



KINDLER

THE JOURNAL OF ARMY INSTITUTE OF MANAGEMENT KOLKATA
(FORMERLY NATIONAL INSTITUTE OF MANAGEMENT CALCUTTA)

VOL - XXI NUMBERS 1 & 2 ISSN 0973-0486 JANUARY-JUNE 2021
(Print) JULY-DECEMBER 2021



ARMY INSTITUTE OF MANAGEMENT KOLKATA

Kindler - The Journal of Army Institute of Management Kolkata

Aims and Objectives

Kindler - the peer-reviewed Journal of Army Institute of Management Kolkata (formerly, National Institute of Management Calcutta) began its journey in 2003. The aim of the journal is to disseminate information about theory, practice and research in the field of management and allied disciplines. It also intends to provide a forum for researchers who wish to communicate ideas and share their experiences in their respective fields of interest on a global as well as national scale. The Journal is internationally contributed as well as subscribed.

In line with the objectives of the journal, **the Chief Editor seeks articles and research papers (4000-8000 words), case studies based on research and experience (2000-4000 words) and book reviews (within 1500 words) for publication.** All articles and papers are referred for independent review by peer experts. The authors are requested to allow the Chief Editor at least two months' time for communicating the decision regarding the publication of the papers. Authors may be required to revise their work in the light of the observations made by the referees or to accept the amendments made by the Editorial Board. Authors may submit contributions electronically (at E-mail: kindler@aim.ac.in with a copy to protik.basu@aim.ac.in) with an undertaking that the contribution is exclusively for Kindler.

Publishers and authors are invited to submit books on management and related fields for review, to The Chief Editor, Kindler.

Chief Editor

Dr. Protik Basu

THE EDITORIAL BOARD

Chief Editor

Dr. Protik Basu

Army Institute of Management, Kolkata (Email: protik.basu@aim.ac.in)

Editorial Team

Dr. Indranil Mukherjee

Maulana Abul Kalam Azad University of Technology, West Bengal
(Email: indranil.mukherjee@makautwb.ac.in)

Dr. Kousik Guhathakurta

Indian Institute of Management, Indore (Email: kousikg@iimidr.ac.in)

Dr. Shovan Chowdhury

Indian Institute of Management, Kozhikode (Email: shovanc@iimk.ac.in)

Dr. Parveen Ahmed Alam

Aliah University (Email: ahmedparveen@aliah.ac.in)

Dr. Malini Majumdar

Army Institute of Management, Kolkata (Email: malini.majumdar@aim.ac.in)

Editorial Correspondence

All articles, research papers, short communications and book reviews should be addressed to:

Dr. Protik Basu

Chief Editor, Kindler

Army Institute of Management

Plot No III /B-11, Action Area III, New Town, Rajarhat, Kolkata – 700160. Tel. 033-66032019-25

Email: kindler@aim.ac.in

EDITORIAL ADVISORY BOARD

Maj Gen VS Ranade (Retd)

Director, Army Institute of Management, Kolkata

Dr. N. R. Banerjea

Former Vice-Chancellor

Indian Institute of Engineering Science & Technology, Shibpur

Dr. Arnab K. Laha

Indian Institute of Management, Ahmedabad

Dr. Pranab K. Dan

Rajendra Mishra School of Engineering Entrepreneurship

Indian Institute of Technology, Kharagpur

Dr. Rudra Pradhan

Vinod Gupta School of Management

Indian Institute of Technology, Kharagpur

Dr. Pinaki Mitra

Indian Institute of Technology, Guwahati

Dr. Dipti Prasad Mukherjee

Indian Statistical Institute, Kolkata

Dr. Prabir K Das

Indian Institute of Foreign Trade, Kolkata

Dr. Soma Sur

St. Xavier's University, Kolkata

Dr. Tapash Ranjan Saha

Institute of Management Study, Kolkata

Dr. J. N. Mukhopadhyay

Army Institute of Management, Kolkata

REVIEW MEMBERS

Dr. Sharad Nath Bhattacharya
Indian Institute of Management, Shillong

Dr. Indranil Ghosh
Institute of Management Technology,
Hyderabad

Dr. Shamima Haque
Techno India School of Management
Studies, Kolkata

Dr. (Capt) Swapna Datta Khan
Globsyn Business School, Kolkata

Dr. Bobby Basu
Heritage Business School, Kolkata

Dr. Amit Kundu
Techno India Group

Dr. Debaleena Chatterjee
Army Institute of Management, Kolkata

Prof. Swagata Sengupta
Heritage Business School, Kolkata

Prof Somarata Guha Chakraborty
United World School of Business,
Kolkata

Prof. Abhishek Bhattacharjee
Army Institute of Management, Kolkata

Prof Anindya Saha
Army Institute of Management, Kolkata

Prof. Tamojit Ghosh Roy
Army Institute of Management, Kolkata

Dr. Kaustav Bandyopadhyay
Indian Institute of Management, Lucknow

Dr. Rabin Mazumder
Institute of Engineering & Management,
Kolkata

Dr. Khushboo Sahu
Institute of Industrial and Computer
Management and Research, Pune

Dr. Rajib Bhattacharya
Globsyn Business School, Kolkata

Dr. Chitra Bagchi
Heritage Business School, Kolkata

Dr. Ayan Chattopadhyay
Army Institute of Management, Kolkata

Dr. Prasenjit Kundu
Army Institute of Management, Kolkata

Prof. Sougata Majumder
The Neotia University

Prof Archita Chatterjee
Institute of Hotel and Restaurant
Management, Kolkata

Prof Asmita Basu
Army Institute of Management, Kolkata

Prof. Abhilash Acharya
Army Institute of Management, Kolkata

Prof. Rianka Saha
Army Institute of Management, Kolkata

KINDLER – The Journal of AIMK

ISSN: 0973-0486

VOLUME XXI □ NUMBERS 1&2 □ ISSN 0973-486 □ JANUARY-June 2021, JULY-DECEMBER 2021

	Page No.
CHIEF EDITOR’S NOTE	5
RESEARCH CONTRIBUTIONS	
Factors influencing Consumer Buying Behaviour towards Traditional and Online Shopping of Readymade Garments – <i>Bratin Maiti</i>	9
Restoration of Ecosystem – An Arena for Global Priority – <i>Asmita Basu Chatterjee & Noreena Singh</i>	18
Ethics in Education challenged during COVID-19 Pandemic – <i>Sayani Ghosh, Abhishek Pal & Prasenjit Kundu</i>	23
Risk Management Analysis in the light of Rumsfeld Matrix – A Study on some selected Companies in India – <i>Biswajit Bhadra</i>	29
Analysing Consumer Behaviour for Purchasing of Electric Two-wheelers in Kolkata in Post Lockdown Scenario – <i>Aniket Maiti & Goutam Dutta</i>	41
BOOK REVIEW	
Successful Aging: A Neuroscientist Explores the Power and Potential of Our Lives – <i>Abhilash Acharya</i>	55
Machine Learning – <i>Anindya Saha</i>	57

This page has been
intentionally left blank

Chief Editor's Note

The recently occurred pandemic called the COVID-19 caused by a tiny invisible microorganism called the SARS COVID-2, has made the world feel the serious repercussions of a natural being for which human activities have been put to a halt. The pandemic, perhaps the most seriously occurring one since the Spanish Flu that broke out in Europe during World War I, has made forced changes in various walks of life such as education, economy and governance. Such ramifications seem to continue even in the post-COVID era, for instance, online classes were a compelling factor during the pandemic; but even today, many institutions are still resorting to the same, when the impact of the virus has subsided.

The education system in India, which is anyway subjected to extremely slow and gradual changes since the nation's independence, has been witnessing a rapid metamorphosis recently. The demand for quality education and changes in several aspects of school and higher education had led to the formulation of the National Education Policy in 2020. The country was then oblivious to the subsequent changes that would be needed to be brought in the education system as a result of the pandemic and the horrors that the country had to endure in shutting down educational institutions and converting the entire education system to online mode. The pandemic has affected researchers, students and academics. More than 300 million students in India alone were affected due to institute closures at the onset of lockdown induced by the COVID-19 disease. Higher educational institutions had negligible in-person activities and hence research and training were significantly disrupted. The challenges were not unique only to students but also to faculty members and researchers who had to face their own difficulties in navigating new barriers introduced by the pandemic. Several researchers had to put data collection projects on hold and have had to delay writing research projects and articles due to the herculean increase in demand for online teaching. Most of the focus had been on adapting to the online mode and helping students cross the pandemic situation and continue their progress.

Research using web-based services or secondary data analysis could be continued. Researchers did not face problems related to such data collation but data collection requiring in-person presence had to come to an immediate halt. Travel and social restrictions had a serious toll on scientific research worldwide. The pandemic had serious negative impacts on researchers affecting their research and mental health. Less commuting and work-related travel had some positive impacts on the time for research but most researchers reported poor levels of mental health because of depression and mental distress.

There had been a few positive impacts of the pandemic, providing opportunities for growth for individuals and the scientific research committee, for example, several conferences pivoted to a virtual format and drastically reduced the cost of registration, travel and attendance, allowing for greater and more inclusive participation. Many journals removed financial barriers to access articles but they were mostly related to COVID-19. There is no doubt that the crisis has led to a massive influx of publications in the medical field but serious disruption in offline data collection had negatively impacted research in business and management areas. The pandemic has created unprecedented challenges for the research and innovation community with profound impacts on institutions and businesses and on the people working in them. However, the community has responded superbly and had been able to adapt during these trying times. Army Institute of Management, Kolkata is pleased to come out with this issue of Kindler in the post-pandemic period, once again giving an opportunity to researchers to showcase their research activities.



Dr. Protik Basu
Chief Editor, Kindler

This page has been
intentionally left blank

RESEARCH CONTRIBUTIONS

This page has been
intentionally left blank

Factors influencing Consumer Buying Behaviour towards Traditional and Online Shopping of Readymade Garments

Bratin Maiti

Assistant Professor, The Heritage Academy

Email: bratin.maiti@tha.edu.in

ABSTRACT

Consumers play a vital role in the economic system of the nation enjoying both the traditional and online modes of shopping. Consumer behaviour is the study of how individuals select and use products/services and takes into account psychology, motivation and behaviour traits. The sole purpose of the study is to identify the different factors and their influence on the purchase pattern of a consumer with respect to readymade garments both in the traditional and online modes of shopping. The study is qualitative in nature and based on secondary sources. The study reveals that the principal factors namely economic, psychological, personal, social and cultural factors affect the buying pattern of readymade garments. Both offline and online modes of garment shopping have merits and demerits. The study is theoretical in nature and uses only one theory of motivation. The results would help traditional marketers of readymade garments and e-commerce shopping sites to consider all the factors when designing marketing strategies in order to give satisfaction to their customers and achieve marketing goals. It is also concluded that in the case of garments the buying pattern changes with the life cycle of an individual. Family, peer groups and references also affect purchasing behaviour.

Keywords: consumer behaviour, principal factors, traditional marketing, online shopping

A. Introduction

India is an emerging and developing country and its textile sector is probably one of the most established ones adding to the economy of the nation. Readymade garments (RMG) are the largest segment of the Indian Textile Industry accounting for approximately 50% of the total industry. This growth is due to globalization and increased usage of the internet; the buying behaviour of Indian consumers has changed drastically thereby increasing the demand for readymade garments. However, with the sudden outbreak of the coronavirus worldwide, all industries have taken a back foot both in production and marketing. The prevailing coronavirus has forced humans to find alternate means of living and survival. Likewise, consumer buying patterns have also changed. This holds true for readymade garments also. Physically going to the market/ shopping mall, examining the products, sometimes bargaining and finally buying is still

happening but at the same time, consumers nowadays have an inclination towards online shopping. Online shopping doesn't require travelling from home to shopping mall, offers more variety, remains functional 24x7, every day, offers huge discounts and extends the facility of customer reviews. Though online shopping is new to Indian consumers, it is growing steadily due to increasing penetration of the internet, an increase in smartphone users, many companies offering eCommerce facilities and above all, covid restrictions still prevailing. Since consumers drive the market, knowledge about consumer behaviour is necessary for success in any business. Understanding consumer perception of a specific product/brand; marketers aim to create the maximum impact. The purchasing behaviour in the case of RMG depends on a number of factors, usually classified into economic and non-economic factors. The study aims to analyse factors affecting consumer behaviour with regard to readymade garments in both offline and online modes of shopping.

