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RESEARCH ARTICLE

SIGNIFICANCE OF NEUROECONOMICS IN MEDIA CORPORATIONS' SURVIVAL IN THE AGE OF DIGITALIZATION

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Abstract

The three concepts of neuroeconomics, behavioral economics and media economics were briefly examined, as relates to media corporations in the age of digitization and found to be closely related to human behavior mostly at individual level. The three concepts are also theoretically related because they all are concerned with human behavior and choices. There are varieties of theories in studying media economics, a few were examined and found to be relevant to Neuroeconomics, they include Theory of The Firm, The Consumer Theory, Theory of Ruinous Competition and Broadcast Media Concentration. The age of digitization has brought with it proliferation of especially electronic media, especially social media. This implies the traditional understanding of how media corporations operate have changed. It was found that consumption of digital media is rapidly increasing and becoming more personalized to individual behaviors and preferences, therefore neuroeconomics can help explain psychological mechanisms that lead to individual economic decision-making and understanding of media economics. Neuroeconomics, by leveraging on neuroscience, can contribute to understanding consumer habits, social networking and possibly predict choices of media consumers and/or detect consumers or groups that are likely to exhibit problematic behaviors. By using neuroeconomics models, media corporations can understand demand and consumer information, thereby tailoring media products in a way that will increase its value and utility to the consumers and ultimately profitability of the media corporations.

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Introduction:-

Defining Neuroeconomics, Behavioral Economics, Media Economics and Neuroscience

It is difficult to comprehensively define economics. In line with the topic of this paper the definition by Lionel Charles Robbins will suffice; economics is "the science which studies human behavior as a relationship between (given) ends and scarce means which have alternative uses." (Britannica, 2021). Generally, "All economic behavior involves decision-making by individuals (Economics Online, 2021). The concepts of Neuroeconomics, behavioral economics, media economics and neuroscience are closely related as they all, in one way or the other, are related to human behavior.

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According to Jonathan (2020) , the Neuroeconomics is a part of economics discipline which infuses the concepts of neuroscience and psychology. Neuroeconomics is an emerging and complex field due largely to the complexity of understanding and modeling human brain (Jonathan, 2020). The field of Neuroeconomics is related to computational activities of brain as it makes decisions (Atli & Yilmazata, 2016) , it aims to understand and predict consumer choices (Houser & Kevin, 2008) . Neuroeconomics introduces mathematical tools to help explain psychological mechanisms that lead to economic decisions (Jonathan, 2020) and provides related theories to examine choice and exchange (Camerer, 2008).

The field of behavioral economics is well-known in economics, it aims to integrate psychology, neuroscience, and sociology (Lavecchia, Liu & Oreopoulos, 2016) to understand how individual behavior, thoughts and emotions affects individual decision-making (Teraji, 2018) which is not always rational (Interaction Design, 2021). The behavioral economics allows for irrational behavior and attempts to understand reasons behind the irrational behavior (The Guardian, 2021). Behavioral economics is focused on observable behavior and does not explain theoretically how economic system works (Felix K. & Daniel O., 2016).

Media economics applies economic theories to study mass media organizations (Albarrans, 2005). There are many types of media, which can basically be grouped into two, print media and electronic media. The print media shares information or news using printed materials such as newspapers and electronic media which shares information or news using electronic medium such as television, internet, applications and so on (Geeks for Geeks, 2021). The media can be of three types: news media, social media, and web media (Ellicott, 2021). There are also various ways media information is shared which includes public televisions, cable television, radios, internet, online games, films, magazines, newspapers, books, audio books, cinema and so on (Mark, 2019). Another form of media is Out-of-Home media known as outdoor advertising which includes static and digital billboards, mall advertising, and so on (Pantograph, 2021)

The field of neuroscience, not directly related to the management discipline, is important to neuroeconomics and behavioral economics. Neuroscience , also known as Neural Science (Georgetown.edu, 2021), is an interdisciplinary science that studies “the cellular, functional, behavioral, evolutionary, computational, molecular, cellular, and medical aspects of the nervous system” (Medical news today, 2021). The neural science basically studies how “nervous system develops, its structure, and what it does” (Georgetown.edu, 2021). Neuroscience has many branches such as Affective neuroscience, Behavioral neuroscience, Clinical neuroscience, Cognitive neuroscience, Computational neuroscience, Cultural neuroscience, Developmental neuroscience, Molecular and cellular neuroscience, Neuro-engineering, Neuroimaging, Neuroinformatic, Neurolinguistics, Neurophysiology etc. (Medical news today, 2021).

Theoretical Relationship Between Neuroeconomics, Behavioral Economics, Media Economics and Neuroscience

The three concepts of Neuroeconomics ,behavioral economics, and media economics are theoretically related because they are all concerned with human thinking, behavior, and choices. Ontologically, the behavioral economics is focused on the individual’s behavior and epistemologically assumes that human behavior can be observed and described (Exploring-economics, 2021). In behavioral economics individuals make decisions by finding alternatives that they consider easier , cost effective and with minimal losses. The aim of the neuroeconomics is to enhance the predictive power of the utility theory(Vromen, 2011), which examines satisfaction and enjoyment consumers obtain from activities, goods, or services (Umn.edu, 2021).

