Neoclassical Economics

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Neoclassical Economics

Neoclassical economics is one of the most influential schools of thought in modern economics. Here's a breakdown of its core ideas, history, and debates:

Core Principles of Neoclassical Economics

- 1. **Rational Behavior**: Individuals are assumed to act rationally, seeking to maximize utility (consumers) or profit (firms).
- 2. **Marginalism**: Decisions are made at the margin—e.g., consuming one more unit of a good is weighed against its marginal cost.
- 3. **Equilibrium**: Markets tend toward equilibrium where supply equals demand. Prices adjust to clear markets.
- 4. **Utility and Preferences**: Consumer choices are based on preferences and constrained by income; utility functions are used to model this behavior.
- 5. **Production Functions**: Firms are modeled using functions that relate inputs (like labor and capital) to output, often assuming diminishing returns.

Historical Roots

- Developed in the late 19th century, building on classical economists like Adam Smith and David Ricardo.
- Major figures include:
 - William Stanley Jevons (UK)
 - Carl Menger (Austria)
 - Léon Walras (France/Switzerland)

Together, they formed the **Marginal Revolution**, emphasizing the role of marginal utility in value determination.

Key Models

- Demand and Supply Curves
- Isoquants and Isocosts (production optimization)
- General Equilibrium Theory (Walras)
- Consumer Choice Theory (indifference curves, budget constraints)

Criticisms of Neoclassical Economics

- 1. **Over-Reliance on Rationality**: Critics argue real-world behavior often deviates from "rational" expectations (see: Behavioral Economics).
- 2. **Static Nature**: Critics like Keynes argued it couldn't explain macroeconomic phenomena like recessions.
- 3. **Income Distribution**: Critics from Marxian and Institutional schools say it neglects power and inequality dynamics.
- 4. **Assumptions vs. Reality**: Perfect information, perfect competition, and no transaction costs are rarely met in practice.

® Real-World Influence

- Neoclassical principles underpin most mainstream economic models used in policy, academia, and financial institutions.
- Forms the foundation of **microeconomic theory**, pricing models, and much of **macroeconomic forecasting**.

Comparison with Keynesian or Behavioral Economics

Excellent! Let's compare **Neoclassical Economics** with **Keynesian Economics**, one of its main alternatives— especially in macroeconomics.

Neoclassical vs. Keynesian Economics			
Feature	Neoclassical Economics	Keynesian Economics	
Time of Origin	Late 19th century	1930s (Great Depression)	
Key Thinkers	Jevons, Menger, Walras, Marshall	John Maynard Keynes	
Main Focus	Long-run equilibrium, efficient markets	Short-run fluctuations, unemployment, demand shortfalls	
View of Markets	Self-correcting; supply creates its own demand (Say's Law)	Markets can fail; aggregate demand drives the economy	
Government Role	Minimal; focus on incentives and efficiency	Active; fiscal policy needed to stabilize demand	
Unemployment	Voluntary, due to wage rigidity or job search	Involuntary, due to insufficient demand	

Feature	Neoclassical Economics	Keynesian Economics
Policy Tools	Interest rate adjustments, market liberalization	Fiscal stimulus (spending & taxes), monetary easing
Inflation View	Result of too much money chasing goods	Trade-off: can use inflation to reduce unemployment (short term)
Assumptions	Rational actors, full information, utility/profit maximization	Acknowledges uncertainty, animal spirits, and sticky prices

Key Debates

- Recessions: Neoclassicals argue they are short-lived and self-correcting; Keynesians argue markets can stay depressed for years without intervention.
- Government Role: Neoclassicals emphasize minimal government to avoid inefficiencies; Keynesians see government as essential in managing economic cycles.
- **Expectations**: Modern hybrids (e.g., New Keynesian models) try to incorporate rational expectations from Neoclassical theory into Keynesian frameworks.

Real-World Application

- After 2008, many policymakers turned to Keynesian-style stimulus (like QE and fiscal bailouts).
- Central banks use Neoclassical-style models for inflation targeting and interest rate setting.