B. Objective of the Study

The current study aims to identify factors affecting the buying behaviour of consumers in online and offline modes and tries to explore to what extent the factors influence the minds of the consumer as regards buying readymade garments.

C. Literature Review

According to Yoo & Donthu (2001), “the quality of internet shopping depends on the search patterns, site patronage and affects buying decisions of the consumers.” They developed a scale composed of four factors – ease of use, aesthetic design, processing speed and security, all affecting consumer behaviour in online shopping.

Chaubey (2009) states that purchasing pattern of readymade garments depends on anthropology, psychology, sociology and economics. Traditional marketers use any suitable approach for segmenting, targeting and positioning which forms the core of their marketing strategy. The study indicates the high association of purchase patterns of readymade garments with age and income of the respondents.

Again, Bhatt and Bhatt (2012) have identified factors like the attractiveness of the website, service quality of the website and website security as the dominant ones influencing consumer perceptions regarding their online purchasing experiences.

According to Gajjar (2013), the customer behaviour study is based on the buying behaviour of the customer where he/she plays three distinct roles of buyer, payer and user. Research on consumer behaviour shows that it is difficult to predict the exact buying behaviour. Marketers must understand how consumers behave, each having different purchasing and thinking characteristics which influence their buying decisions.

According to Ramya & Ali (2016), many factors influence the individual in what he is and the consumer in his decision-making process, shopping habits, purchasing behaviour, the brands he buys or the retailers he goes. A purchase decision is the result of each and every one of these factors. Exploring the sociological factors influencing readymade garment purchase, Eze & Bello (2016), revealed that age, quality, income and fund shapes the consumer buying behaviour.

Kalpana. R (2017) studied different factors like sales promotion proneness, prestige sensitivity, price and value consciousness and their effect on the buying behaviour of consumers. Based on the findings of confirmatory factor analysis, prestige sensitivity, price consciousness, value consciousness, local retailer shop loyalty, coupon and sales proneness highly influence consumer buying behaviour.

Pandey & Parmar (2019) have identified seven factors that affect consumer's online shopping buying behaviour. These factors are ease of use, perceived risk and usefulness, the effect of website design, economic factor and availability of products.

The above literature review shows that though there have been studies regarding readymade garments, only a few have taken into account all the factors that affect consumer buying behaviour. Not many authors have studied the demographic factors of market segmentation. Apart from factors like quality, style and price, there are many other factors which affect consumer buying behaviour regarding readymade garments.

D. Methodology

The study is based on a theoretical approach involving secondary data. Secondary data sources include books and articles published in peer-reviewed journals.

E. Findings

In the case of readymade garments consumer buying motives are strongly influenced by the following factors:

a) Economic Factor

Every human being needs garments and therefore every consumer has to purchase them for usage. The economic condition of a consumer greatly influences the brand of garments purchased. The choice of a product, its specific brand and the ultimate purchase decision of a consumer is greatly influenced by the economic condition of the consumer. Economic factor includes personal and family income, savings, retail credit, etc all collectively affect the consumer buying decision. Consumers belonging to the economically higher strata of the society generally prefer expensive readymade garments, international brands like Gucci, Armani, Chanel, Tommy Hilfiger, Prada, etc. to name a few. Consumers with low-income levels usually prefer Indian brands like Peter England, Allen Solly, Van Heusen, etc. The disposable income of

a consumer becomes the decisive factor in whether a consumer will purchase an international or an Indian product. However, the mode of shopping also has a role to play. Consumers can now avail discounts if they shop online. Online shopping entails payment either by debit/credit card or fund transfers. Nowadays consumers can buy expensive branded garments at a discounted price during online purchases. These purchases can be made from numerous online e-commerce sites available to the Indian consumer.

b) Psychological Factor

The Psychological Factor plays an important role in decision-making regarding the purchasing behaviour of an individual (Ramya & Ali 2016). Motivation, perception, learning, memory and beliefs and attitudes are the principal elements (Kotler & Keller, 2016). This holds true for readymade garments also.

(i) Motivation

Abraham Maslow's Hierarchy of Needs model of human motivation (Robbins and Judge, 2012), provides an explanation as to why people are driven by a particular need at a particular time. In the model, different needs of human beings are arranged in a hierarchy according to their significance and five different types of needs are identified: 1) Physiological needs: basic needs for human survival 2) Safety needs: security and protection to one and one's family; 3) Social needs: friendship, family, love & acceptance; 4) Esteem needs: to achieve something and belong to a status; 5) Self-actualization needs: realization of a person's potential, self-fulfillment and seeking personal growth. Each person initially tries to satisfy the basic needs. Clothing is one of them. Whether a consumer goes for offline shopping or online, clothes are a must for any human being to socialize in the family and the society.

(ii) Perception

Perception is selecting and understanding sensory information to produce a meaningful explanation. It usually follows motivation. For readymade garments, an individual's thinking about a specific product/brand determines his/her perception of the product/brand. A healthy response from a motivated person favouring a specific product/brand, builds a positive perception. On the other hand, an adverse response to any other brand develops a negative perception of it. The perceptual process follows a series of sequential steps: the presence of objects, observation, selection, organization, interpretation, and response. For readymade garments, individuals observe and collect information about a product/brand which is of use to them; they tend to perceive the information in a way that suits their line of thought and belief. Online shopping mode offers more flexibility, wider product line, more outreach, smoother transaction and customization of products Chong, H. T. (2014). Consumers show their responses, which might be either positive or negative.

(iii) Learning and Memory

Learning is a relatively permanent change in behaviour brought about by practice or experience (Lachman, S. J. (1997). Human beings, animals, and some machines possess the ability to learn. Some learning is immediate but much knowledge and skill accumulate from repeated experiences. Usually, it is seen that from childhood a boy/girl learns to be in proper attire, choosing a different dress for different occasions, which depends on the right choice of garments. Learning shapes the behaviour of an individual. It is produced by the interplay of stimuli, cues, drives, responses and reinforcements. (Kotler & Keller, 2016). Memory plays an important role in the decision-making of consumers and also helps to determine whether the information is important or disposable. In the case of online shopping, customers have a mindset about the known e-commerce sites, being accustomed to choosing products from a wide range at a discounted price. Subconscious decisions of the consumers, influenced by one's memory, become vital in case of purchase of readymade garments.

(iv) Beliefs and attitudes

Beliefs and attitudes play a vital role for consumers; each individual being different chooses a different product/brand. Readymade garment marketers are interested in these since beliefs and attitudes shape the image of a specific product which affect consumer purchasing pattern both in traditional as well as online shopping. Marketers usually try to manifold these beliefs and attitudes by bringing new sales promotion schemes and advertisements in order to sell a specific product/brand.

c) Personal Factor

Personal factor also affects the purchase behaviour of consumers in the case of readymade garments. The important elements of the personal factor are occupation, age, lifestyle and personality. All these factors affect the buying behaviour in the case of readymade garments in both offline and online shopping. Marketers of readymade garments should take into account these factors in order to get an idea about consumer behaviour.

(i) Occupation

Occupation is an individual's principal work or business, in order to earn a living. A part of personal factor it affects the consumer buying pattern of an individual. The clothing pattern of an individual is affected by his/her occupation. Usually, professors, doctors or office goers are clothed in formals while field engineers prefer jeans. So occupation of an individual directly affects the type of clothing one wears.

(ii) Age

Different stages of the life cycle and age of an individual have a profound impact on buying behaviour. As individuals grow old, their tastes and preferences change and hence their buying behaviour changes, which can be seen in the case of readymade garments also. Every individual passes through some definite stages in the life cycle, viz. childhood, bachelorhood, married life,

parenthood, etc. From infant to childhood, an individual clothes himself/herself as told. As he/she grows up, bachelors are mostly fascinated by trendy looking and smart readymade garments. Once an individual gets married, the choice of garments changes. The job of the marketer is to create different marketing strategies so as to capture the attention of individuals as they pass through the different stages of the life cycle. Companies create its products on the basis of different stages of the life cycle and/or different ages of the consumer (Kotler et al, 2017).

(iii) Lifestyle

Lifestyle is the way one lives which includes his/her style, attitudes and possessions. Stated differently, it is the way of living, how an individual lives in the society. There are various indicators to gauge the lifestyle of an individual, clothing is one of them. It forms an integral part of the lifestyle and therefore buying behaviour of garments is also influenced by the lifestyle of a consumer. Joseph T. Plummer (1974), a prominent lifestyle researcher summarizes the concept as; lifestyle is a different pattern combination of demographics mixed with the richness and dimensionality of psychological characteristics. Consumers choose dresses which enhance their body shape and describe their lifestyle. Lifestyle is determined by customer opinions, activities and interests and therefore shapes his/her buying behaviour.

(iv) Personality

Personality is a characteristic way of thinking, feeling, and behaving. It embraces moods, attitudes, and opinions and is most clearly expressed in interactions with other people. Two separate individuals can be distinguished on the basis of their personality traits. The personality of an individual is revealed by the brands of apparel/accessories he/she prefers. Clothing affects the behaviour, mood, attitude and personality of an individual. Thus, clothing is a formidable part of how a person is perceived in society and forms an extension of one's personality. Usually, marketers of readymade garments tend to focus on the personality of an individual and devise unique marketing strategies to influence the same.

d) Cultural and Social Factor

Culture is the customary beliefs, social forms, and material traits of a racial, religious, or social group; usually passed along by communication and imitation from one generation to the next. Culture is a word for the 'way of life' of groups of people. Clothing is an important component of one's daily life. Clothes are a signifier of one's identity and culture. Since time immemorial, communities have used clothing as a means to communicate status and show unity. The influence of culture on the buying pattern of individuals/groups varies worldwide. Marketers of readymade garments try to use these groups to segment the market. Both online and offline marketers usually design garments specific to the need of a particular group/sub-group. Social factor refers to the society, which includes the family and the social group one is associated with. The important social factors affecting the consumer buying behaviour are the reference groups. Individuals use these groups to learn attitudes, beliefs and behaviour and adapt them. The status of an individual greatly influences the buying behaviour. The buying behaviour of an individual,

in the case of garments, is influenced by family members and usually by a person's better half. This is reflected by the type of garments an individual buys, jeans and t-shirts during bachelorhood and formal/ethnic dresses after marriage. In the Indian context, usually, the wife makes the decision regarding shopping for apparel. With this knowledge, marketers usually target the wife for selling products. Presently, people are much more open to online shopping. E-commerce sites such as Amazon, Flipkart, Azio, Myntra, Meesho etc. present a huge product line for their consumers, offering attractive discounts and other sales promotion schemes during the festivities.

F. Managerial Implications

To survive in today's competitive market, a marketer must have the knowledge of his customers. A marketer of readymade garments should have knowledge of different buying habits and varied preferences. A logical analysis backed by knowledge of consumer preferences is required on the part of the marketer to capture the market share. The study of the above-mentioned factors will definitely help the marketer to predict an individual's preference for readymade garments. In the case of online shopping, marketers need to take care of the website design, ease of viewing, easily placing the order and smooth transaction. Products should be available in various sizes in order to cater to different individuals.

G. Limitations of the Study

The current study takes into account different factors affecting consumer behaviour with respect to readymade garments in both traditional and online shopping. The study has some limitations; it is theoretical in nature. Only one theory of motivation is considered. No primary data have been used during the course of the study.

H. Scope of Future Work

Further studies can be done by taking a practical example from the market in the readymade garment sector. Further modification of the study can be done to suit any other specific industry. Further research can be done by taking into account other theories of motivation such as McClelland's Need Theory, etc.