Theories around media economics

There are many theories around media economics; this includes (a) Theory of The Firm, which looks at decision-making around costs and volumes of production, resource allocation and price adjustments (Investopedia, 2021). This will help explain the complexities in determining volumes of production, the unit costs and economics of scale. (b) The Consumer Theory , which looks at how a rational consumer would make consumption decisions (Levin & Milgrom, 2004) and that the consumer often seeks to maximize their overall utility to achieve highest level of satisfaction from their economic decisions (Corporate finance Institute, 2021). (c) Theory of cut-throat or ruinous competition, is when prices for a long time do not cover fixed costs of production, is also relevant in media economics as it could be destructive to profitability of media organizations. The theory of (d) Broadcast Media Concentration this theory explains that concentration of mass media ownership is increasingly in the hands of fewer individuals (Cunningham & Alexander, 2004), while this is observable, but it affects consumers choice and

freedom of media (Omachonu & Schultz, 2009), despite proliferation of media. Concentration of media places excessive power in the hands of few private individuals, corporations, governments, or political authorities (IFJ, 2021).

Findings

Neuroscience and media economics

The aim of media organizations is to educate, entertain and inform and ultimately media organizations need to be sustainable, therefore the need to also aim at profitability and this can be achieved through economics of scale. On one hand, neuroscience cognitive models can help in explaining the processes in decision making that lead to choices by consumers, its wide application is limited and not well understood within the broader economics profession. On the other hand, media economics has elements of economic processes and is built on economics theories and concepts of demand and supply within market conditions. Neuroscience can contribute to the field of media economics by peering into the consumer choices to attract and retain customers. Also, neuroscience can help in understanding “the brain and its impact on behavior and cognitive functions (Georgetown.edu, 2021).

Neuroeconomics and survival journalism and media corporation

The age of digitization has brought with it proliferation of especially electronic media, which includes digitized newspapers, social media, internet sites, satellite televisions and other forms of media streaming channels. Even though, economists are primarily “interested in predicting behavior from observable features of the environment” (Konovalov & Krajbich, 2016) but Neuroeconomics, by leveraging on neuroscience, will help in understanding and predicting the preferences and choices of media consumers. In addition to providing quality information, education and entertainment, there is an important element of profit making and sustainability of media organizations, this would require modeling of consumer choices and contents according to tastes, age categories and medium of communication. The marketing strategies and advertisement depend significantly on understanding the behaviors of the consumers to enhance revenues (Atli & Yilmazata, 2016), therefore deployment of neuroeconomic concepts can help in tailoring media products to increase its value and utility to the consumers. Neural networks and social network analysis (Tan et al., 2019) can also help in understanding social interactions on social media, thereby improving design and provision of targeted advertisements to media consumers. Neuroeconomics models can help in understanding consumer habits and possibly predict choices (Tan et al., 2019). There is also a possibility that neuroeconomics can help “to detect when individuals or groups of individuals are likely to exhibit economically problematic behaviors” such as market bubbles (Tan et al., 2019). Neuroeconomics can as well help media suppliers understand how their stories are accepted or rejected, thereby increasing understanding how people consume information. Media organization can use neuroeconomics models to understand media use as relates to consumer brain development (Crone & Konijn, 2018).

Conclusion:-

It is important that media corporation deploy neuroeconomics models to better understand consumer choices, predict consumer preferences and tailor media products to customers towards enhancing media corporation’s survival in the age of digitization

References:-

1. Atli, D., & Yilmazata, M. (2016). Neuroeconomics and Media Economics. *Advances In Psychology, Mental Health, And Behavioral Studies*, 33-44. doi: 10.4018/978-1-4666-9989 2.ch002
2. Albarrans, B. (2005). Media economics research: Methodological perspectives and areas for future development. *Palabra Clave [en linea]*, (13), 0[fecha de Consulta 7 de Agosto de 2021]. ISSN: 0122-8285. Disponible en: <https://www.redalyc.org/articulo.oa?id=64901305>
3. Britannica. (2021). Lionel Charles Robbins, Baron Robbins | British economist. (2021). Retrieved 7 August 2021, from <https://www.britannica.com/biography/Lionel-Charles-Robbins-Baron-Robbins-of-Clare-Market>
4. Camerer, C. (2008). The Potential of Neuroeconomics. *Economics And Philosophy*, 24(3), 369-379. doi: 10.1017/s0266267108002022
5. Corporate finance Institute. (2021). Utility Maximization - Overview, How It Works, Calculation. Corporate Finance Institute. (2021). Retrieved 8 August 2021, from <https://corporatefinanceinstitute.com/resources/knowledge/economics/utility-maximization/>.
6. Crone, E., & Konijn, E. (2018). Media use and brain development during adolescence. *Nature Communications*, 9(1). <https://doi.org/10.1038/s41467-018-03126-x>