How Behavioral Economics challenges both of these models

Great choice—**Behavioral Economics** adds a psychological lens to traditional economic models, challenging many assumptions of both **Neoclassical** and **Keynesian** schools.

What Is Behavioral Economics?

Behavioral economics blends **economics** with **psychology** to better understand how people actually behave—not how perfectly rational agents *should* behave.

It challenges the idea that humans:

- Always act rationally
- · Have stable preferences
- · Perfectly weigh costs and benefits

Key Concepts in Behavioral Economics

Concept	Explanation
Bounded Rationality	People have limited cognitive resources and often use rules of thumb (heuristics) instead of full optimization.
Loss Aversion	Losses hurt more than equivalent gains feel good (part of Prospect Theory).
Mental Accounting	People treat money differently depending on its source or intended use, violating standard economic theory.
Anchoring	Initial values can bias subsequent decisions, even if they're irrelevant.

Concept	Explanation
Overconfidence	Individuals often overestimate their knowledge or ability to predict events.
Herd Behavior	People tend to mimic the actions of others, especially in uncertain environments like stock markets.

5 Founders and Influencers

- Daniel Kahneman (Nobel Prize, 2002) Prospect Theory
- Amos Tversky cognitive biases and decision-making
- Richard Thaler (Nobel Prize, 2017) Nudge Theory, mental accounting

How It Challenges Traditional Economics

Area	Traditional View	Behavioral Challenge
Rationality	People optimize	People satisfice (do "good enough")
Preferences	Stable and consistent	Can be inconsistent and context-dependent
Information Use	Fully processed	Often ignored, misinterpreted, or biased
Market Efficiency	Prices reflect all info	Prices can deviate due to investor psychology

Real-World Impact

• **Public Policy**: "Nudges" used to improve savings rates, health behaviors, tax compliance.

- **Finance**: Behavioral finance explains anomalies like bubbles, crashes, and momentum.
- **Corporate Strategy**: Businesses design pricing and marketing strategies using behavioral insights (e.g., subscription defaults, pricing tiers).

Behavioral biases show up in investing or markets

Perfect. Let's explore how **behavioral biases** affect **investing decisions and financial markets**, often in ways that contradict standard economic theory.

Real-World Investing Biases (with Examples)			
Bias	Description	Market Example	
Overconfidence Bias	Investors overestimate their knowledge or ability to predict markets.	Traders may take excessive risks, leading to high portfolio turnover and underperformance.	
Loss Aversion	Losses feel ~2x worse than gains feel good.	Investors hold onto losing stocks too long (hoping to "break even"), and sell winners too soon.	
Herding Behavior	Following the crowd even when fundamentals don't support it.	Dot-com bubble (late '90s), Crypto mania, meme stocks like GameStop.	

Bias	Description	Market Example
Anchoring	Fixating on arbitrary reference points (like past prices).	Refusing to sell a stock that's fallen because "it used to be \$100."
Confirmation Bias	Seeking only info that supports pre- existing views.	An investor bullish on Bitcoin may only read positive forecasts, ignoring risks or contrary data.
Mental Accounting	Treating money differently based on its source or category.	Splurging with a tax refund instead of investing it, despite all money being fungible.
Recency Bias	Giving more weight to recent events than historical trends.	Panic selling during a short-term crash (like COVID March 2020), or chasing hot stocks.

📉 Behavioral Finance Insights in Market Trends

- Stock Bubbles & Crashes: Often fueled by herding, overconfidence, and momentum chasing, not fundamentals.
- Under-diversification: Many retail investors hold too few assets, influenced by familiarity bias (investing mostly in local or well-known stocks).
- "Hot Hand" Fallacy: Belief that past winners will keep winning, despite regression to the mean.

Behavioral Tools in Practice

Robo-advisors and financial planners now use **nudges** to:

- Encourage better asset allocation
- Automate saving & investing
- Counteract emotional decision-making

Prospect Theory explains a lot of this behavior

Let's dive into **Prospect Theory**—one of the cornerstones of Behavioral Economics. It was developed by **Daniel Kahneman** and Amos Tversky in 1979 to explain how people make decisions under risk, especially why they often deviate from rational choices predicted by classical economics.