I. Conclusion

The readymade garment sector is driven by decisions taken by the marketers based on consumer buying patterns. In traditional shopping, consumers can physically examine the goods, take trials and finally buy the product. Female consumers also enjoy the joy of bargaining. Consumers can take possession of the goods immediately after the purchase. In contrast, online shopping offers a

wide product line, huge discounts, product review facilities; everything that an individual can enjoy from the comfort of his/her residence. However, physical trial or chances of bargaining is not available online. Taking all these things into consideration, marketers need to understand the factors affecting the buying behaviour of various types of consumers. The above study shows that for the readymade garment sector there are four principal factors affecting the consumer behaviour such as Economic factor, Psychological factor, Personal factor and Social & Cultural factor. Clothing style and garment choice are dependent on motivation, perception, lifestyle, and personality of an individual. Family, peer groups and reference groups also affect the choice of readymade garments. An understanding of the consumer behaviour and the factors affecting it helps marketers of readymade garments, in both offline and online shopping devise strategies to satisfy the consumer and achieve customer satisfaction in the long run.

References

1. Bhatt, S., & Bhatt, A. (2012). Factors influencing online shopping: an empirical study in Ahmedabad. *The IUP Journal of Marketing Management*, 11(4), 51-65
2. Chaubey, D. S., & Chauby, D. S. (2009). A Study of Consumer's changing lifestyle Pattern in the Branded V/S Unbranded Male Readymade Garment Market. *IMS Manthan*, 4.
3. Chong, H. T. (2014). *Factors affecting online shopping of purchasing apparels among young adults* (Doctoral dissertation, UTAR).
4. Eze, S. C., & Bello, A. O. (2016). Factors influencing consumers buying behaviour within the clothing industry. *British Journal of Marketing Studies*, 4(7), 63-81.
5. Gajjar, N. B. (2013). Factors affecting consumer behavior. *International Journal of Research in Humanities and Social Sciences*, 1(2), 10-15.
6. Kotler, P., & Keller, K. L. (2016). *A framework for marketing management* (p. 352). Boston
7. Kalpana, R., & NS, S. (2016). Influence of Few Variables on Consumer Buying Behaviour. *International Journal of Management (IJM)*, 7(7), 387-394.
8. Lachman, S. J. (1997). Learning is a process: Toward an improved definition of learning. *The Journal of psychology*, 131(5), 477-480.
9. Pandey, A., & Parmar, J. (2019). Consumer's Online Shopping Behavior with Reference to The Flipkart. In *Proceedings of 10th International Conference on Digital Strategies for Organizational Success*.
10. Rayhan, S. J., Saha, S., & Hassan, M. M. (2014). Factors Affecting the Customer Buying Behavior in Relation to Readymade Garments in Bangladesh. *International Research Journal of Marketing*, 2(2), 36-42
11. Ramya, N., & Ali, S. M. (2016). Factors affecting consumer buying behavior. *International journal of applied research*, 2(10), 76-80
12. Robbins, S. P., & Judge, T. (2012). *Essentials of Organizational Behavior*

13. Yoo, B., & Donthu, N. (2001). Developing a scale to measure the perceived quality of an Internet shopping site (SITEQUAL). *Quarterly journal of electronic commerce*, 2(1), 31-45.

Restoration of Ecosystem – An Arena for Global Priority

Asmita Basu Chatterjee

Assistant Professor, Army Institute of Management

Email: asmitab@aim.ac.in

and

Noreena Singh

Student, Army Institute of Management

ABSTRACT

Ecosystems provide seemingly endless goods and services we depend upon to survive. They are responsible for the production of oxygen, food, clean water, medicines, etc. and store carbon from the atmosphere, regulate the climate, protect our shorelines, purify air and water, and provide aesthetic beauty and an array of recreational activities. In a world overwhelmed by human disturbances, the degradation of nature is more and more widespread. The decline of biodiversity along with the loss of ecosystem functions and services is a threat to nature and human life. However, the growing awareness of the value of nature has given rise to an increasing interest to restore these precious natural ecosystems and the services they provide.

Keywords: Ecosystem, Biodiversity, Restoration

A. Introduction

The pertinent question which hovers in the mind of present generation of human being is - what would happen if one day, all our environmentally destructive activities stopped? Planet Earth would start healing itself, ecosystems are in a constant state of evolution. Restoration Ecology is different from Conservation Biology; it's inter-disciplinary, bio-geographic-specific discipline, field-oriented, long-term activity, focusing on the restoration of environment and ecology. It aims at facilitating and speeding-up the recovery of lands and waters after their degradation by humans.

B. Objective of the Study

To comprehend and research the concept of Restoration of Ecosystem.

C. Literature Review

Modern restoration ecology began in 1900s when conservationist, Aldo Leopold began promoting the movement. The capacity for habitat restoration is rapidly being exploited to justify the reintroduction of ecosystem engineers (Law et.al., 2017). Currently, world faces

converging environmental crises that are inextricably linked: the accelerating destruction of nature and climate change, driven largely by unsustainable production and consumption. A man-made sixth mass extinction is underway wherein half of the species on earth could go extinct by 2050. On an average, two vertebrate species disappear yearly. We live in Anthropocene, an epoch marked by drastic transformations caused by humans to natural environment. Since then, nature is increasingly subjected to many pressures and disturbances. Human activities, both purposeful and unintentional, affect the products and services provided by many of the ecosystems on which we rely, and by entering into this connection of changing ecosystems, we accept responsibility to our neighbours and future generations (Hilderbrand et.al,2005). Restoration procedure usually starts with a particular purpose in mind, which is to achieve certain objectives (Palmer,2006). There are numerous generic guidelines for restoration, but more specialised research are needed to match management to local circumstances (Wunderle, 1997).

Global viewpoint

Ecosystem degradation is a global phenomenon. It is expected that by 2050, 95% of Earth's land will be degraded. A whopping 24 billion tons of soil have already been eroded by unsustainable agricultural practices. UN Decade on Ecosystem Restoration, aims at addressing the enormous task of restoring degraded habitats across the planet. Against a backdrop of ecological crisis, this declaration is a chance to revive our life support system – the natural world. There is no doubt this is an ambitious plan. But it must be translated into action. Humanity is at a crossroads, 3.2 billion people suffer from negative impacts to the ecosystems. (i.e loss of about 10 percent of the global annual GDP).In order to improve this situation, the Bonn Challenge has been established to restore roughly 350 million hectares of degraded ecosystems this decade.

Indian context

Almost 2/3rd of our terrestrial forests are outside of protected areas. India has a target of restoring 26 million hectares of degraded lands by 2030. India has worked to protect and conserve its natural resources by implementing certain acts such as: The Wildlife Protection Act, Forest Conservation Act, Biological Diversity Act, Wildlife Crime Control Bureau, National Tiger Conservation Authority, etc. Community level movements in conservation efforts like The Chipko Movement ,The Silent Valley Movement ,The Jungle Bachao Andola Movement, etc and projects to return ecosystems to their natural state(Western Ghats), Sita Sagar Lake (Madhya Pradesh) , Mandali Lake, (Maharashtra), Inventorisation of Water bodies in Mumbai Metropolitan Region , Mira-Bhayandar, (Maharashtra), Karnataka's Bandipur forest reserve, have been carried out.

Nature-based solutions for sequestering carbon, can bring more than a third of the way to emission reductions needed by 2030. Cyclone Tauktae and Yaas documents a climate trend in the Tropics, amphibious defenders against extreme climate events. Coastal vegetation and natural features, can provide protection from storm surges, strong winds, and cyclones (1999 Odisha cyclone). Partnering with tribal as their place-based knowledge is crucial. According to The Nature Conservancy, combining the climate mitigation benefits of natural climate solutions with their co-benefits can break through financing barriers for example,Calcutta

where 8,000 hectares of wetlands help to treat the sewage from its 10 million citizens, reduced the need for constructing treatment plants, while producing substantial amounts of fish and vegetables and multiple other benefits. Mobilizing capital is crucial for India to attain its UNFCCC, Nationally Determined Contributions targets. Climate finance is a powerful tool to increase green investment.

D. Methodology

The article is written using secondary research material and from the data available on the internet.

E. Results

- Multiple datasets show that the climate system is warming, surface temperatures are rising by about 0.2 °C per decade, with 2020 reaching a temperature of 1.2 °C above pre-industrial, which has impacted ecosystem.

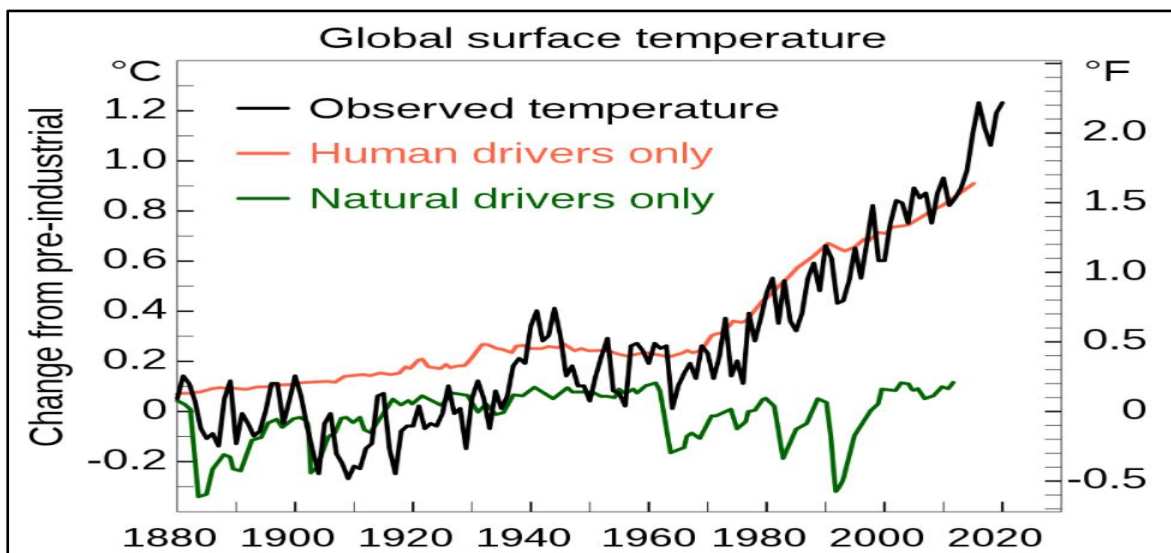


Fig 1: Global Surface Temperature

- The global carbon project shows addition to CO₂ since 1880 caused by different sources.

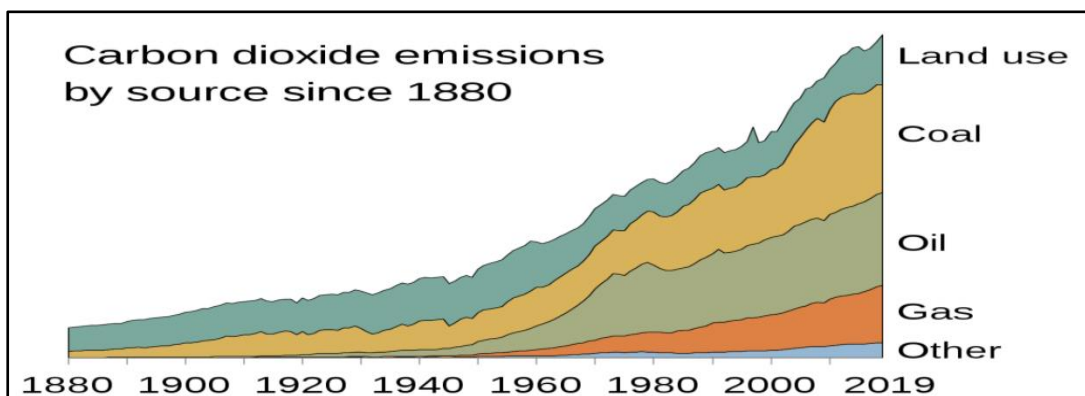


Fig 2: Carbon produced by different source

F. Discussions, Managerial Implications and Way Forward

1. If we deviate from the Paris Agreement target to limit global warming to 1.5°C, the world could quickly find itself at a tipping point.
2. As we work to build back better from the COVID-19 pandemic, we shouldn't forget that ecosystem degradation often results in greater contact between humans, livestock, and wildlife, which in turn increases the risks of zoonotic diseases.
3. Climate change is making extreme climate events more frequent in the state and the incidences of landslides, flash floods and droughts are on the rise.
4. Measures of planning, policy, engineering measures, including afforestation; terracing; dune stabilization; agroforestry, convincing decision makers, businessmen, policymakers, and others that nature-based solutions such as these can work on a large scale for promoting nature as a solution for a wide range of societal challenges at ecological level.
5. The world can feel encouraged even during the pandemic, net-zero commitments have roughly doubled. Corporate commitments alone under the Race to Zero campaign now cover over 12% of the global economy and USD\$ 9.81 trillion in revenue.