7. Cunningham, B., & Alexander, P. (2004). A Theory of Broadcast Media Concentration and Commercial Advertising. *Journal Of Public Economic Theory*, 6(4), 557-575. <https://doi.org/10.1111/j.1467-9779.2004.00180.x>
8. Ellicott, A. (2021). What are the different types of media? Retrieved 7 August 2021, from <https://www.axiapr.com/blog/what-are-the-different-types-of-media>
9. Economics Online. (2021). What is behavioral economics Retrieved 6 August 2021, from https://www.economicsonline.co.uk/Behavioural_economics/Introduction-to-behavioural-economics.html
10. Geeks for Geeks. (2021). Difference between Print Media and Electronic Media – Geeks for Geeks. (2021). Retrieved 7 August 2021, from <https://www.geeksforgeeks.org/difference-between-print-media-and-electronic-media/>
11. Georgetown.edu (2021). About Neuroscience - Department of Neuroscience. Retrieved 7 August 2021, from <https://neuro.georgetown.edu/about-neuroscience/>
12. Houser, D., & McCabe, K. Introduction to Neuroeconomics. *Neuroeconomics*, xv-xxi. doi: 10.1016/s0731-2199(08)20014-2
13. Investopedia. (2021). How Theory of the Firm Can (or Can't) Maximize Profits. Investopedia. Retrieved 8 August 2021, from <https://www.investopedia.com/terms/t/theory-firm.asp>
14. Jonathan, C. (2010). Everything you need to know about Neuroeconomics. Retrieved 3 August 2021, from <https://www.weforum.org/agenda/2016/10/everything-you-need-to-know-about-neuroeconomics/>
15. Felix K. & Daniel O. (2016). The Perspectives of Pluralist Economics. *Exploring Economics*. Retrieved 6 August 2021, from <https://www.exploring-economics.org/en/orientation/behavioral-economics/>
16. IFJ. (2021). Media Concentration. Retrieved 8 August 2021, from <https://www.ifj.org/what/press-freedom/media-concentration.html>
17. Interaction Design. (2021). What is Behavioral Economics? Retrieved 6 August 2021, from <https://www.interaction-design.org/literature/topics/behavioral-economics>
18. Lavecchia, A., Liu, H., & Oreopoulos, P. (2016). Behavioral Economics of Education. *Handbook Of the Economics of Education*, 1-74. doi: 10.1016/b978-0-444-63459-7.00001-4
19. Konovalov, A., & Krajbich, I. (2016). Over a Decade of Neuroeconomics: What Have We Learned? *Organizational Research Methods*, 22(1), 148-173. <https://doi.org/10.1177/1094428116644502>
20. Levin, J., & Milgrom, P. (2004). Consumer Theory. *Web.stanford.edu*. Retrieved 8 August 2021, from <https://web.stanford.edu/~jdlevin/Econ%20202/Consumer%20Theory.pdf>
21. Mark, A. (2019). 5 Types of Media. Retrieved 7 August 2021, from <https://medium.com/@andrewmarkgibs/5-types-of-media-dbb40c02f5ec>
22. Medical news today.(2021). Neuroscience: Overview, history, major branches. (2021). Retrieved 7 August 2021, from <https://www.medicalnewstoday.com/articles/248680#overview>
23. Omachonu, J., & Schultz, D. (2009). Media Concentration. *Mtsu.edu*. Retrieved 8 August 2021, from <https://www.mtsu.edu/first-amendment/article/1127/media-concentration>
24. Pantograph. (2021). What Are The 4 Types of Media? (2021). Retrieved 7 August 2021, from <https://pantograph.io/what-are-the-4-types-of-media/>
25. Teraji, S. (2018). Institutions and the Economics of Behavior II. *The Cognitive Basis of Institutions*, 77-136. doi: 10.1016/b978-0-12-812023-1.00003-x
26. The Guardian. (2021). What is behavioral economics? (2021). Retrieved 6 August 2021, from <https://www.theguardian.com/world/2017/oct/09/what-is-behavioural-economics-richard-thaler-nobel-prize>
27. Tan, Q., Liu, N., & Hu, X. (2019). Deep Representation Learning for Social Network Analysis. *Frontiers In Big Data*, 2. <https://doi.org/10.3389/fdata.2019.00002>
28. Umn.edu. (2021). The Concept of Utility. Retrieved 8 August 2021, from <https://open.lib.umn.edu/principleseconomics/chapter/7-1-the-concept-of-utility/>
29. Vromen, J. (2011). Neuroeconomics: two camps gradually converging: what can economics gain from it? *International Review of Economics*, 58(3), 267-285. doi: 10.1007/s12232-011-0127-8.