



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

IJIRSET

International Journal of Innovative Research in
SCIENCE | ENGINEERING | TECHNOLOGY

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 11, Issue 1, January 2022

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.569

9940 572 462

6381 907 438

ijirset@gmail.com

www.ijirset.com



Cognition and Economic Behavior

Armaana Malhotra ¹

Student, The Shri Ram School, Aravali, Gurgaon, Haryana, India¹

ABSTRACT: Economic behavior is a subfield of economics that gives a descriptively detailed account of individual decision-making to enhance economic models' explanatory and predictive power. People behave like they have limitless awareness, period, and information-processing skill sets. Heretofore, economic behavior initiated the correction of neoclassical economic theory utilizing psychological cognizance into decision-making mechanisms. Economic behavior is founded on loosening the most fundamental principle underpinning microeconomic theory – economic agents' rationality – for studying the range of social, cognitive, and emotional variables that impact the financial decisions of groups and individuals, with a primary focus on the limits of reasoning. Because mental health is concerned with people's psychological and emotional health, economic behavior can furnish insight into others' functionality and well-being and help form strategies to improve decision-making. We have highlighted this topic by linking psychology and economics because cognition is a part of psychology or can be described as a mental process that helps acquire knowledge and comprehension. We have further dug deeper into economic behavior and cognition separately.

KEYWORDS: Economic behavior, Individual decision-making, Rationality, Cognition

I. INTRODUCTION

There is indeed a strong link between psychology and economics (Krueger, & Meyer-Lindenberg, 2019). They are both similar and dissimilar to one another. But first, let's talk about the similarity. We learn human and society's economic activities in economics, such as how humans earn money and then spend it. Business activities are a huge factor in human behavior (Tajvidi, & Karami, 2021), and psychological variables have significantly impacted human economic behavior in economics.

Mill and Bentham both (Lu, 2020) advocated economic utilitarianism. McLelland (KHURANA, & JOSHI, 2017) and his colleagues emphasized the role of motivation and achievement in economic behavior.

It is also impossible to deny that our earnings and the amenities we have had a significant effect on complete behavior (Bell, 2019). Psychologists have studied the impact of earnings on our behavior. Because of many psychological factors, economic underdevelopment and deprivation cause a great deal of rising crime and social unrest. Much psychological research has been conducted on this topic.

The term "middle-class child" is used, and psychology addresses middle-class behavior, such as anxiety, ambition, etc. As a result, we can see that psychology and economics are inextricably linked.

Let us now compare each other. First, economic experts were keen on institutions, specifically gaming situations and markets, whereas psychologists focused on individual factors like learning, social motivation, etc. Moreover, the former was more concerned with outcomes, whereas the latter was more concerned with the procedure. Eventually, economics experiments mirrored that profession that emphasizes stylized quantitative approaches, while psychology experiments sought to capture real-world context.

The lines have recently begun to blur. Both economists and psychiatrists increasingly recognize that understanding institutions mean recognizing an individual's cognitive bonds and desires. His behavior means understanding the institutional structure in which it occurs. Experimental economists are busy with games and markets, but they are beginning to recognize the value of learning and social motivation. A few experimental psychologists (Bishop, 2019) have started to work with institutionally explicit, game-theoretic constructs that economists prefer; at the same time, experimental economists are becoming more aware of the importance of context.



II. MEANING OF COGNITION

The mental process or action of (Bayne, Brainard, Byrne, Chittka, Clayton, Heyes, ... & Webb, 2019) acquiring knowledge and understanding through thought, expertise, and the senses is referred to as cognition. It includes various factors of cognitive functions and processes like:

- **Learning:** It necessitates cognitive functions such as consuming new information, formulating it, and incorporating it alongside foreknowledge. Learning encompasses a wide range of behavioral patterns or habits, such as learning to walk, brushing our teeth and knowledge gained through socialization.
- **Perception:** It enables individuals to consume information via their senses or sensation such as sight, smell, taste, touch, and hearing and then use that information to connect and engage with the environment. Although many people are aware of the common senses, there are some lesser-known senses such as proprioception (stimulation that unknowingly perceives our position in space and adjudicates spatial orientation) and interoception (the perception of our body organs). It tells us when we are thirsty or hungry. When we are exposed to stimuli, our mind combines each information and creates a new memory.
- **Attention:** It encourages people to reflect their focus on a particular activity in their surroundings for a better process in the future. It is used in daily situations and most tasks that we perform daily. Indeed, it has been presented that it regulates and controls the entire cognitive processes, ranging from perception (to concentrate on activities that do not reach our senses) to learning and intricate reasoning.
- **Memory:** It allows individuals to generate, store, and obtain information. It is an important part of the learning process because it allows people to preserve information about the world and their life stories in their memory. Memories are of many types, such as short-term memory (retaining information for a short period, such as remembering a phone number until we write it down on paper) and long-term memory (memories that we keep for a long period). Long-term memory is divided into two categories: declarative memory and procedural memory. The former includes knowledge gained through language, education, and knowledge possessed through personal experiences. Learning through routines is referred to as procedural memory. Contextual memory, recognition, naming, and auditory memory are examples of other types of memory.
- **Language:** It helps express our feelings and thoughts orally. It is a tool that assists us in communicating, organizing, and transmitting information about ourselves and the universe. Language and thought grow in tandem and are inextricably linked; they mutually affect one another.
- **Thought:** It is essential for all cognitive processes because it enables us to combine all the information we have gained and establish relationships between knowledge and events. It helps people with decision-making, problem-solving and better reasoning power.
- Cognitive processes take advantage of available knowledge while also discovering new information. Such processes are studied in various contexts, including computer science, logic, education, anthropology, philosophy, musicology, linguistics, anesthesia, psychiatry, neuroscience, psychology, and biology. And other such approaches to cognition analysis are produced in the emerging field of cognitive science, a successively independent educational discipline.