G. Conclusion

Rather, than reaching a tipping point, 2030 could be a world where de-carbonized industries are coupled with fertile forests and restored land. Together the world must race towards a resilient, healthy and zero carbon world.

References:

1. Hilderbrand, R. H., Watts, A. C., & Randle, A. M. (2005). The myths of restoration ecology. *Ecology and society*, 10(1).
2. Law, A., Gaywood, M. J., Jones, K. C., Ramsay, P., & Willby, N. J. (2017). Using ecosystem engineers as tools in habitat restoration and rewilding: beaver and wetlands. *Science of the Total Environment*, 605, 1021-1030.
3. Falk, D. A., Palmer, M. A., & Zedler, J. B. (2006). Integrating restoration ecology and ecological theory: a synthesis. *Foundations of restoration ecology*, 341-349.
4. Wunderle Jr, J. M. (1997). The role of animal seed dispersal in accelerating native forest regeneration on degraded tropical lands. *Forest ecology and management*, 99(1-2), 223-235.
5. Retrieved from <https://biomeecology.com/conservation/2020/05/nature-restoration-the-time-has-come/> accessed on 10 Jan 2022.
6. Retrieved from <https://www.iucn.org/news/europe/201607/restoration-natural-ecosystems-makes-society-thrive> accessed on 20 Jan 2022.
7. Retrieved from <https://scroll.in/article/973345/climate-change-and-reduced-freshwater-supply-have-put-sundarbans-on-the-endangered-ecosystem-list> accessed on 18 Jan 2022.

8. Retrieved from <https://www.britannica.com/science/ecological-restoration/Implementation> accessed on 05 Feb 2022.
9. Retrieved from <https://theprint.in/science/western-ghats-forest-cover-improved-active-ecological-restoration/300151/> accessed on 23 Feb 2022.
10. Climate Change. Retrieved from https://en.wikipedia.org/wiki/Climate_change accessed on 03 Mar 2022.

Ethics in Education challenged during COVID-19 Pandemic

Sayani Ghosh

Research Scholar, Maulana Abul Kalam Azad University of Technology, WB
Email: saynighosh26@gmail.com

Abhishek Pal

Research Scholar, Maulana Abul Kalam Azad University of Technology, WB
and

Prasenjit Kundu

Associate Professor, Army Institute of Management

ABSTRACT

The coronavirus of 2019 (COVID-19), heavily impacted the world owing to its high transmissibility spreading to 114 countries, infecting 118,000 people within 3 months (WHO, 2020b). According to the United Nations Education, Scientific and Cultural Organization (UNESCO), COVID-19 is a pandemic that has affected the world's education system (UNESCO, 2020b). However, the lack of infrastructural advancements in networking technology as well as access to computers, smartphones and high-speed internet has created a barrier in e-learning in developing countries. The restructure in the educational methods of academic institutions has been aimed at recovering lost learning and preparing students for their return to school when they reopen. Due to the on-campus educational methods being heavily impacted by the coronavirus, developing countries need to focus and develop their e-learning methods, use of broadcast media and online classinfrastructures.

Keywords: *Coronavirus, Developing Country, Distance Learning, Education System, Impact of COVID-19.*

A. Introduction

As of June, 2021, the coronavirus pandemic has affected 222 countries and territories across the world, with 181,258,315 overall cases, 165,831,896 recoveries and 3,926,945 deaths ("Worldometer", 2021). Education, a pillar of development for all nations, has suffered due to the shutdown of traditional campus learning due to the pandemic, which has forced restructuring of the curriculum (Owusu-Fordjour et al, 2015).

With 87% of the student population in the world, approximately 1.5 billion students from 195 countries, being affected by school-closures during the pandemic (UNESCO, 2020b), distance learning facilities have been launched by the UNESCO to reach out to the most at-risk students. Besides affecting the economy and our daily lives, COVID-19 has also mentally and physically affected our health (Niranjan, 2020), disrupting cultural celebrations and festivities, stressing the population through the closures of religious and entertainment venues, hotels and

restaurants (Evans, 2020). The economic shock due to the lockdowns, has caused the economies in developing countries to decline due to the closure of the transportation and educational systems (Haleem et al, 2020). Distance learning tools consist of educational platforms and applications, resources aimed at assisting students, parents and teachers, e-learning management systems, self-directed learning courses and massive open online courses (UNESCO, 2020a). Distance learning in developing countries however, has been hindered by the lack of high-speed internet facilities, data science systems, online study materials and digital literacy (Mustafa, 2020). Even though some developing countries utilize online platforms, radio and television to impart education, the access to these media is heavily lacking in the poorest of the families. These countries have therefore tried to supplement these resources with textbooks, study-guides, radios, televisions and other equipment to enhance at-home learning (Mustafa, 2020).

B. Objective of the Study

This study aims at analyzing COVID-19's impact on education, students, parents and teachers, the challenges to e-learning, and explore solutions to facilitate the access to education during the pandemic, as well as study the opportunities in the education sector during the post-pandemic era. Most countries implemented temporary closure of child-cares and nurseries, schools and institutions of higher education to tackle the spread of the pandemic (TUAC Secretariat Briefing, 2020).

C. Literature Review

Students

The pandemic has amplified social inequalities in education sector, since the wards of advantaged parents have easier access to digital infrastructure, greater digital literacy, as well as access to schools with better e-learning platforms and resources, compared to the wards from disadvantaged families attending institutions with less developed Information and Communication Technology (ICT) systems and resources (Di Pietro et al, 2020). Since COVID, advantaged students adopting e-learning has increased, while disadvantaged students and the ones living in rural areas have struggled due to the ailing digital infrastructure. Combined with the differences in resource and development in public and private schooling, students are facing inequality in accessing digital technology and resources and struggling with increased anxiety, depression and stress. The disruption in on-campus education and poor implementation of distance learning resulting in unequal access to education has reduced the time spent by students in learning, thereby demotivating them and increasing stress (Di Pietro et al, 2020).

Teachers and Parents

Despite distance learning offering a solution to the education sector's problems, disparity in the access to the internet and computers is a major issue (Zhang, 2020). The teachers and staff need to be familiarized with e-learning technology and face hindrances in the form of lack of

technology and infrastructure as well as non-payment or reduced payment of pre-determined salaries by the educational institutions.

D. Methodology

Various data highlighting the socioeconomic, physical and psychological impact of COVID-19 were collected from the relevant sources including news articles and official data published by the public as well as private organizations, for the purpose of conducting basic research.

The gathered information was analyzed in accordance to pre-existing research in different fields such as economy, consumer psychology and behavior, etc.

Some of the probable roadblocks introduced by COVID-19 were identified and some possible recommendations have been provided, while highlighting the urgent need of qualitative and quantitative research for a deeper analysis in the areas where limitations experienced during this research and finding solutions for a better quality of life under the New Normal.

E. Scope and Limitations

The focus of this research is on recognizing some of the primary factors influencing life in the New Normal and the adverse effects of COVID-19 on some sections and aspects of society. Recent research and data will be used to gain an overview of certain problems affecting people's lives such as health and education. The study will try to identify some of the issues in an organized manner.

The findings and recommendations of this research does not extend to include an in-depth analysis of the problems introduced by COVID-19 or an advanced understanding of the sources of, or solutions to, the probable problems identified. Owing to the limited scope of this research, the findings and recommendations should not be regarded as exhaustive guidelines but a simple overview of some of the problems raised by COVID-19.

F. Findings and Implications

Unequal Access to Education Resources and Technology

Most countries have opted to curb the virus' spread by encouraging parents and schools to facilitate education through distance learning (UNESCO, 2020a). Even though the government directive to utilize radio and televisions for learning at home works for academics in urban areas, those in rural areas have suffered due to their inaccessibility. For example, at the end of 2020, India had around 210 million households with access to television out of approximately 300 million (Business Standard, 2021), while 111 million households are estimated to have radio ownership (The Pangean, 2020). Coupled with the high number of members per household and the limited access to electrical power, students in rural areas have struggled to access these means of distance learning. Urban schools have been uploading study materials and books, as well as broadcasting live classes through various applications, emails, social media and Google Classroom. In contrast, public school faculty and students have limited to

noaccess to the internet or the other aforementioned facilities (Tzifopoulos, 2020). Students from less-privileged households may have greater need for guidance regarding learning processes and accessing the internet, applications and devices (Tzifopoulos, 2020). COVID-related closure of educational institutions could amplify the already existent inequalities in the quality of education available to the students in different socioeconomic classes, as well as urban and rural areas (Owusu-Fordjour et al, 2015).

Mental and Physical Health

COVID related school closure forces students in rural areas to supplement their families' income through full-time herding and farming, aggravating the already high dropout rates of students from disadvantaged families, estimated at 50% pre-COVID. The ones affected the worst are often the girls, as indicated by a survey of 733 government school students in Bihar, where 23% of the girls had household access to smartphones, compared to 36% among the boys, with these smartphones being mostly owned by male adults, often being less accessible to the girls than the boys (Karyala P. & Kamat S., 2020). As of 2019, 63% of Indian women had access to phones compared to the 79% of their male counterparts, while only 21% women had internet access compared to the 42% of males (*GSM Association*, 2020). Home confinement due to the lockdown also put the children, especially the girls, under increased threat of mental, physical and sexual abuse. In 2020, 53% of Indian children reported to have experienced different forms of abuse, with 93% of abusers being relatives or known individuals (Poddar S. & Mukherjee U., 2020). 11 million additional girls from low-income backgrounds are also under the risk of child marriage due to COVID (UNICEF, 2021), with Maharashtra recording a 78.3% surge in child marriages (Sonwalkar, 2020). The uncertainty looming large during the lockdown, has caused stress, fear and anxiety (Sahu, 2020), which also affects the students. Owing to differences in their ability to acquaint themselves with the changes in educational media, different students interact differently with the e-learning tools (Haleem et al, 2020).

G. Conclusion

COVID-19 is a pandemic that has forced educational institutions in both developed and developing countries to face closure and adopt distance learning as a means of continuing the impartment of education. However, owing to the differences in access to resources among the different socioeconomic classes as well as residents in rural and urban areas, students have been facing an inequality in their access to education due to varying levels of digital literacy and access to ICT infrastructures, radio, television and computers. Poor families with lower digital literacy are at a disadvantage because of their inability to access the resources facilitating distance education, as well as their children being forced into labour to support the family income affected due to COVID through farming and herding. Girl students from such disadvantaged families are at an increased risk of sexual abuse and exploitation and early marriages. Such students have also been affected in terms of sustenance they received in the form of free meals.

H. Recommendations

Governments need to implement scaled educational infrastructure, network connectivity, zero-rating of educational websites, build digital learning and teaching libraries, integrate free e-learning resources, establish uniformity in the usage of mobiles and applications, televisions and radios and develop ICT facilities. Educational institutions need to work with educators and policy-makers to modify the education sector for greater equality and quality. They also need to strategize methods to bridge the gap created in the form of portions not taught, as well as ensure the return of the children on the reopening of the schools. Since the face-to-face on-campus mode of teaching has been affected in developing countries, they need to supplement their education with scaled online lessons and educational infrastructures.

