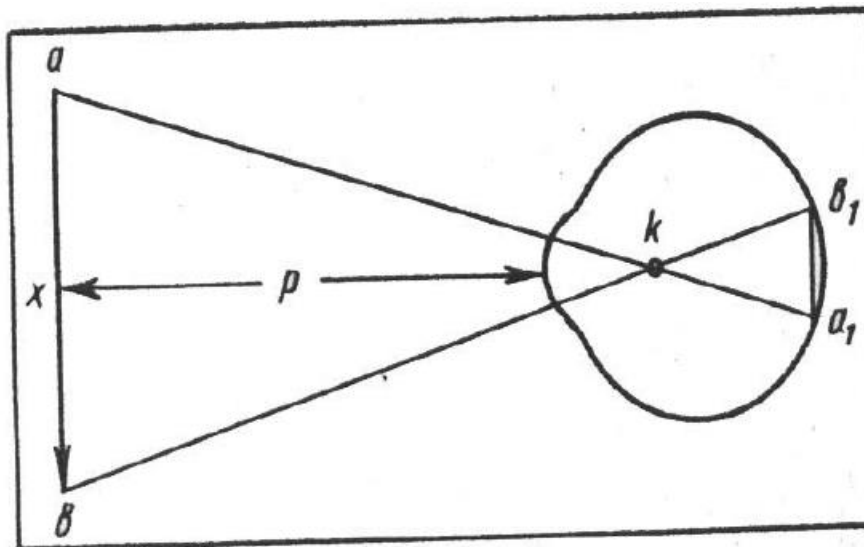


Figure 3. The scheme of image construction on the retina

Furthermore, neural connections weaken or harden over time, forming “stereotypical thinking.” While such patterns conserve energy (the principle of minimal energy expenditure), they also lead to non-rational institutional behavior, limited by emotional inf-

luences and bounded rationality. Much like in nature, the strongest, most resilient, and adaptable agents survive in economic life.

Although neuroeconomic analysis has developed only recently, it has already achieved significant progress, confirming the importance of interdisciplinary research for advancing scientific thought. Within this domain, psychological and neuroeconomic experiments (such as brain MRI studies) provide methodological justification for the shifting and bounded rationality of economic agents, moving beyond the “classical framework” of rational decision-making.

Conclusion

The analysis demonstrates that contemporary economic development cannot be adequately explained within the narrow framework of classical economic theory, which assumes perfectly rational actors [Simon, 1955; North, 1990]. The increasing complexity of market interactions, the psychological dimensions of entrepreneurial behavior, and the neurophysiological diversity of decision-making highlight the limitations of the *homo economicus* paradigm. By introducing alternative conceptualizations such as *homo adaptans* and *homo institutius*, the study underscores the need to situate economic agents within broader institutional, socio-cultural environments [Brendeleva, 2003; Inshakov, 2005].

Institutional innovations as leasing, rent-to-own contracts, and installment purchases, illustrate how the fragmentation of ownership into usage rights enables new mechanisms for market surplus realization [Martirosyan, 2006]. At the same time, insights from behavioral economics and neuroeconomics reveal that producers and consumers operate under bounded rationality, shaped by cognitive biases, risk perceptions, and physiological typologies [Kahneman & Tversky, 1979; Kahneman et al., 1991; Camerer, Loewenstein, & Prelec, 2005; Voronin, 1987]. These findings suggest that market equilibrium is a dynamic process of adaptation and interaction between institutional structures and human behavior [Hodgson, 2006; North, 1991].

References

1. Brendeleva, E. (2003). *Neoinstitutsional'naya ekonomika* [Neo-institutional economics]. Moscow: Teis.
2. Camerer, C. F., Loewenstein, G., & Prelec, D. (2005). Neuroeconomics: How neuroscience can inform economics. *Journal of Economic Literature*, 43(1), 9–64.
<https://doi.org/10.1257/0022051053737843>
3. Hodgson, G. M. (2006). What are institutions? *Journal of Economic Issues*, 40(1), 1–25.
<https://doi.org/10.1080/00213624.2006.11506879>
4. Inshakov, O. (Ed.). (2005). *Homo institutius. Chelovek institutsional'nyy* [Homo institutius: The institutional man]. Volgograd: VolGU.

5. Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–291. <https://doi.org/10.2307/1914185>
6. Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives*, 5(1), 193–206. <https://doi.org/10.1257/jep.5.1.193>
7. Maltus T. R., *Principles of Political Economy*, New York: Henry Holt & Co, 1988. (Originally published by W.Pickering 1836) <https://archive.org/details/economicessays00ricauoft/page/n5/>; *Leisure class*. Oxford, UK: Oxford University Press. (Original work published 1899)
8. Martirosyan, A. (2006). The transition from ownership rights to usage rights: Physio-psychological interrelations. *Armenia: Finance and Economics*, 2(66), 73–76.
9. North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511808678>
10. North, D. C. (1991). Institutions. *Journal of Economic Perspectives*, 5(1), 97–112. <https://doi.org/10.1257/jep.5.1.97>
11. Rikardo D., *Economic essays*. London, G. Bell, 1923. (<https://archive.org/details/economicessays00ricauoft/page/n5/mode/2up>, Last ent. 19.09.2025).
12. Say J. B., *A Treatise on Political Economy; or the Production, Distribution, and Consumption of Wealth*. Batoche Books, Kitchener, 2001. (Original work published 1880)
13. Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, 69(1), 99–118. <https://doi.org/10.2307/1884852>
14. Voronin, L. (1987). *Fiziologiya vysshey nervnoy deyatel'nosti* [Physiology of higher nervous activity]. Yerevan: Yerevan State University Press.

Arman MARTIROSYAN, Gevorg PETROSYAN, Armen SIMONYAN

Presumption of producer autonomy and neuro-economic aspects of the separation of use from ownership

Key words: producer autonomy, neyroeconomics, ownership, institutionalism, demand, supply

This article explores contemporary issues in economics from an institutional perspective, emphasizing the interplay between individual motivations, market laws, and broader social structures. While classical and neoclassical traditions conceptualized economic behavior as driven primarily by rational self-interest, recent interdisciplinary research demonstrates the limitations of this reductionist approach. Drawing on insights from institutional economics, behavioral economics, and economic sociology, the study highlights how norms, historical evolution, and cognitive biases shape decision-making and market outcomes. The institutional framework reframes the economy as a dynamic and evolving system of interdependent activities, where personal ambition operates within social and cultural constraints. By analyzing key contributions from Adam Smith to contemporary behavioral theorists, the article underscores the importance of integrating psychological, social, and historical dimensions into economic inquiry. The findings suggesting self-interest, though central to economic activity, gains meaning and direction only through institutional contexts that mediate its effects on innovation, equity, and collective welfare. This approach provides a more comprehensive basis for interpreting contemporary economic patterns and offers a foundation for developing policy frameworks that account for the complexity of human behavior within ins-titutional systems.