Prospect Theory: The Basics

Prospect Theory explains how people evaluate potential gains and losses, and why they often fear losses more than they value equivalent gains.

Key Features:

1. Loss Aversion:

- Loses loom larger than gains.
- A loss of \$100 feels worse than a gain of \$100 feels good.
- People often require 2x the gain to compensate for a potential loss.

2. Reference Dependence:

- People evaluate outcomes relative to a reference point (like the current price or past high), not absolute wealth levels.
- Gains and losses are judged from this reference, not end outcomes.

3. Diminishing Sensitivity:

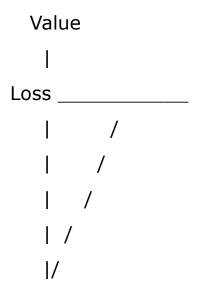
- The value function is concave for gains (risk averse) and convex for losses (risk seeking).
- Example: The difference between \$0 and \$100 feels bigger than \$1,000 vs \$1,100.

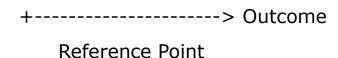
4. Probability Weighting:

- People overweight small probabilities and underweight large ones.
- Leads to behaviors like buying lottery tickets and also insuring against rare disasters.

Prospect Theory Curve

- The value function is:
 - Steeper in the loss domain than in the gain domain (loss aversion)
 - Curved (not linear), showing diminishing sensitivity





Investment Implications

Behavior	Explained by Prospect Theory
Holding losers too long	Investors don't want to "lock in" losses (loss aversion)
Selling winners too quickly	Gains are taken quickly to "feel good" (risk aversion for gains)
Risk-seeking in losses	Chasing risky bets to recover from a losing position
Lottery investing	Overweighting small probabilities of a huge gain
Insurance	Overweighting small probabilities of large loss

Prospect Theory applied in real investing scenarios like during market crashes or in crypto

Here's how **Prospect Theory** plays out in **real-world investing scenarios**, especially during market extremes like **crashes or crypto surges**:

1. Market Crashes (e.g., COVID March 2020, 2008 GFC)

➤ Behavioral Reaction:

- Investors panic-sell during sharp declines.
- This is driven by **loss aversion**: the pain of further losses outweighs potential recovery gains.
- Even rational investors may override logic due to fearinduced loss sensitivity.

➤ Prospect Theory Lens:

- The steep "loss" side of the value curve kicks in.
- People become risk-seeking in losses, sometimes doubling down on risky trades to "win back" losses (like options or leveraged bets).

2. Crypto Mania (e.g., 2017, 2021 Bitcoin/Ethereum rallies)

➤ Behavioral Reaction:

- Massive inflows as people fear missing out (FOMO).
- Some investors make extremely risky bets on small coins, believing in outsized gains despite high failure risk.

➤ Prospect Theory Lens:

- **Probability weighting** explains lottery-style investing—people **overweight small probabilities** of a huge gain (like hitting 100x on a coin).
- Once profits are made, many sell quickly to lock in gains, consistent with risk aversion in gains.

ii 3. "Break Even" Bias (e.g., refusing to sell losing stocks)

➤ Example: A stock drops from \$100 to \$60.

- Many hold the position hoping it rebounds to \$100—even if fundamentals are deteriorating.
- Selling at a loss would psychologically "lock in" a loss.

➤ Prospect Theory Insight:

 This reflects reference dependence (the \$100 price becomes the anchor) and loss aversion (resisting losses emotionally).

© Real-World Tools to Address These Biases

- Stop-loss strategies and automated investing help bypass emotional decisions.
- Some advisors use "nudges" to prevent panic selling or risky chasing behaviors.
- Robo-advisors embed these insights into portfolio management (e.g., rebalancing, tax-loss harvesting).

How these behavioral ideas are being used by professionals

Excellent! Let's explore how **behavioral economics**— especially concepts from **Prospect Theory**—are actively used by professionals like **fund managers**, **financial advisors**, and **policy designers** to shape better outcomes.