References

1. Owusu-Fordjour, C., Koomson, C. K., & Hanson, D. (2015). The Impact of COVID-19 on Learning: The Perspective of the Ghanaian Student. *European Journal of Education Studies*, 7, 88-101. Retrieved from <https://oapub.org/edu/index.php/ejes/article/view/3000>
2. Evans, O. (2020). Socio-Economic Impacts of Novel Coronavirus: The Policy Solutions. *BizEcons Quarterly*, 7, 3-12. Retrieved from <https://econpapers.repec.org/article/risbuecqu/0013.htm>
3. Haleem, A., Javaid, M., & Vaishya, R. (2020). Effects of COVID-19 Pandemic in Daily Life. *Current Medicine Research and Practice*, 10, 78-79. Retrieved from <https://doi.org/10.1016/j.cmrp.2020.03.011>
4. Mustafa, N. (2020). Impact of the 2019-20 Coronavirus Pandemic on Education. *International Journal of Health Preferences Research*, 1-12. Retrieved from https://www.researchgate.net/publication/340849956_Impact_of_the_2019-20_coronavirus_pandemic_on_education
5. Di Pietro, G. B., Biagi, F., Dinis Mota Da Costa, P., Karpinski, Z., & Mazza, J. (2020). *The Likely Impact of COVID-19 on Education Reflections Based on the Existing Literature and Recent International Datasets*. Luxembourg: Publications Office of the European Union. Retrieved from <https://publications.jrc.ec.europa.eu/repository/handle/JRC121071>
6. Zhang, X. (2020). Thoughts on Large-Scale Long-Distance Web-Based Teaching in Colleges and Universities Under Novel Coronavirus Pneumonia Epidemic: A Case of
7. Chengdu University. In *Proceedings of the 4th International Conference on Culture, Education and Economic Development of Modern Society (ICCESE 2020)* (pp. 1222-1225). Amsterdam: Atlantis Press. Retrieved from <https://doi.org/10.2991/assehr.k.200316.266>
8. Tzifopoulos, M. (2020). In the Shadow of Coronavirus: Distance Education and Digital Literacy Skills in Greece. *International Journal of Social Science and Technology*, 5, 1-14. Retrieved from https://www.researchgate.net/publication/341358736_Tzifopoulos_M_2020_In_the_shadow_of_Coronavirus_Distance_education_and_digital_literacy_skills_in_Greece_International_Journal_of_Social_Science_and_Technology_52_1-14
9. Sahu, P. (2020). Closure of Universities Due to Coronavirus Disease 2019 (COVID-19): Impact on

Education and Mental Health of Students and Academic Staff. *12(4): e7541*. Retrieved from <http://doi.org/10.7759/cureus.7541>

10. Business Standard (2021, April 15). *TV-owning households in India grew 6.9% to 210 mln in two years: BARC*. Retrieved from https://www.business-standard.com/article/current-affairs/tv-owning-households-in-india-grew-6-9-to-210-mln-in-two-years-barc-121041500923_1.html
11. The Pangean (2020, October 31). *Do People Still Listen to Radio in 2020?: A Decentralised Understanding of Radio Broadcasting in India*. Retrieved from <https://thepangean.com/Do-People-Still-Listen-to-Radio-in-2020>
12. Karyala, P., & Kamat S. (2020, September 23). *Online education in India – the good, the bad and the ugly!* Retrieved from <https://indiabioscience.org/columns/education/online-education-in-india-the-good-the-bad-and-the-ugly>
13. GSMA (2020). *The Mobile Gender Gap Report 2020*. Retrieved from <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/05/GSMA-The-Mobile-Gender-Gap-Report-2020.pdf>
14. Poddar, S., & Mukherjee, U. (2020, August 26). Ascending Child Sexual Abuse Statistics in India During COVID-19 Lockdown: A Darker Reality and Alarming Mental Health Concerns. *Indian Journal of Psychological Medicine*. 42(5): 493–494. <https://doi.org/10.1177/0253717620951391>
15. Sonwalkar, P. (2020, June 09). Indian women 25% less likely to own mobile phones: Oxford. *Hindustan Times*. Retrieved from <https://www.hindustantimes.com/world-news/indian-women-25-less-likely-to-own-mobile-phones-oxford/story-CJsgJzhvjzcdkB9g7nrMO.html>

Risk Management Analysis in the light of Rumsfeld Matrix – A Study on some selected Companies in India

Biswajit Bhadra

Associate Professor & former Teacher-in-Charge, Netaji Nagar College, Kolkata

Email: biswajitbhadra09@gmail.com

ABSTRACT

Risk is an inherent part of every activity. Regardless of the activities the organisation actually goes through, managing risk, by eliminating or mitigating its effects, will yield a greater chance of a favourable outcome. Therefore, an important part of risk management is prioritizing how an organization will eliminate or mitigate risk. An organization's vulnerability as can be perceived, stems less from its decision about whether or not to address risk and more from its failure to identify the existence of risk and to understand the nature of the risk. The very nature of risk is the uncertainty of what one knows. Donald Rumsfeld has identified four types of risks that an organisation may face and these are known knowns, known unknowns, unknown knowns and unknown unknowns. It is of no use to mention that unknown risks have a dangerous yet unfathomable impact like a submerged iceberg. So every organisation, whatever may be its type and nature, should understand the nature of the risks it may face and how to face the challenges arising out of such risks. In this article an attempt has been made to highlight the risks mentioned here encountered by some selected companies operating in India and how to manage those risks.

Keywords: Risk, Rumsfeld Matrix, Strategic risk, Financial risk, Community risk

A. Introduction

Our society day by day has become so complex and its people so interdependent that the failure of one individual among thousands can disrupt the delicate balance of organisation to such an extent that millions may suffer. Here the issue is human behaviour. In order to live effectively in our modern world, we need to gain the very best understandings we can achieve concerning the nature of man and of his behaviour. So, from the view of point understanding the nature of human behaviour up to the view point of running any organisation successfully, there is always some element of risk which we cannot avoid.

In common parlance risk is perceived as uncertainty in the likelihood of a favourable outcome. Risk, on the other hand, is considered a calculation of the probability of an unfavourable outcome. Such unfavourable outcome may cause deleterious effect to the organisation. So, every organisation should think that if there is potential for damage arising out of a given risk, the organisation should try to avoid or mitigate the such risk as far as practicable with proper risk management process. Risk arises out of various reasons and if any one scans risk environment through which different organisations actually go through, he or she can

understand the magnitude of such risks. Leading tech companies viz., Meta (Facebook), Amazon, Alphabet (Google), Apple etc. over the past decades, have been facing various types of risks while doing their businesses. Facebook has faced various types of risks such as - regulatory uncertainty, no access in many countries, Zynga opts for rivals, Mobile dominance of Apple, Google etc. Amazon, on the other hand faces risks viz., increasing competition, profit potential uncertainty, revenue growth uncertainty, speculative valuation and share price volatility etc. In case of Google, there are also risks that are related to culture with respect to hiring right people, maintaining proper balance between how much to diversify in product lines and how much to control, competitions created by Facebook, Twitter, Microsoft, etc. So, whatever may be the nature and size of the company risk is unavoidable.

High levels of risk and complexity is not unknown to the champions of the corporate world. For future growth and development of any organisation risk is one of the important parameters what the organisation cannot avoid. There are various types of risks and these are related to finance, technology, human resource, environment, regulatory compliance etc. All these aspects have a direct bearing on profitability, efficiency and sustainability of any type of organizations whether it is related to business or not.

Risk – The Concept

In common phraseology, risk is defined as variability of returns that implies future uncertainty about deviation from expected earnings or expected outcome.

According to Funk and Wagnall's Encyclopedic Dictionary (1966), risk is defined as exposure to the chance of injury or loss; a chance of encountering harm or loss. Risk is an unavoidable part of doing business that has been mentioned earlier. At present in a world where massive amounts of data are being processed at increasingly rapid rates, recognizing and mitigating risks is a challenge for any company. So, addressing risk requires an organised, focused effort across the enterprise that must encompass consideration of all types of risk. In most of the organisations risk is considered from the financial point of view. But besides financial risk which can be seen and measured, there are other risk as well and that is behavioural risk. This risk arises due to poor workforce behaviours and the cultural factors within which they grow and develop themselves. Such risk affects organisational culture which in long run creates impact on the performance of the organisation. Whatever may be the type of organization, it is imperative to mention that theoretically risk is observed from the view point of financial risk as any risk ultimately affects the profitability and thereby financial condition will be affected. So, it may be opined that risk in relation to those consequences of the activities with respect to something that humans value. The focus of those consequences is normally observed from the viewpoint of their negativity and undesirable consequences.

If we interpret the inherent quality of risk, as Terje Aven (2016) observed, the following qualities of risks immerge -

- “(a) the possibility of an unfortunate occurrence,
- (b) the potential for realisation of unwanted, negative consequences of an event,
- (c) exposure to a proposition (e.g. the occurrence of a loss) of which one is uncertain,

- (d) the consequences of the activity and associated uncertainties,
- (e) uncertainty about and severity of the consequences of an activity with respect to something that humans value,
- (f) the occurrences of some specified consequences of the activity and associated uncertainties,
- (g) the deviation from a reference value and associated uncertainties.”

Risk is subdivided mainly into two types - company specific risk and market risk. Company specific risk is known as unsystematic risk and the other name of market risk is systematic risk. Unsystematic risk is company specific that is caused by such events as strikes, problems relating to marketing programmes, winning and losing of major contracts on which financial success depends to a large extent. On the other hand, systematic risk stems from those factors which affect various organisations simultaneously due to several issues viz., inflation, recessions, war, faster development of new products, quicker adoption of new technologies and so on.

Since the time is changing fast and consumer’s lives are changing due to deluge of emerging technologies, the landscape of risks is also changing fast.

B. Objective of the Study

It is quite obvious that every company experiences various types of risks in their life time. Some of the risks are financial in nature and some are non-financial. Again some risks are known to the company and the company knows how to combat such risks. But there are some risks which cannot be estimated in advance i.e., unknown risks. In this article an attempt has been made how risk can be measured and monitored using Rumsfeld Matrix with reference to some selected companies operating in India.

C. Literature Review

Studies on risk management is not new in the business world. Since risk arises out of various incidences, naturally different authors have interpreted the concept of risk as per their perceptions.

Tsai et al (2012), are of opinion that the risk is an indispensable property of any decision and it is measured by a mixture of numerous factors. However, it is generally limited to two factors: sternness and frequency of occurrence of a potentially damaging accidents that include some exposure factors.

Marhavilas et al [2012], the risk is considered as the chance that someone or something that is valued will be unfavorably affected by the hazards, and which have got the features of creating potential damage to the organisation.

According to Heldman (2005), most of us considered risk in terms of its negative consequences. Although risks are potential events that cause threats to projects, they are also

potential opportunities embed in risk. It is an obstacle preventing a project, either positively or negatively, to be delivered based on goals being set.

D. Methodology

To understand the type of risks and their analyses, the above study is based on the following methodologies and these are as under:

- i) Secondary source: The information that are required, have been collected from the annual reports of the selected companies. Besides these, information have also been collected from various text books, journal of national and international repute, internet and websites.
- ii) Sample design: For this study the sample size is three of varied in nature. One sample has been drawn from steel manufacturing giant, the other two are from media house and FMCG respectively and they are TATA Steel, Netflix and Big Bazaar.

Rationale behind choosing different types of organisation for risk analysis:

It is known that while selecting the nature of organisation for discussing any issue in connection with any company requires homogeneity. That means no significant conclusion can be derived if various types of companies are selected for the purpose of any analysis that is related to any company. In this article different types of companies viz., steel manufacturing, media house and FMCG have been chosen in order to examine to what extent Rumsfeld Matrix is at all relevant for all types of companies under reference.