III. USES OF COGNITION

Each facet of life is affected by cognitive processes, from school to work to relationships. The following are some particular uses for these cognitive processes (Fields, Hoffman, Prakash, & Singh, 2018):

- **Learning new things:** Learning necessitates the ability to absorb new knowledge, develop new remembrances, and relate it to what is already known. Educators and researchers deploy their understanding of these cognitive processes to produce instructional materials that help people learn new concepts.
- **Memory formation:** Memory is a vital topic of study in cognitive psychology. How and what we remember and what we forget explain a lot about the functioning of our brains.

While many people imagine memory comparable to a video camera, meticulously recording and cataloging life experiences and stashing them for further recall, memory is intricate.

Decision-making: When people make decisions, they judge things that have been processed. Before deciding, it may be necessary to compare prior knowledge to new knowledge, integrate new knowledge to present ideas or replace prior information with new information.



IV. IMPROVING COGNITION, MEMORY, AND CREATIVITY WITH BRAIN EXERCISES

Although the brain performs myriad exercises daily (Raichlen, & Alexander, 2017), specific activities might help improve brain functionality and connectivity. As a result, the brain may be protected from age-related degradation. Even while sleeping, the brain is constantly active. On the other hand, specific activities can involve the brain in novel ways, resulting in improved memory, cognitive ability, or creativity.

The five brain exercises listed below may boost cognition, memory, and creativity.

- **Meditation:** Meditation entails concentrating in a calm and controlled manner. It has numerous advantages for the brain and the body and slow brain aging, and increase the brain's capability to learn.
- **More visualization:** Visualization involves creating a mental image to portray information. This mental image can be in the form of a photograph or an animated scene. Visualization assists people in organizing information and making correct choices. People can use visualization in their daily lives like before going grocery shopping; people can imagine how they will go to and come from the store and what they will buy. The key point is to envision the scenes vividly and precisely to the maximum extent even before the event occurs.
- **Play games:** Playing games like card or board games is an enjoyable way to socialize or kill time, benefiting the brain. Such games reduce the risk of cognitive impairment in elderly individuals.
- **Practice crossword puzzles:** Crossword puzzles are a popular brain-stimulating activity. In individuals with preclinical dementia, puzzles may slow down the progression of memory decline.
- **Complete jigsaw puzzles:** Doing jigsaw puzzles is leisure while also benefiting the brain. Cognitive functions, including mental rotation, perception, working memory, and reasoning, may be activated by puzzles. Regularly completing jigsaw puzzles all across lifespan might protect against brain aging.
- **Playing sudoku:** Number puzzles, for example, sudoku, can be a good way to test your brain. They may also help some people's cognitive function. Practicing such puzzles frequently might result in better cognitive function in adults.
- **Playing chess:** Chess and other cognitive leisure pursuits might enhance memory executive functioning - ability to adapt and monitor behavior to achieve predefined information processing speed goals.
- **Playing checkers:** Regular participation in checkers or any other cognitively stimulating game is associated with greater brain volume and cognitive health markers in individuals at risk of Alzheimer's disease.
- **Playing video games:** Some video games, like puzzle games, action games, and strategy games, may enhance problem-solving, attention, and cognitive flexibility.

V. MEANING OF ECONOMIC BEHAVIOR

Economic behavior is the study of (Lisciandra, 2018) psychology. It relates to individuals' and institutions' financial decision-making mechanisms. In this field, the two most important questions are:

1. Are economists' suppositions about utility or wealth maximization accurate representations of people's behavior from the real world?
Do people optimize their subjective expected utility (a technique to decision-making under risk allowing for subjective assessment of variables under consideration and their possibility)?
2. Economic behavior (Herfeld, 2018) is frequently associated with normative economics (a viewpoint on economics that indicates normative or ideologically prescriptive judgments toward investment projects, economic growth, statements, and circumstances).