How Professionals Use Behavioral Insights

1. Nudges in Personal Finance

- Inspired by Richard Thaler's "Nudge" theory, nudges are subtle policy or design choices that steer behavior without restricting options.
- Examples:
 - Auto-enrollment in retirement plans (401(k), superannuation)
 - Default contribution increases (e.g., $3\% \rightarrow 4\%$ annually)
 - Default investment allocations (like target-date funds)
- **Impact**: Dramatically increases savings rates by leveraging *inertia* and *status quo bias*.

2. Fund Managers & Behavioral Portfolio Theory

- Many fund managers now factor in investor psychology when constructing portfolios:
 - Diversification tailored to risk perception, not just volatility.
 - Avoiding extreme volatility to prevent panic redemptions.
- Some use "bucket" strategies: separating risky growth assets from safer income ones to ease loss aversion anxiety.

🙀 3. Robo-Advisors

- Platforms like Betterment, Wealthfront, and others use behavioral tools:
 - Tax-loss harvesting automatically locks in losses for tax benefits (reducing loss aversion sting).

- Goal-based investing aligns investments with emotional outcomes, improving investor discipline.
- Emotional guardrails: sending warnings or blocking transactions during market panics to prevent impulsive actions.

1 a 4. Government & Policy Design

- Behavioral finance has influenced public pension systems, tax compliance, and consumer protection laws.
- Example: UK's Behavioral Insights Team ("Nudge Unit") helped design programs to:
 - Increase tax collection via smart messaging
 - Improve health outcomes via framing effects
 - Reduce fraud and error in benefit claims

Key Takeaway

Professionals now realize that **investor behavior** can be more influential than **market behavior** in long-term outcomes. Integrating behavioral insights helps:

- Improve decision-making
- Reduce emotional mistakes
- Enhance overall financial wellness

Academic research that measures the impact of these behavioral tools

Certainly! Let's delve into how **behavioral economics**—particularly through **nudges** and insights from **Prospect Theory**—has been applied in real-world settings, both in investing and public policy.

Behavioral Finance in Investing

Recent academic studies have explored how behavioral biases influence investment decisions:

- A study published in the Journal of Economics, Assets, and Evaluation examined the impact of behavioral finance on investment decision-making. It highlighted how cognitive biases and emotional fluctuations can lead investors to make irrational choices, affecting market dynamics.
- Another research article in ScienceDirect investigated the role of financial literacy in moderating behavioral biases. The findings suggest that higher financial literacy can significantly reduce the impact of biases like overconfidence and herd behavior on investment decisions

These studies underscore the importance of understanding and mitigating behavioral biases to improve investment outcomes.

m Nudges in Public Policy

Governments worldwide have incorporated behavioral insights to design more effective policies:

- The UK's Behavioural Insights Team (BIT), also known as the "Nudge Unit," has implemented over 750 projects globally. Their interventions range from increasing tax compliance through personalized messages to promoting energy conservation by leveraging social norms.
- In the United States, the **Social and Behavioral Sciences Team** (SBST) under the Obama administration applied behavioral science to enhance federal programs.

For instance, sending personalized text reminders for financial aid applications led to a 5.7% increase in college enrollment.

These examples demonstrate how subtle changes in policy design, informed by behavioral economics, can lead to significant improvements in public outcomes.