E. Rumsfeld Matrix – The Concept

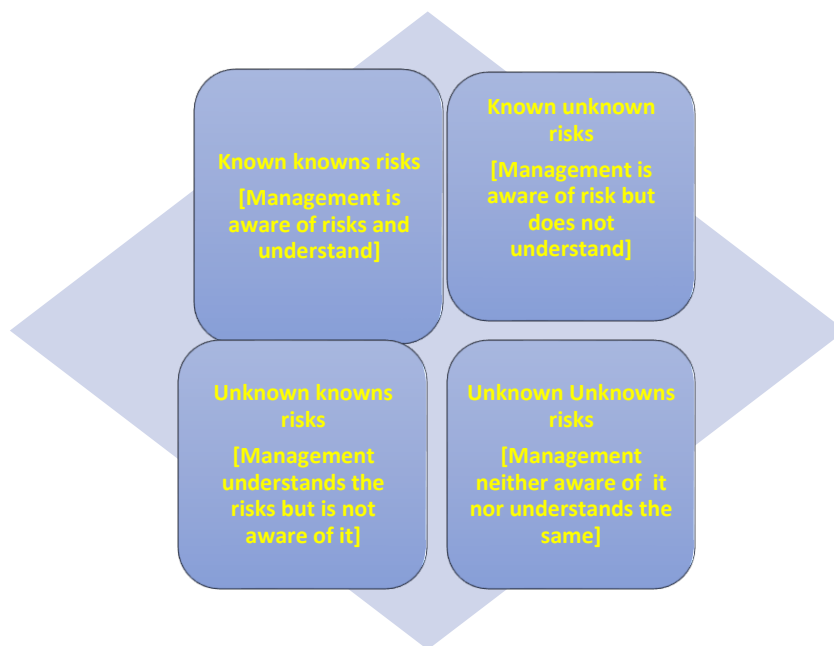
Donald Henry Rumsfeld (2011) was the former United States Secretary of Defence, when George W. Bush was the president of America. At the time of invasion of Iraq he had developed the Knowns and Unknowns framework. After that people started using quadrants of knowledge and those are known known, known unknown, unknown known, and unknown unknown. Rumsfeld's perception about risk was later turned into a poem written by an unknown poet. The lyrics are as under:

*“As we know,
There are known knowns.
There are things we know we know.
We also know
There are known unknowns.
That is to say
We know there are some things
We do not know.
But there are also unknown unknowns,
The ones we don't know
We do not know.
Finally, there are unknown knowns*

The knowns

We do not want to know.”

According to Rumsfeld, ‘we live in the evidence edge’ and we try to justify policy decisions on the basis of ‘known knowns’. Focus was made mainly on the category of knowledge of human being. So, when the question of decision making arises, it is the duty of the management to identify different environments and how the organisations should proceed accordingly. Rumsfeld had a belief that risks based on knowns and unknowns and these parameters result in four fields of risk which have been presented below with the help of a diagram:



a) Known knowns risks

There are some risks that are very common to company and very much known to the management and the management develops countermeasures to defend such risks. Its identification and assessment are based on fact and knowledge. In this connection an example can be cited. It is a very common phenomena that there is very much possibility of losing of customers base to the competitors in this competitive world and all the companies are aware of such risk. Since losing of customer base results into financial loss, it is the duty of any organisation to reasonably quantify such loss and save the company from impending disaster. This type of risk can be managed and controlled by the management. An example can be cited in this connection with respect to consumer electronics industry. On the demand side such industry faces consumers with unpredictable tastes, on the supply side supplier-related delays or disruptions can be seen and in the middle there is a challenges in production process. Since there is a revolution in technology and to cope up with that, this industry requires large investments but there is hardly any guarantee of proportional returns. This is known known risk in nature. So, when know knowns risk situation arises the management can plan for in

advance to combat the risks. One of the glaring example that can be cited with respect to known knowns risk in connection with TATA Steel is as under:

Strategic risk – Adverse macro-economic environment coupled with global steel capacity may create an impact on TATA’s operating markets and net realisations with respect to cash flows.

Operational risk – The company may incur huge costs if adequate health and safety standards are not maintained that will lead to significant amount of liabilities and the reputation of the company. Non-disposal of plant waste due to limited demand and storage space.

Legal and compliance risk – The outcome of commercial transactions will be affected if there is volatility of foreign exchange.

Safety risk - Non-compliance/delay in implementation of the provisions of safety laws and regulations, which may lead to stoppage of operations, damage to assets and loss of reputation.

Mitigation policy of Known knowns risks adopted by TATA Steel

In order to counteract such known knowns risks TATA Steel had taken various strategic decisions and one of the significant step to address such risk is stated below:

- With respect to strategic risk, the management of TATA had taken initiatives for developing value added products, introducing new brands, diversifying and expanding the customer base. Several cost reduction strategies were also undertaken to mitigate challenging economic conditions.
- When operational risk is to be handled TATA Steel had taken a strategic decision what is known as “Committed to Zero” drive across the Tata Steel Group, and to create awareness and reduce safety accidents.
- In dealing with legal and compliance risk relating to volatility of foreign exchange, foreign exchange hedging policies is to be followed to protect trading and manufacturing margins against rapid and significant foreign exchange movements.
- With respect to mitigating safety risk TATA Steel conducts regular audit and review of the safety measures that are undertaken by the company. Periodic safety trainings are also conducted for employees, contractors and other relevant stakeholders.

b) Known unknown risks

The second category risks is known unknown risks. These types of risks that the management know exists but cannot quantify their potential impact. This arises when the management knows that there is risk but the management does not have all the information about the risk. One example can be cited in this regard. A seasonal factory run by a company is aware of the fact that there is always a chance of rain particularly during rainy season and there is a risk that rain may affect its business operations. It is known risks. But if actual rain falls exceed estimated rains, there arises lack of knowledge and it is very difficult to make concrete plan in this regard. Planning for and perception of risks is difficult but not so difficult. The glaring examples of known unknown risks of TATA Steel are as under:

Community risks: Communities proximate to our operations live through significant socio-economic challenges while retaining a strong cultural heritage and an aspiration to overcome these challenges. The absence of an understanding of this duality in our communities and an inability to maintain a harmonious relationship with them would pose risk to our operations.

Information security risks: Breach of information security events lead to business interruption and damage to reputation. This is known but its impact cannot be properly assessed.

Mitigation policy of Known unknowns risks adopted by TATA Steel

- In order to reduce community risk TATA Steel has adopted the strategy of co-creating scalable solutions for the most endemic development challenges of the communities. TATA Steel has undertaken proven programmes on health, education, livelihood generation, public infrastructure and basic amenities and thereby more than a million lives at TATA's operating locations every year can be protected . Not only that this company has a deep engagement with the tribal community and foster a relationship with the communities by celebrating their history, culture and tribal identity.
- As a measure to lessen information security risks TATA Steel has made admirable efforts to increase awareness and invest in IT security and related compliances. This company has also invested in cyber insurance.

c) Unknown known risks

Negligence of the company is one of the major causes of such risk. If the company believes that there will be no adverse event the company would face, it is a negligence on the part of the company. An example can be cited in this connection with respect to Netflix, the US media house. It is of no use to mention that media industry, like many industries, is in the midst of ongoing shift from their traditional media content distribution and ad sales practices. This is being driven by the ever proliferating number of digital platforms available to consumers for watching TV content and some of such platforms are as under:

- yMVPD's: Sling, Hulu Live, YouTube, AT&T, Philo etc.
- SVOD's, Netflix, Amazon Prime, Apple TV+, Disney+, HBO Max etc.
- FASTs (Free Ad Supported Streaming Television): Pluto, Tubi, Xumo, IMDB etc.

The growing number of options is driving further fragmentation of consumers. Dealing with this shifts is forcing networks to continuously seek ways to drive efficiency in their traditional 'linear' business models exploring the best ways to monetise their content via the digital distribution platforms.

Since there are some threats that all the media houses are facing Netflix is not an exception to that. The unknown risks that Netflix is facing at present is stated below.

International risk – Netflix's international operations involve risks that could adversely affect its business. The nature of such risks, as stated in Netflix's Annual Report 2020, include:

- i) the need to adapt Netflix's content and user interfaces for specific cultural and language differences;
- ii) difficulties and costs associated with staffing and managing foreign operations;
- iii) political or social unrest and economic instability; compliance with laws such as the Foreign Corrupt Practices Act, UK Bribery Act and other anti-corruption laws, export controls and economic sanctions, and local laws prohibiting corrupt payments to government officials;
- iv) difficulties in understanding and complying with local laws, regulations and customs in foreign jurisdictions, including local ownership requirements for streaming content providers;
- v) regulatory requirements or government action against our service, whether in response to enforcement of actual or purported legal and regulatory requirements or otherwise, that results in disruption or non-availability of Netflix's service or particular content in the applicable jurisdiction;
- vi) adverse tax consequences such as those related to changes in tax laws or tax rates or their interpretations, and the related application of judgment in determining Netflix's global provision for income taxes, deferred tax assets or liabilities or other tax liabilities given the ultimate tax determination is uncertain;
- vii) fluctuations in currency exchange rates, which Netflix does not use foreign exchange contracts or derivatives to hedge against and which will impact revenues and expenses of our international operations and expose us to foreign currency exchange rate risk; etc.

Competitor's risk – Netflix occupies significant position in the entertainment zoner. Its main focus is on providing original, timely and collaborative content. Though it is known to Netflix that many streaming service companies viz., HBO Max (Warner Bros), Disney+, Amazon Prime Video, and Apple TV+ etc have entered into the market, and favoured by local people as well as government, Netflix ignores this risk. So there is every possibility of customers' risk when the above mentioned OTT houses enter into the entertainment zoner and thereby, there is risk for future growth and development of Netflix.

Negligence and copy right risks: From the Annual Report 2020 of Netflix it has been observed that as a producer and distributor of content, Netflix faces potential liability for negligence, copyright and trademark infringement, or other claims based on the nature and content of materials that Netflix acquires, produces, license and/or distributes. Netflix also may face potential liability for content used in promoting its service, including marketing materials. Besides these members of Netflix cancel their service for many reasons, including a perception that they do not use the service sufficiently, the need to cut household expenses, availability of content is unsatisfactory, competitive services provide a better value or experience and customer service issues are not satisfactorily resolved.

Mitigation policy of Known knowns risks adopted by Netflix –

In order to reduce risk as far as practicable with respect to international risks that Netflix faces, the management of Netflix should think to develop different pricing strategies and systems for

different markets according to the regional average income level. Since language barrier is one of the important constraints for Netflix, and the company has started facing competitions from similar types of organisations, Netflix should take such an initiative so that it could reach to a larger audience of varied languages. The company can build firm relationships with internet service providers of various countries and take their supports to convert this problem into a positive solution.

As already mentioned, that Netflix has been facing challenges from different OTT media and the names of those media platforms have been mentioned earlier. Since no company at present cannot avoid competitions, it has to develop its own lifeline. Netflix in order to counter this problem, is devoting more resources toward the development, production, marketing and distribution of original programming, including TV series, documentaries and feature films. It believes that original programming can help differentiate its service from other offerings, enhance its brand and otherwise attract and retain members. In order to offer more better services Netflix contracts with third parties related to the development, production, marketing and distribution of its original programming.

In order to reduce political risks Netflix can hire professional resources to carefully study the international markets and regulations before entering a specific market. By doing so, the company can ensure they comply with the local laws and regulations, especially pertaining to censorship, thus avoiding getting sanctioned by local governments.

When it is a question of mitigating financial risks, Netflix can do it by hedging currency risks. By doing this, the company can ensure they maintain a fixed currency exchange rate across different markets they are operating in. This will allow better cost forecasting and planning and would minimize risks against a strengthening US dollar value.

To mitigate customer's risk Netflix could have a fee for customers who prematurely end their membership specified to a certain time. This, however, may make customers become much more reluctant when subscribing in the first place. On the other hand, Netflix can choose to take no actions in changing their packages and accept the related risks, which is ultimately retaining the risk.

d) Unknown unknown risks

These types of risks arise when an organisation is not aware of the existence of such risk. These are very vulnerable type in nature. And as a consequence, it may be opined that the measuring and quantifying such risks cannot be apprehended. One important point in this connection is to be mentioned that risk and uncertainty are sometimes used synonymously. But there is a difference, because a risk represents an event or condition for which the probability of occurrence of an event is known, what is popularly known as the 'known unknowns' condition that is susceptible to analysis. On the other hand, uncertainty is an event for which the probability is not known, being the 'unknown unknowns', and not susceptible to analysis.

The unknown unknowns risks which cannot be understood earlier and on which the organisation has got no control, naturally its negative impact can be noticed on the financial as well as other organs of the organisation and in some cases may endanger the very existence of the organisation. So, it is the riskiest category of risk. The events that cause such risk is called

as *black swan events*. During the 2008 financial crisis arising out of the crash of the U.S. housing market is one of the most current and well-known black swan events.