According to economic behavior, in a real-world setting, people would always make judgment calls that help them avail the ultimate value and fulfillment (Kanev, & Terziev, 2017). The rational decision, as per it, states that when humans are presented with multiple choices under scarcity, they will choose what brings them maximum satisfaction. This theory holds that, given their preferences and constraints, people can act rationally by proficiently considering the costs and benefits (Bento, Jacobsen, Knittel, & Van Benthem, 2020) of every option available.

Therefore, the ultimate choice will be the best option for the person. The logical person has self-control and is not swayed by emotions or external forces, and thus wants what is best for him. Unfortunately, economic behavior explains that humans are irrational (Gigerenzer, 2018) and cannot think logically, so they end up making decisions that do not favor them. For example, decisions like an ideal pay for coffee cup, contribution towards retirement, whether to attend



graduate school or not, live a healthy life or not, etc., are the decisions that most individuals make at a specific point in their lives.

VI. NUDGE THEORY IN ECONOMIC BEHAVIOR

A "nudge" is a method of manipulating (Tagliabue, Squatrito, & Presti, 2019) people's choices to influence them to make specific decisions in economic behavior. For example, keeping fruits near the cash register in a high school cafeteria is an example of a "nudge" to encourage students to choose healthier options. Nudges are non-coercive: Banning junk food and punishing people for making unhealthy choices is not a nudge.

However, auto-enrolling staff members in 401k plans and telling them to opt out instead of giving people the opportunity to opt in is an example of a nudge to promote significantly better retirement savings. Nudges create a circumstance of "libertarian paternalism"—libertarian since it retains options but paternalistic as it empowers specific behavior. In other words, make things uncomplicated if you want people to do something.

VII. EXAMPLES OF ECONOMIC BEHAVIOR

The principles of economic behavior (Tetiana, Inna, Walery, Olga, & Svetlana, 2018) significantly impact how we live our lives. It attempts to explain why some individuals chose option A over option B. We can better develop our facets by recognizing their effect on our behavior.

Example 1: Participating in sports

- **The principle used Hot-Hand Fallacy** (Miller, & Sanjurjo, 2018): The idea that humans who got successful with a random event have a higher probability of success in subsequent attempts.
- **Example:** When a basketball player makes several consecutive shots and believes they have got a "hot hand" and cannot miss.
- **Relation to Economic Behavior:** False signals can cloud human perception and judgment. There is no such thing as a "hot hand"—it's all down to chance and luck.

Example 2: Taking an exam

- **The principle used Self-handicapping** (Schwinger, Trautner, Pütz, Fabianek, Lemmer, Lauermann, & Wirthwein, 2021): A cognitive strategy in which people avoid exerting effort to protect their self-esteem.
- **Example:** If a student performs poorly, she may tell her friends that she barely studied for an exam, despite having studied extensively.
- **Relation to Economic Behavior:** People create roadblocks (and make it more difficult for themselves) to manage upcoming answers for their success or failure.

Example 3: Enjoying coffee

- **The principle used Anchoring** (Gurdgiev, & O'Loughlin, 2020): the method of implanting an idea in someone's mind that will further impact that individual's actions.
- **Example:** Starbucks identified itself differently from Dunkin' Donuts through its distinct product names and store atmosphere. This enabled the firm to deviate from the Dunkin' Donuts price point and pay more.
- **Relation to Economic Behavior:** Starbucks grande hot coffee priced at \$2.10 will always cost more than Dunkin' Donuts medium-priced at \$1.89). Starbucks customers are conditioned and ready to pay more even though the coffee is somewhat the exact as Dunkin' Donuts.

Example 4: Playing slots

- **The principle used Gambler's Conceit** (O'Neill, 2017): An incorrect belief that someone can halt a dangerous activity while participating in it.
- **Example:** A gambler at the slot machine says, "I can stop the game when I win or when I want to," but does not stop.
- **Relation to Economic Behavior:** Players are enticed to continue playing to extend their winning streak and continue playing while losing to win money back. The gambler continues gambling that is detrimental to his best interests.

Example 5: Taking work supplies

- **The principle used Rationalized Cheating** (Chen, & Ong, 2018): Individuals who rationalize cheating don't consider themselves bad people or cheaters.
- **Example:** A person is expected to take a stapler or pencils home from work than the same amount in cash.
- **Relation to Economic Behavior:** People justify their actions by portraying them for doing something (in this



scenario, taking) instead of stealing. People's eagerness to deceive grows as they gain cognitive dissonance from their deeds.

