Evaluation – the reward, incentive, nudge & the probability

Type of Evaluation	Weightage (in %)
Quizzes (2)	30
Midsem	25
Term paper	
Project	35 (1st evaluation: 10 marks – around 2nd week of October)
Class presentation____ & Viva_____	10

REFERENCE BOOKS

1. NEUROECONOMICS, Decision Making and the Brain, SECOND EDITION Edited by PAUL W. GLIMCHER & ERNST FEHR

2. NEUROSCIENCE OF DECISION MAKING, Oshin Vartanian & David R. Mandel (eds)

3. Choices, Values & Frames by Daniel Kahneman & Amos Tversky)

- The classes will be a combination of lectures, which will be in the first half of the semester, followed by student presentations on selected topics and papers.

- The quizzes and exams will be based on student presentations, instructors' notes & the relevant sections in the textbooks recommended.

Class Zero

Climate change threatens our existence

Climate change threatens our economy

Puzzle in Classical Economics & behv. Eco(?)
(Barry Nalebuff, 1987 paper in Economic Perspectives)

- **Puzzle 2:In Fact, it's a Gas**

- The production costs of leaded and unleaded gasoline are almost exactly equal. At the wholesale level, the price differential is usually no more than 1 cent per gallon. Why does this translate into about 8 cents per gallon at the pumps? Similarly, the production cost of unleaded premium is only 2 cents per gallon more expensive than standard unleaded.

- At the pumps, the price differential is often over a dime. Why?

(once upon a time in India..)

City	Diesel	Vpower Diesel	Unleaded Petrol	Vpower Petrol
BANGALORE	91.89	107.39	114.1	123.6

Economic puzzles

- Equity premium puzzle
- Home bias in trade puzzle
- Equity home bias puzzle
- Consumption correlations puzzle
- Feldstein-Horioka puzzle
- Forward premium anomaly
- Real exchange rate puzzles
- Retirement-consumption puzzle
- Missing trade puzzle, also known as Border puzzle

Source for the list: economic papers

Possible puzzles in Indian context?

- Farm Insurance India:

- In UP, in January 13, 2016, the scheme touched its high in 2018-19 when more than 61 lakh farmers registered.

- In 2019-20, it dropped to 47.21 lakhs (23% less).

  - why?

- In 2019, the government dropped mandatory insurance for any farmer taking a loan!

- Farmers feel more secure in the rabi season compared to the kharif season

Two scenarios – why economic phenomenon

- 100 in the class
- 100 chocolates
- 100 houses
- 100 seats in an engg college

- 100 in the class
- 50 chocolates
- 25 homes
- 20 seats in an engg college

Some basic questions

- Why are 'choices' interesting?
- Why is the decision making process important to understand?
- What are the factors influencing choices & why?
- What the subjective or individual differences leading to choice variance?
- How is the behavior & the process applied studied?

???
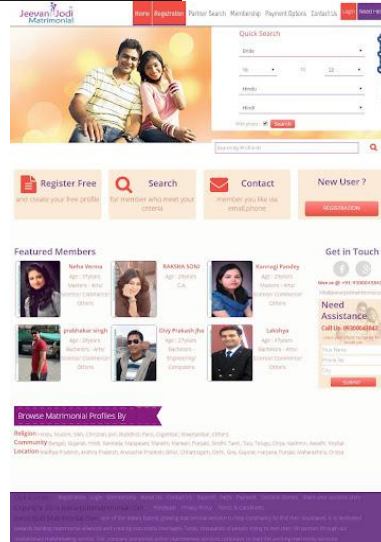
Understand factors influencing decisions based on choices

" They're all involved in the decision-making process. "

Understand decision makers

When all want to do what is 'good' for them individually.... will collective goal be achieved?

Understand individual versus collective goals

But will collective 'good' work?

So, what is Behv Economics?

- Camerer and Loewenstein (2004) succinctly put it:

Behavioral economics increases the explanatory power of economics by providing it with more realistic psychological foundations.