As an example of this type of risk we can cite the example of Big Bazaar (a part of Future Group), a super market chain of 289 outlets spread pan India. During the first 21-day lockdown due to the Covid-19 pandemic, as per Government order, sales of non-essential items were prohibited. The Central Government has allowed the sale of indispensable items only during the 21-day lockdown. In order to obey the orders, the company had to close its several sections and floors, including fashion, apparel, home, and other non-essential sections. From the Annual Report 2020-21 of Future Retail Limited it transpires that the pandemic, coupled with the lockdown impacted the operations of shopping malls and retail stores across all states. The early stage of the lockdown made an impact on the retail trade severely because there were restrictions on movements of employees, customers and goods. From the said report this observation has been found - *'External environment factors like second wave of COVID-19, impeding threat of resurgence of the third wave, spread of the delta variant of Covid-19 and economic factors such as interest rates, inflation, liquidity, rationalisation of tax structure, job creation continue to be the biggest threats. Continued slowdown in the economic activity in the country, no respite from the job losses or challenged income-levels & hence consumption can severely impact Indian retail and therefore growth of the Company.* This type of risk is unknown unknowns risks in nature.

Mitigation policy of Known knowns risks adopted by Big Bazar-

To ensure that the customer can spend lesser time in the shopping mall, the authorities of Big Bazaar was working on it and allowed those customers who were in need of few products. Big Bazaar also has launched an in-store quick-service app in Mumbai. As a pilot on the notion that a customer service executive will help customers to place order for the products using the app, and the order will be delivered on time to their doorstep. This will mean lesser time at the store and a boost for social distancing. On that time this pilot project apparently seemed a success but the Big Bazaar is not thinking about launching the app pan India.

In an alternative way, customers can call a pan-India number and have the products delivered at their doorstep. The company saw a spike in calls for launching of this service.

In order to mitigate other various types of unknown unknowns risks Big Bazaar is vehemently trying to reach out to all the sections of the society. As a consequence Big Bazaar is creating a hypermarket and people from all strata of society such as the rich customers, the middle and the lower class customers come to enjoy the whole shopping experience. To reach to all sections of society Big Bazaar has done huge promotion budgets and it spends significant amount for advertisements to make people aware doing bulk shopping. The main object is not to target at promoting each store, rather only creates an image of Big Bazaar as low-cost shopping option. As a step towards creating awareness among the prospective customers, the store has started advertisement through TV, road shows and also started reality show-typed promotional campaign "The Big Bazaar Challenge." One of the significant strategy to get impressive result was introducing the catch line "Sabse Sasta Din" (Cheapest Day) and it brought forth positive result.

F. Conclusion

The study is over. From the study it appears that various types of companies, be it steel manufacturing company to media house to FMCGs, are facing various types of risks and all the risks they are facing can be placed under four matrix that Rumsfeld has mentioned. Though no company in their annual report has subdivided risks under those categories, however, if such risks can be segregated then due importance can be given to mitigate the type of risk. And this can only be possible when identification the nature of such risks is not the cup of tea of senior managers. As Drucker (2004) mentioned that the decision making process should involve all levels within the organisation. In his opinion the idea that only senior executives make decision or that merely senior executives decision count, runs contrary to the successful decision making process. So every company while categorising the type of risks and how to mitigate them, needs to create risk management team comprising of various stakeholders instead of engaging only managerial personalities and thereby, effective risk management process can be established to exploit the advantage of opportunities on the one hand and stakeholders expectation can be satisfied on the other.

References

1. Funk and Wagnall's Standard College Dictionary, The Reader's Digest Association, 1966, Library of Congress catalog no. 66-21606
2. Terje Aven (2016), Risk assessment and risk management: Review of recent advances on their foundation, *European Journal of Operational Research*.253(1), 1-13.
3. Tsai et al (2012), The dark side of logistics outsourcing Unraveling the potential risks leading to failed relationships, *Transportation Research, Part 4, E* (48), 178-189.
4. Marhavidas & Koulouriotis (2012)., Developing a new alternative risk assessment framework in the work sites by including a stochastic and a deterministic process: A case study for the Greek Public Electric Power Provider, *Safety Science* (50), 448– 462,
5. Heldman, K. (2005) *Project Manager's Spotlight on Risk Management*, Harbor Light Press, United States of America
6. Donald Rumsfeld, (2011) *Known and Unknown: A Personal Memoir*, Penguin Group USA, February
7. Irina V. Onyusheva & Ann S. Baker, (2021), Netflix: A Case Study on International Business Strategy Development, *The EURASEANs: journal on global socio-economic dynamics*
8. R. Kolisch. Managing project uncertainty—advances in project management, by D. Cleden. *International Journal of Production Research* 2010:48:5537-5537
9. McKinsey (2007), The 'Bird of Gold': The Rise of Indian Consumer Market, McKinsey Global Institute, USA
10. Berman, B. & Evans, J.R. (2001) *Retail Management*, Prentice Hall, Upper Saddle River, New Jersey

11. Drucker, P. F. (2004) What Makes an Effective Executive, *Harvard Business Review*, 82(6), 58-63.

Websites visited:

- 1) file:///D:/Downloads/Risk_assessment_and_risk_management_Review_of_rece.pdf
- 2) <https://uxdesign.cc>
- 3) <https://www.tatasteel.com/investors/annual-report-2015-16/html/risks-and-opportunities.html>
- 4) <https://www.tatasteel.com/investors/integrated-report-2018-19/risk-and-opportunities.html>
- 5) <https://www.tatasteel.com/investors/integrated-report-2018-19/risk-and-opportunities.html>
- 6) <https://journo.com.tr/netflix-strategic-risks>
- 7) https://s22.q4cdn.com/959853165/files/doc_financials/2020/ar/8f311d9b-787d-45db-a6ea-38335ede9d47.pdf
- 8) file:///D:/Downloads/288-Article%20Text-556-1-10-20211125.pdf
- 9) https://www.futureretail.in/pdf/Annual_Report_2020_21.pdf
- 10) <https://www.thehindubusinessline.com/companies/big-bazaar-expects-revenues-to-decline-as-sale-of-non-essential-items-is-put-on-hold/article31173029.ece>

Analysing Consumer Behaviour for Purchasing of Electric Two-wheelers in Kolkata in Post Lockdown Scenario

Aniket Maiti

Assistant Professor, Techno International New Town
Email: aniketimt@gmail.com

and

Goutam Dutta

PhD Scholar, Amity University

ABSTRACT

Due to the pandemic (Covid-19), the two-wheeler industry has achieved descend growth after the lockdown phase. After the lockdown phase, the demand for two-wheelers has been increased significantly. The Electric two-wheeler market segment has seen significant growth as it offers a pollution-free ride than its IC Engine operated counterparts. The perception and acceptance of electric two-wheelers are focusing on environment-friendly (Zero emission) technology, the technical specification of the scooter (speed, max distance travelled, charging time, battery capacity), maintenance cost (battery replacement), infrastructure (charging points) and social acceptance etc. The objective of the study is to find the perception of electric 2-wheelers among consumers and factors which affect the buying behaviour in Kolkata.

Keywords: Zero-emission, Adoption, Range, Reliability

A. Introduction

The two-wheeler market in India has developed a huge potential in the last decade. There is an increasing demand in urban and rural areas that have been seen predominantly. A relatively low competitive price and maintenance are some of the leading factors for driving the growth of the Indian market. Due to the pandemic (Covid-19), the two-wheeler industry has achieved descend growth after the lockdown phase. After the lockdown phase, the demand for two-wheelers has been increased significantly. The Electric two-wheeler market segment has seen significant growth as it offers a pollution-free ride than its IC Engine operated counterparts. The perception and acceptance of Electric two-wheelers are focusing on environment-friendly (Zero emission) Technology, the technical specification of the scooter (Speed, max distance travelled, charging time, battery capacity), Maintenance cost (battery replacement), infrastructure (charging points)

and social acceptance etc. The electric two-wheelers in India can be classified based on a low-speed two-wheeler (Max speed up to 25 Km/ hr) and high-speed. High-speed vehicle Max speeds greater than 25 Km/hr. Low-speed two-wheelers have lower power motor and battery capacity whereas high-speed vehicles have higher power motor and high capacity. The battery used in electric two-wheelers can also be characterised as an electric two-wheeler. The market may be divided into two types of batteries: lithium-ion and lead acid. Lead Acid accounted for the largest share till 2019 but nowadays most of the companies wanted to shift their high-speed vehicle to Lithium-Ion battery and this segment is also expected to increase at a rapid pace in the coming years (Chan, et al, 2001). The market has been divided into two types of vehicles: electric scooters and electric motorbikes. In comparison to motorcycles, the electric scooter category dominates the city's electric two-wheeler market. Hero Electric, Okinawa Autotech Pvt. Ltd, Ampere Vehicles, and Electrotherm India (Yo Bikes), among others, are major participants in the Electric Two-Wheeler Market. The study's goal is to determine if customers would accept any innovation based on their awareness, knowledge, and perceptions of the items (Yong et al,2014).

Due to public attention of the limited amount of fuel energy in the world and the emission of greenhouse gaseous by the internal combustion engine vehicles, people started to look for environmentally friendly vehicles that can be powered using alternate rechargeable energies. As electricity is one of the sustainable energies, the concept of vehicles using electricity to power up the car was introduced. Although electricity is the sustainable energy to power up the motors of the vehicles, the concept of an electric vehicle was not introduced to the world until the year of 1859. In the same year, the rechargeable battery named lead-acid battery was first conceived by Gaston Planté . Batteries play an important role to the evolution of the electric vehicles as it is a must for the electric vehicles to carry a portable item that stores electricity in order to have the electricity supply to its motor. Typically, an electric motor consists of a rotor, stator, windings, air gap and commutators/converters. Depending on different arrangement of these components different types of electric motors are constructed Those electric motors that do not require brushes for commutation or energy conversion are called brushless permanent magnet motors. Furthermore, motors can be categorized according to the shape of their back-EMF. Their shape can either be sinusoidal or trapezoidal. Based on these shapes, they can be Permanent Magnet AC Synchronous Motors (PMSM) or Brushless DC motors (BLDC) respectively. For an Electric motor to be successfully deployed as the drive for EVs, it should be highly efficient, it should have great power density and should be cost effective. However, the specification of the motors depends on its application purpose. This application could range from home, regular vehicular and heavy duty vehicles. Furthermore, the performance of motors depends mainly on vehicle duty cycle, thermal characteristics and the cooling mechanism (Wadekar, S).

Hero Electric

Electric Hero It is India's oldest and largest maker of electric two-wheelers. Both high speed and low-speed scooters are available under this brand. Popular products under this brand are Optima, Nyx and Flash

Okinawa Autotech Pvt. Ltd.

It is a growing electric 2 wheeler manufacturing company and established in 2015. Both High speed and low-speed scooters are available in companies' line up. Popular products under this brand are I-praise plus, praise go, ridge+.

Tork Motors

It is a high-performance electric vehicle and charging infrastructure manufacturing startup based out of Pune, India. Backed by a successful racing background and 8 years of groundbreaking research and development, TORC Motors will be launching India's First Electric Motorcycle - 'KRATOS'. Proudly manufactured and assembled in India.

Revolt Motors

In with the new, is something achieved by a few. Merging passion with purpose, Revolt on the road will give city dwellers a revolutionary way to commute and connect, charting the future for generations to come.

Its identity is founded at the convergence of two directions — the back arrow signifying learnings and values of the past and, the forward arrow, clean energy for the future. Together, like its namesake, Revolt takes the Revolution ahead, going against the grain to herald in a new dimension of the next-gen mobility.

Greaves Electric Mobility Private Limited

With the foresight and passion to revolutionise everyday mobility, Ampere set out to take action back in 2008. Company realised their dream of a sustainable future and set in motion a chain of events that would later bring Eco-Friendly Mobility within everyone's grasp.

Through research and innovation, company design Electric vehicles that power India through New Age Energy. Take charge of your journey with Ampere's sustainable mobility and ride towards a cleaner and greener planet.

Ather Energy

Ather Energy is an Indian electric vehicle company, headquartered in Bangalore. It was founded by Tarun Mehta and Swapnil Jain in 2013. It manufactures two electric scooters - the Ather 450X and the Ather 450 Plus. It has also established electric vehicle charging infrastructure across the country called Ather Grid.