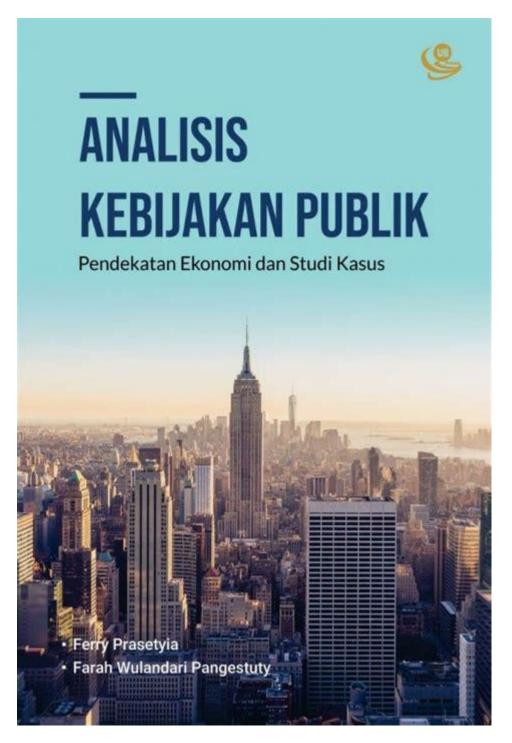
Evaluating the Effectiveness of Nudges

While nudges have shown promise, their effectiveness can vary:

- A comprehensive meta-analysis published in PNAS analyzed 215 studies on nudges. The overall effect size was moderate (Cohen's d = 0.45), with higher efficacy in areas like dietary choices (d = 0.72) and lower in finance (d = 0.25). The study also cautioned about potential publication bias, suggesting that the true effect might be smaller.
- Critics argue that nudges may not lead to long-term behavior change. For example, while nudging individuals to choose healthier foods can have immediate effects, sustaining these choices over time remains a challenge.

These insights highlight the need for careful design and evaluation of behavioral interventions to ensure their effectiveness and ethical application.

Specific case studies in areas like health, finance, or environmental policy



Berikut adalah beberapa studi kasus nyata yang menunjukkan bagaimana **ekonomi perilaku** diterapkan dalam kebijakan publik di bidang **kesehatan**, **keuangan**, dan **lingkungan**:

🕌 Kesehatan: Meningkatkan Imunisasi melalui Nudging

Sebuah studi besar di Haryana, India, menguji 75 kombinasi intervensi untuk meningkatkan imunisasi anak. Kombinasi yang paling efektif—terdiri dari insentif, duta informasi, dan pengingat SMS—meningkatkan tingkat imunisasi sebesar 44% dibandingkan dengan status quo. Kombinasi lain yang lebih hemat biaya tanpa insentif meningkatkan efektivitas biaya per dolar sebesar 9,1% .(arXiv)

Keuangan: Meningkatkan Kepatuhan Pajak dengan Norma Sosial

Di Inggris, Behavioural Insights Team (BIT) mengirimkan surat kepada pembayar pajak yang menunggak, menyatakan bahwa "9 dari 10 orang di daerah Anda telah membayar pajak mereka tepat waktu." Pernyataan berbasis norma ini meningkatkan pembayaran pajak dalam 23 hari sebesar lebih dari £1,6 juta .(Wikipedia)

Lingkungan: Mengurangi Sampah Plastik melalui Default Pilihan

Alibaba mengubah pengaturan default pada aplikasi pemesanan makanan mereka, menetapkan jumlah alat makan plastik menjadi nol kecuali pelanggan memilih sebaliknya. Perubahan ini menyebabkan peningkatan 648% dalam pesanan tanpa alat makan, berpotensi mengurangi 3,26 juta metrik ton limbah plastik jika diterapkan secara nasional di China .(Time)

l Ringkasan

Studi-studi ini menunjukkan bahwa intervensi sederhana berdasarkan prinsip ekonomi perilaku—seperti pengaturan default, norma sosial, dan pengingat—dapat memiliki dampak signifikan dalam berbagai bidang kebijakan publik.

Prinsip-prinsip ekonomi perilaku, khususnya teori *nudge*, telah diterapkan dalam berbagai kebijakan publik di Indonesia untuk mendorong perubahan perilaku masyarakat secara efektif tanpa paksaan. Berikut beberapa contoh penerapannya:

1. Meningkatkan Kepatuhan Pajak melalui Nudge

Direktorat Jenderal Pajak (DJP) bekerja sama dengan Behavioural Insights Team (BIT) dan Cambridge University Press melakukan uji coba acak terkontrol terhadap lebih dari 11 juta wajib pajak di Indonesia. Mereka mengirimkan berbagai jenis email berbasis perilaku untuk mendorong pelaporan pajak lebih awal. Hasilnya, email yang menyertakan ajakan untuk merencanakan pelaporan dan opsi pengingat meningkatkan pelaporan awal sebesar 2,07 poin persentase dan pelaporan keseluruhan sebesar 1,10 poin persentase dibandingkan dengan kelompok yang tidak menerima email .(Cambridge University Press & Assessment)