VII. CONCLUSION

Economics and psychology are closely related as psychology (brain) only affects consumer buying behavior and further creation, production, and distribution of goods and services. However, they differ at the same time in terms of their career requirements. This implies cognition and economic behavior go hand in hand.

Cognition is acquiring knowledge and understanding through thought, expertise, and the senses involving various factors like learning, attention, perception, etc. It is a daily process as we humans undergo various things daily – small or big. Also, one can boost their cognition to make smarter decisions that benefit them.

This cognition affects economic behavior, a study of psychology, relating to entities' financial decision-making process. Financial decision-making involves a thought process, so cognition and economic behavior affect industries, organizations, financial experts, and other entities.

REFERENCES

1. Bayne, T., Brainard, D., Byrne, R. W., Chittka, L., Clayton, N., Heyes, C., ... & Webb, B. (2019). What is cognition?. *Current Biology*, 29(13), R608-R615.
2. Bell, A. (2019). Job amenities & earnings inequality. *Job Market Paper, Harvard University*.
3. Bento, A. M., Jacobsen, M. R., Knittel, C. R., & Van Benthem, A. A. (2020). Estimating the costs and benefits of fuel-economy standards. *Environmental and Energy Policy and the Economy*, 1(1), 129-157.
4. Bishop, D. (2019). The psychology of experimental psychologists: Overcoming cognitive constraints to improve research.
5. Fields, C., Hoffman, D. D., Prakash, C., & Singh, M. (2018). Conscious agent networks: Formal analysis and application to cognition. *Cognitive Systems Research*, 47, 186-213.
6. Gigerenzer, G. (2018). The bias bias in behavioral economics. *Review of Behavioral Economics*, 5(3-4), 303- 336.
7. Gurdgiev, C., & O'Loughlin, D. (2020). Herding and anchoring in cryptocurrency markets: Investor reaction to fear and uncertainty. *Journal of Behavioral and Experimental Finance*, 25, 100271.
8. Herfeld, C. (2018). From theories of human behavior to rules of rational choice: tracing a normative turn at the Cowles Commission, 1943–54. *History of Political Economy*, 50(1), 1-48.
9. Kanev, D., & Terziev, V. (2017). Behavioral economics: development, condition and perspectives. *IJASOS-International E-Journal of Advances in Social Sciences*, 3(8).
10. KHURANA, H., & JOSHI, V. (2017). MOTIVATION AND ITS IMPACT ON INDIVIDUAL PERFORMANCE: A COMPARATIVE STUDY BASED ON MCCLELLAND'S THREE NEED MODEL. *Clear International Journal of Research in Commerce & Management*, 8(7).
11. Krueger, F., & Meyer-Lindenberg, A. (2019). Toward a model of interpersonal trust drawn from neuroscience, psychology, and economics. *Trends in neurosciences*, 42(2), 92-101.
12. Lisciandra, C. (2018). The role of psychology in behavioral economics: The case of social preferences. *Studies in History and Philosophy of Science Part A*, 72, 11-21.
13. Lu, X. (2020). Utilitarianism of Mill and Bentham: a comparative analysis. *Frontiers in Educational Research*, 3(4).
14. Miller, J. B., & Sanjurjo, A. (2018). Surprised by the hot hand fallacy? A truth in the law of small numbers. *Econometrica*, 86(6), 2019-2047.
15. O'Neill, K. (2017). Cognitive behavioural therapy for problem gambling. In *Evidence-based treatments for problem gambling* (pp. 27-38). Springer, Cham.
16. Raichlen, D. A., & Alexander, G. E. (2017). Adaptive capacity: an evolutionary neuroscience model linking exercise, cognition, and brain health. *Trends in neurosciences*, 40(7), 408-421.
17. Schwinger, M., Trautner, M., Pütz, N., Fabianek, S., Lemmer, G., Lauermann, F., & Wirthwein, L. (2021). Why do students use strategies that hurt their chances of academic success? A meta-analysis of antecedents of academic self-handicapping. *Journal of Educational Psychology*.
18. Tagliabue, M., Squatrito, V., & Presti, G. (2019). Models of cognition and their applications in behavioral economics: A conceptual framework for nudging derived from behavior analysis and relational frame theory. *Frontiers in psychology*, 10, 2418.
19. Tajvidi, R., & Karami, A. (2021). The effect of social media on firm performance. *Computers in Human Behavior*, 115, 105174.
20. Tetiana, H., Inna, N., Walery, O. K., Olga, G., & Svetlana, D. (2018). Innovative model of economic behavior of agents in the sphere of energy conservation. *Academy of Entrepreneurship Journal*, 24(3), 1-7.



**Impact Factor:
7.569**



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

 9940 572 462  6381 907 438  ijirset@gmail.com



www.ijirset.com

Scan to save the contact details