It is important to emphasize that the behavioral economics approach extends rational choice and equilibrium models; it does not advocate abandoning these models entirely (Ho, Lim and Camerer, 2006)
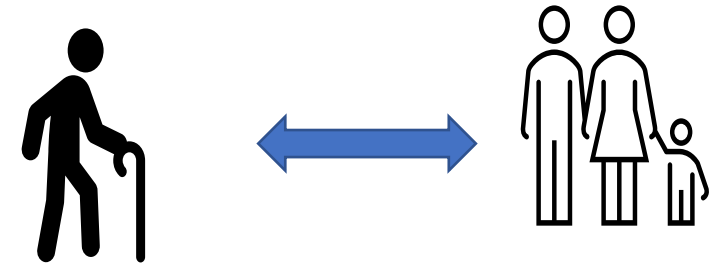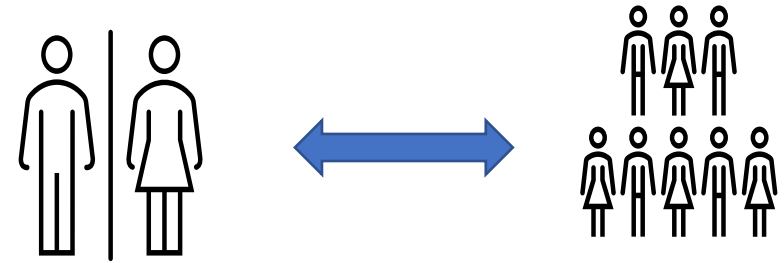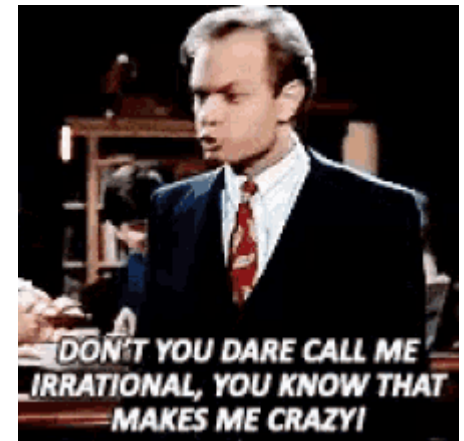
India Smartphone Market Share (Q4 2020 - Q1 2022)
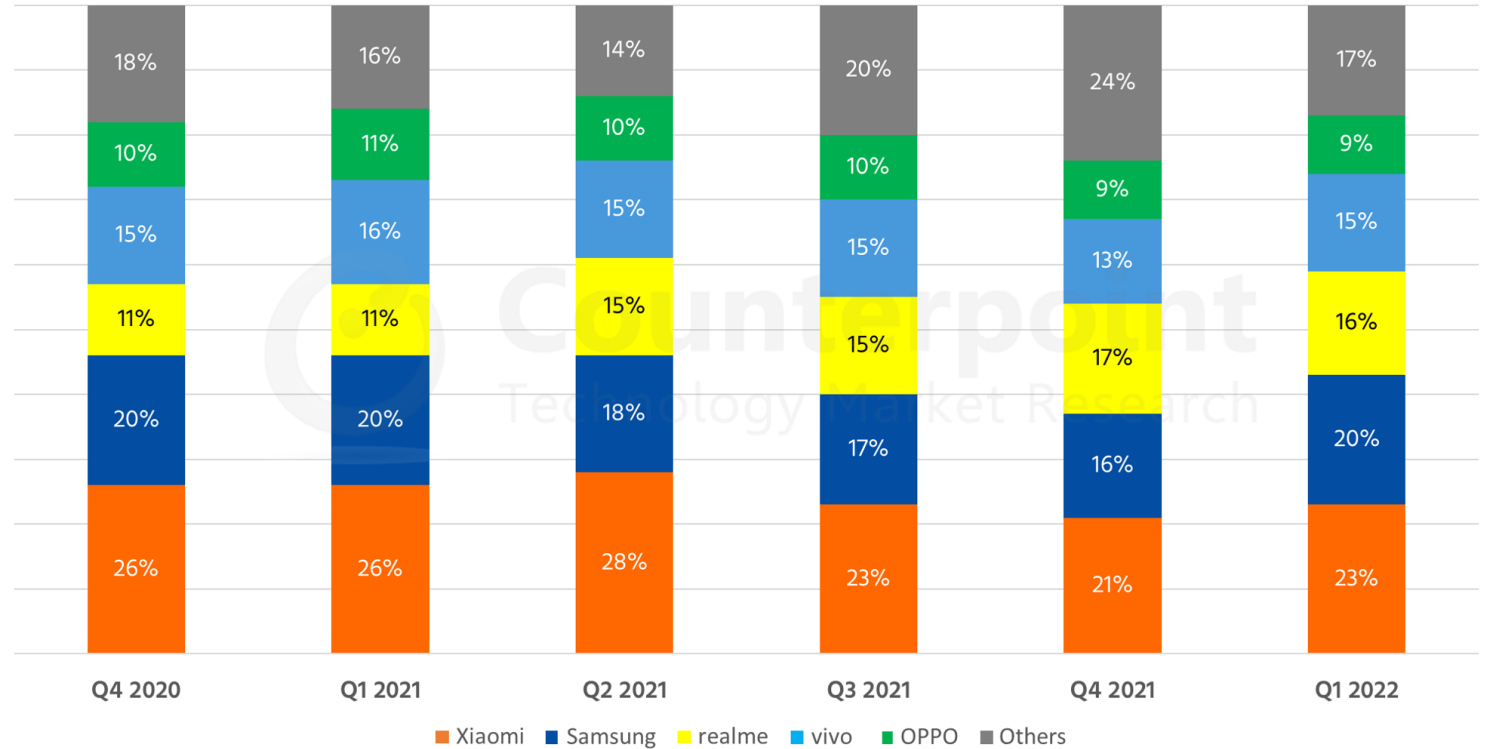
Vernon Smith:if markets are efficient, for example, in terms of market clearing, then this is evidence that individuals are rational.

