

Behavioural Biases and Rational Choice Theory: An Integrative Analysis of Economic Decision-Making

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Abstract

Economic decision-making has traditionally been explained through Rational Choice Theory (RCT), which assumes that individuals are rational agents maximizing utility based on stable preferences and complete information. However, empirical evidence from psychology and behavioral economics challenges these assumptions, showing that decisions are influenced by cognitive biases, heuristics, emotions, and social contexts. This paper conceptually analyzes the contrast between Rational Choice Theory and behavioral approaches. It traces the historical development of RCT, outlines its assumptions, and examines its strengths and limitations. It then explores behavioral economics, focusing on biases such as loss aversion, anchoring, overconfidence, framing effects, and present bias. By comparing normative and descriptive dimensions, the study highlights how behavioral models provide a more realistic account of decision-making while raising theoretical and policy questions. The paper concludes by advocating for an integrative perspective that reconciles rational choice principles with behavioral insights.

Keywords

Rational Choice Theory, Behavioral Economics, Cognitive Biases, Decision-Making, Heuristics

1. Introduction

Economic theory explains how individuals and institutions allocate scarce resources. For much of the twentieth century, Rational Choice Theory dominated, assuming rational, self-interested, utility-maximizing agents. Despite its analytical clarity, RCT has been criticized for limited psychological realism. Empirical studies reveal deviations such as time inconsistency, preference reversals, and contextual influences. Behavioral economics emerged to address these anomalies, integrating psychology into economic analysis.

2. Theoretical Foundations of Rational Choice Theory

2.1 Historical Origins

RCT has roots in classical political economy and Enlightenment philosophy. Thinkers like Adam Smith, Jeremy Bentham, and John Stuart Mill emphasized rational self-interest. In the twentieth century, neoclassical economists such as Pareto, Samuelson, and von Neumann formalized RCT. Expected Utility Theory (von Neumann & Morgenstern) provided axioms of rational decision-making under uncertainty.

2.2 Core Assumptions

- Complete and stable preferences
- Utility maximization
- Full information and cognitive capacity
- Consistency across contexts

2.3 Normative and Positive Dimensions

RCT serves normative (how agents should behave) and positive (how agents do behave) roles. Tension arises when empirical behavior deviates from theory.

3. Strengths of Rational Choice Theory

- Analytical clarity and predictive power through mathematical modeling.
- Applications in market equilibria, auction design, contract theory, and mechanism design.
- Policy evaluation tools such as cost-benefit analysis and welfare economics.

4. Limitations and Critiques of Rational Choice Theory

- Psychological unrealism: ignores cognitive limits and emotions.
- Empirical anomalies: preference reversals, endowment effects, time-inconsistent choices.
- Neglect of social norms and cultural contexts.

5. Emergence of Behavioral Economics

5.1 Intellectual Origins

Herbert Simon's bounded rationality challenged full optimization. Kahneman and Tversky's Prospect Theory revolutionized decision-making studies.

5.2 Bounded Rationality and Heuristics

Individuals use heuristics—mental shortcuts—that simplify decisions but can cause biases.

5.3 Descriptive Orientation

Behavioral economics explains actual behavior, not idealized rationality.

6. Key Behavioral Biases

- Loss Aversion: Losses felt more strongly than equivalent gains.
- Framing Effects: Choices depend on presentation.
- Anchoring Bias: Reliance on initial reference points.
- Overconfidence Bias: Overestimation of abilities or knowledge.
- Present Bias: Preference for immediate rewards over future benefits.

7. Behavioral Models versus Rational Choice Models

- Prospect Theory vs. Expected Utility Theory: Prospect Theory incorporates loss aversion and probability weighting.
- Dual-Process Models: Distinguish between intuitive (System 1) and deliberative (System 2) thinking.
- Trade-Offs: Behavioral models improve realism but reduce simplicity.

8. Implications for Policy

- Behaviorally informed policies: nudges, default options, automatic enrollment.
- Critiques of paternalism: concerns about autonomy.
- Integrating rationality and behavior: hybrid approaches.

9. Toward an Integrative Framework

Decision-making varies across contexts. Hybrid models incorporating bounded rationality, learning, and institutional constraints offer promise.

10. Discussion

The debate reflects philosophical questions about rationality and welfare. RCT provides a normative benchmark; behavioral economics enhances descriptive accuracy. The challenge is balancing realism with analytical tractability.

11. Conclusion

RCT remains indispensable but limited. Behavioral economics enriches theory with psychological realism. The future lies in integrating rational and behavioral insights into a coherent framework.

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