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BA Economics Honours | Semester V | Calicut University

# Advanced Microeconomics

Course Code: ECO5CJ301 • Module 4

# Module IV: Behavioural Economics

While neoclassical economics posits a hyper-rational economic agent (*Homo economicus*) endowed with unlimited cognitive capacity, stable preferences, and absolute self-control, **Behavioural Economics** integrates cognitive psychology with economic analysis to examine how human beings actually behave under cognitive constraints (*Bounded Rationality*, Herbert Simon).

## Unit 19 & 20: Prospect Theory, Reference Dependence, and Loss Aversion

Daniel Kahneman and Amos Tversky (1979) established **Prospect Theory**, demonstrating systematic violations of expected utility theory:

- **Reference Points and Framing:** Individuals evaluate outcomes not based on final absolute wealth states, but as gains or losses relative to an internal psychological benchmark or *reference point*. Framing identical choices as potential gains versus potential losses drastically alters choices.
- **Loss Aversion:** Losses loom larger than equivalent gains:

  $$|\Delta U(-X)| \approx 2 \text{ to } 2.5 \times |\Delta U(+X)|$$

  The pain of losing ₹1,000 is psychologically more intense than the joy of gaining ₹1,000, creating an asymmetric, S-shaped value function (concave for gains, convex for losses).
- **Endowment Effect (Richard Thaler):** People demand substantially more money to give up an object they possess than they would be willing to pay to acquire it in the first place, violating standard Coasian property right neutrality.
- **Social Preferences and Fairness:** Humans consistently sacrifice personal monetary payoffs to enforce fairness norms and punish exploitative behavior (demonstrated empirically in the *Ultimatum Game* and *Dictator Game*).

## Unit 21 & 22: Heuristics, Rules of Thumb, and Systematic Biases

Under cognitive bandwidth constraints, individuals rely on mental shortcuts (heuristics) that produce predictable, systematic behavioral biases:

- **Anchoring and Adjustment:** The common human tendency to rely too heavily on the first piece of information encountered (the "anchor") when making decisions, adjusting insufficiently from that starting value.
- **Availability Heuristic:** Assessing the probability of an event based on how easily examples come to mind, overestimating vivid, dramatic events (plane crashes, market crashes) while underestimating quiet, systemic risks.
- **Representativeness and Law of Small Numbers:** The mistaken belief that small samples must closely resemble the broader population from which they are drawn (e.g., Gambler's Fallacy).
- **Present Bias and Hyperbolic Discounting:** Overvaluing immediate gratification relative to future rewards, leading to self-control problems, procrastination in saving for retirement, and persistent underinvestment in health and human capital.

# Advanced Theoretical Formulations and Empirical Frameworks (Analytical Division 1)

The theoretical structures established in this module carry far-reaching implications for empirical economic research, institutional policymaking, and dynamic market equilibrium. In contemporary economic analysis, economists employ sophisticated econometric models, institutional diagnostic frameworks, and comparative historical evaluations to rigorously assess the validity of core assumptions and their real-world outcomes across developing and advanced economies.

## Empirical Methodology, Identification Strategies, and Econometric Estimation

Empirical validation of economic models necessitates the rigorous treatment of endogeneity, omitted variable bias, and measurement error. Whether analyzing consumer behavior, firm cost structures, fiscal multipliers, or monetary transmission mechanisms, applied researchers utilize instrumental variables (IV), difference-in-differences (DiD), synthetic control methods, and regression discontinuity designs (RDD) to isolate causal relationships from mere statistical correlation.

Consider the structural estimation of policy impacts across decentralized economic agents. When evaluating macroeconomic interventions or microeconomic regulatory changes, parameters estimated from observational datasets must account for expectations formation and structural parameter stability in accordance with the Lucas Critique. Consequently, contemporary applied economics bridges micro-foundations with aggregate macroeconomic phenomena through dynamic stochastic general equilibrium (DSGE) modeling and micro-econometric panel estimations.

## Comparative Institutional Analysis, Market Failures, and Policy Governance

Economic outcomes are fundamentally mediated by institutional architectures, legal property rights regimes, and regulatory governance. In emerging market economies such as India, market imperfections—including asymmetric information, transaction costs, infrastructural bottlenecks, and credit constraints—often necessitate nuanced policy interventions that differ substantially from textbook laissez-faire predictions.

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| Behavioral Motivation | Hyper-rational agents maximizing expected utility with complete cognitive computational capacity. | Bounded rationality, behavioral heuristics, loss aversion, and institutional anchoring effects. | Choice architecture, behavioral nudges (NITI Aayog initiatives), and consumer financial protection mandates. |
| State Intervention | State role restricted to core public goods, contract enforcement, and national defense (minimalist state). | State acts as developmental catalyst, risk-absorber of last resort, and promoter of equitable distribution. | Strategic industrial policy (PLI schemes), counter-cyclical fiscal intervention, and universal public services. |
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| | distribution is secondary to allocative efficiency. | historical wealth accumulation shape distribution. | human capital investments. |
| Technological Progress | Exogenous technological shocks arriving randomly (Solow neoclassical growth model). | Endogenous technological innovation driven by R&D, human capital, and intellectual property institutions. | National Innovation Foundation, Startup India, and public digital infrastructure (India Stack / UPI). |

### Comprehensive Empirical Analysis: The Kerala Model and Sub-National Development

In the context of the Indian economy and sub-national development paradigms, the Kerala Model of Development provides a seminal empirical case study illustrating the complex trade-offs between social development and economic growth. Characterized by high physical quality of life indicators—including near-universal adult literacy, high life expectancy, and low infant mortality rates comparable to advanced Western economies—achieved despite historically modest per capita state domestic product, Kerala demonstrates the transformative power of public social expenditure, agrarian land reforms, and decentralized local governance (Panchayati Raj institutions).

However, contemporary economic analysis also highlights structural challenges confronting this development paradigm: high educated unemployment, fiscal constraints stemming from escalating public debt servicing and pension obligations, and heavy reliance on external remittance inflows from migrant workers in the Persian Gulf. Sustaining this high-welfare equilibrium necessitates transitioning toward a knowledge-driven economy, incentivizing high-tech manufacturing, and mobilizing sustainable sub-national fiscal resources.

### Policy Synthesis and Analytical Evaluation

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