2. Mendorong Pembayaran Denda Pajak dengan Prompt Perilaku

Studi lain yang melibatkan lebih dari 10.000 wajib pajak yang dikenai denda di Indonesia menunjukkan bahwa pengingat berbasis perilaku dapat meningkatkan pembayaran denda tepat waktu. Intervensi ini menunjukkan bahwa *nudge* dapat efektif dalam konteks kepatuhan pajak di Indonesia .

🍌 3. Mempengaruhi Pilihan Makanan melalui Emoji

Penelitian di Indonesia meneliti bagaimana penggunaan emoji sebagai *nudge* dapat mempengaruhi pilihan makanan ringan antara pisang dan cokelat. Hasilnya menunjukkan bahwa *nudge* sederhana seperti emoji dapat bersaing dengan pengaruh

teman sebaya dalam mempengaruhi pilihan makanan, menunjukkan potensi *nudge* dalam konteks kesehatan masyarakat .(ScienceDirect)

l Ringkasan

Penerapan prinsip ekonomi perilaku di Indonesia menunjukkan bahwa intervensi sederhana seperti pengingat berbasis perilaku, penggunaan emoji, dan pengaturan default dapat memiliki dampak signifikan dalam berbagai bidang kebijakan publik. Hal ini mencerminkan potensi besar *nudge* dalam meningkatkan efektivitas kebijakan tanpa mengurangi kebebasan individu.

Glossary

of Key Behavioral Economics Terms and Applications based on our discussion, with a focus on how they apply in **Indonesia** and globally:

Behavioral Economics Glossary

Term	Definition	Example / Application
Nudge	A subtle change in the way choices are presented to influence behavior without restricting freedom.	Email reminders from DJP to encourage early tax filing in Indonesia.
Loss Aversion	The tendency to prefer avoiding losses more than acquiring equivalent gains.	Investors holding onto losing stocks too long.
Reference Dependence	Evaluating outcomes based on a reference point, not absolute terms.	A taxpayer compares current payment to last year's refund.
Default Effect	Tendency to go with the pre-set option.	Alibaba's no- plastic default setting on food apps.
Social Norms	Behavior influenced by what most people are perceived to do.	UK tax letter saying "9 out of 10 have paid" boosted compliance.

Term	Definition	Example / Application
Anchoring	Relying too heavily on the first piece of info seen (the anchor).	Holding a stock because "it used to be \$100."
Mental Accounting	Treating money differently based on category/source.	Spending a bonus more freely than regular salary.
Overconfidence Bias	Overestimating one's knowledge or ability.	Retail investors making frequent, risky trades.
Planning Prompt	A nudge that asks people to make a specific plan to act.	Indonesia's DJP emails encouraging a plan for tax filing.
Emoji Nudge	Using visual cues (like emojis) to steer choices.	Study in Indonesia showed emojis influenced food choices.
Herding Behavior	Copying others' actions in uncertain situations.	Panic-buying during COVID; meme stock rallies.
Behavioral Prompt	Any cue or reminder aimed at triggering specific behavior.	Text messages reminding people to enroll in programs.
Prospect Theory	A theory that describes how people make decisions under risk, valuing losses more than gains.	Selling winners too early and holding losers too long in investments.

Rudy C Tarumingkeng: Neoclassical Economics

Term	Definition	Example / Application
Bounded Rationality	Limited cognitive resources lead people to make "good enough" choices, not optimal ones.	Choosing the simplest investment fund rather than researching.

Bibliography

Here's a curated **bibliography** for **Neoclassical Economics**, covering foundational texts, modern interpretations, and critical evaluations. This can serve as a resource for deeper academic or policy-oriented exploration.

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