Theories of decision – entry of cog sci

- Theories of decision are variously presented as descriptive or normative.
- A **descriptive** theory describes how people *in fact* make decisions.
- A **normative** theory captures how people *should* make decisions.
- The entry of cognitive science is to examine the influence of beliefs and desires, symbols, rules, and images – that is processed in the human brain
- Behavioral economics is a product of the cognitive revolution.
- **Behavioral science** refers to the scientific study of behavior, which makes behavioral economics a kind of behavioral science.

Three Decision-Making Philosophies

		POINT OF VIEW	STRENGTHS	WEAKNESSES	WHEN TO USE IT
1	**DECISION ANALYSIS**	Decisions should be made systematically, even in the face of uncertainty. Decision trees provide a framework, and Bayesian statistics provide rules for revising probability assessments.	Consistent, rational, teachable	Doesn't always account for limits of time, data, and human cognitive abilities	To make big decisions with long investment horizons and reliable data—in oil and gas and pharma; whether to go to grad school. Also in negotiations and group decisions
2	**HEURISTICS AND BIASES**	When people make decisions under uncertain conditions, they rely on rules of thumb, or heuristics, that sometimes yield reasonable judgments but sometimes cause big errors.	Based on observed human behavior	Not always clear how to apply to actual decision making	To design better institutions, warn ourselves away from dumb mistakes, and better understand the priorities of others
3	**GOING WITH YOUR GUT**	The heuristics that people use to make decisions are often very effective.	Simple, without extraneous information	Can be hard to know in advance whether a heuristic will work	In predictable situations with opportunities for learning—firefighting, flying, sports. Also in highly uncertain situations where you can't necessarily rely on data

Structure of the course

1. Risk /Ambiguity (student presentations) (4 presentations)

2. Choice (student presentation) (4 presentations)

3. Time (4 presentations)

4. Probability/heuristics/bias (2 presentations)

5. Reward/Loss (4 presentations)

6. Reinforcement Learning ((student presentation) (4 presentations)

7. Social behaviour (student presentation) (4 presentations)

8. Neuro-Morality (1 lecture(KV), 2 student presentation)

Example:

Topic : Risk and Ambiguity

KV: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3065064/

Student: perceptive/cognitive (https://www.nature.com/articles/s41598-021-84359-7)

       Behavioral: https://www.pnas.org/content/pnas/106/36/15268.full.pdf?sid=