B. Objective of the Study

This investigative study focused on the perception and adoption of Electric Vehicle in (two-wheeler segment) by comparing the use, features, acceptance, and reliability of traditional IC engine fitted two-wheelers with Electric scooters in Kolkata. It would help in the widening of technology and this is the most significant topic in recent years. This study enables us to understand

and explore the driving parameters that would lead to a change in the acceptance of electric scooters in changing beliefs.

C. Literature Review

Beatriz Junquera, Blanca Moreno, Roberto Alvarez(2016) in research work on an electric vehicle which focused on technical specification and consumer perception in terms of buying behaviour in Spain, but their study was mostly based on four-wheelers (Janquera,B. et al 2016). In the research work on electric vehicles focused on consumer perception and purchase intention of 4 wheelers in India (Sripad, S et al, 2019) in his research work focused on the challenges and future of the electric vehicle in India. But in India, the growth of electric two-wheelers is more prominent than electric four-wheelers.

Electric vehicles (EV), as a promising way to reduce the greenhouse effect, have been researched extensively. With improvements in the areas of power electronics, energy storage and support, the plug-in hybrid electric vehicle (PHEV) provides competitive driving range and fuel economy compared to the internal combustion engine vehicle (ICEV). Operating with optimised control strategies or utilising the concept of the energy management system (EMS), the efficiency of the PHEV could be significantly improved. In this review paper, the operating process of the various types of EVs will be explained. Battery technology and supercapacitor technology will also be discussed as a possibility to increase the energy capacity of PHEV(Ding, N., 2017).

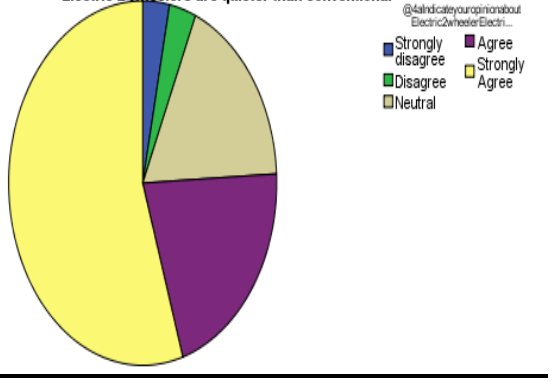
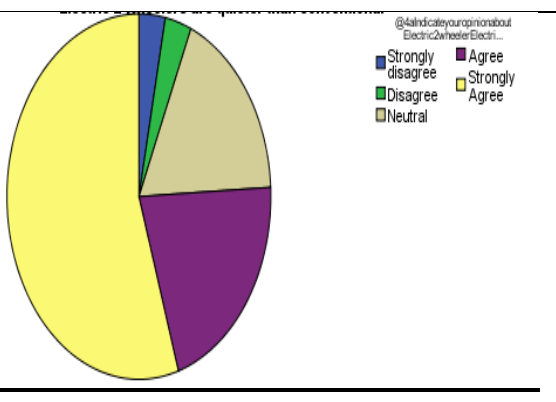
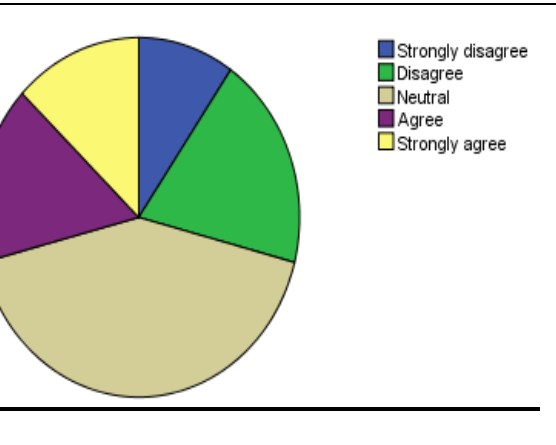
A vehicle is considered Green when it is more environmentally friendly than the traditional petroleum combustion engine, in which includes any nontraditional vehicle like, HEV, Plug In, EV, Fuel Cell, Bio fuel etc. that improves fuel economy. The development of electric vehicle has been over a hundred years but failure to gain the public acceptance in various stages due to various reasons which explained. While EV was never mass produced, Hybrid electric vehicle gains the momentum in recent years. Ford has launched its second generation of HEV and GM also announced the debut of the Volt in 2010. Comparing to the regular HEV, Plug in is the new trend in hybrid auto development due to extend travel range in electrical mode and a possibility of a zero emission as long as travel distance is less than charging threshold. However, more recently, an electrification trend in automotive industry has been evolved and will revolutionize the industry. With the correct policy and government help and advancement of electric vehicle technology, the prospect of Electric Vehicle will be bright and the focus point of future development (Situ, L., 2009, May).

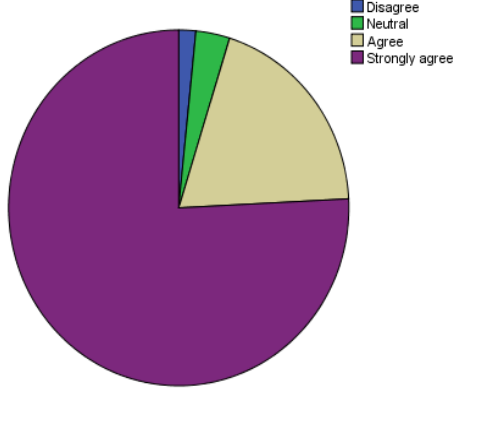
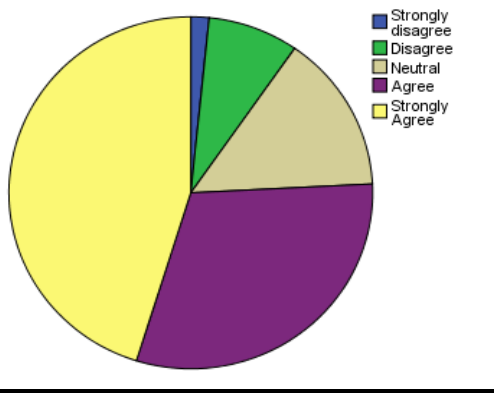
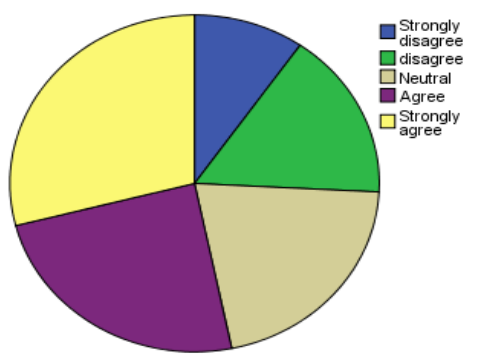
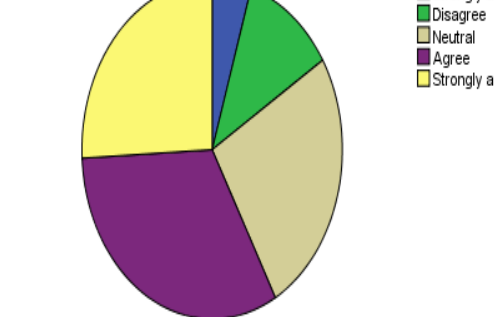
D. Methodology

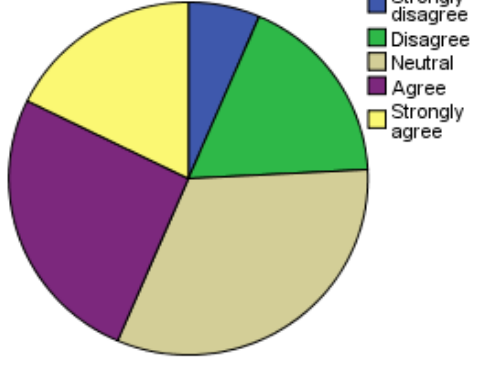
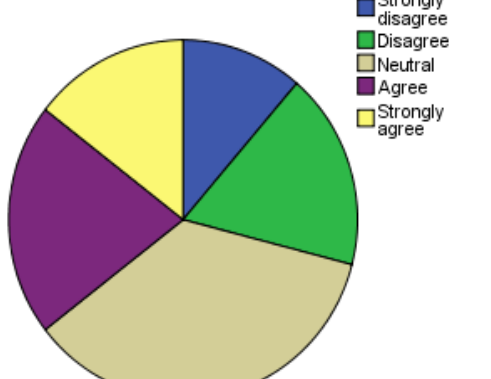
The study of descriptive research is carried out for finding the attitude among the consumers about the electric two-wheelers in Kolkata. This study is conducted considering various performance parameters of electric vehicles like acceleration, power, range, charging time etc. The acceptance decision based among the consumers based on various parameters also studied. The target respondent is mainly young and middle-aged people, who used two-wheelers as a commuter in

their day-to-day activities and intend to buy two-wheeler in near future. The survey was conducted through the internet with a questionnaire format to get the response (Chan, C. C.,1993).

E. Results and Discussion

 <p>@44Indicateyouropinionabout Electric2wheelerElectri...</p> <ul style="list-style-type: none"> Strongly disagree Disagree Neutral Agree Strongly Agree 	<p>a) About 75.8 % respondent believes that Electric two-wheelers are quieter than conventional two-wheelers and practically it is true that electric motor creates less sound & smooth than the internal combustion engine</p>
 <p>@44Indicateyouropinionabout Electric2wheelerElectri...</p> <ul style="list-style-type: none"> Strongly disagree Disagree Neutral Agree Strongly Agree 	<p>b) About 75.8 % respondent believes that Electric two-wheelers are quieter than conventional two-wheelers and practically it is true that electric motor creates less sound & smooth than the internal combustion engine</p>
 <ul style="list-style-type: none"> Strongly disagree Disagree Neutral Agree Strongly agree 	<p>c) In point of acceleration of the electric two-wheelers about 41% of the respondent doubts the acceleration of electric two-wheelers. The automakers have to concentrate to improve the acceleration of the two-wheelers by improving motor parameters which most of the consumers are not satisfied with or doubtful.</p>

	<p>d) Electric vehicles are pollution-free vehicle (green vehicle) about more than 95% of the respondent agree about that concept of the electric vehicle. It is an environmentally friendly motor.</p>
	<p>e) The running cost is a parameter that will be the prime concern in buying decision-making process. About 75% of the respondent agree that the running cost of an electric two-wheeler is much less than conventional two-wheelers. This should be the prime concern in today's life because fuel prices increase day by day.</p>
	<p>f) About 53% of the respondent believe that the purchase cost of the Electric two-wheelers is less than the Conventional two-wheelers.</p>
	<p>g) In point of technology advancement, about 58% of respondent agree that electric two-wheelers nowadays has adopted more improved technology and for which they can deliver the better range in a single charge.</p>

	<p>h) The consumer can often judge the vehicle in terms of Max. speed especially at a young age. But about 50% of the population not confident enough about the max speed of the vehicle.</p>
	<p>i) Product reliability is an important perception among consumers. In the case of the electric vehicle, most consumers' concern about reliability. More than 63 % of the population of this survey sceptical about the reliability of the electric two-wheelers, which has hampered the buying behaviour of electric two-wheelers.</p>

Correlation table

Buying an electric bike/scooter in future	Pearsons correlation	Significant level
Electric two-wheelers are quieter than a conventional two-wheeler	-0.169	0.190
Electric two-wheelers have excellent acceleration	-0.336	0.008 **
Electric two-wheelers are pollution free	0.088	0.494
Electric two-wheelers have low running cost	0.043	0.742
Electric two-wheelers have low purchase cost	-0.215	0.093
Electric two-wheelers have improved technology & better range	-0.298	0.019*
Electric two-wheelers have a good maximum speed	-0.205	0.111
Electric two- wheelers are reliable	-0.365	0.004**

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.375 ^a	.141	.096	1.349	.141	3.168	3	58	.031
a. Predictors: (Constant), reliability, improved technology, acceleration									

From the above correction table, the results were statistically significant, strong negative correction between buying behaviour and acceleration of the electric scooter ($r = -0.336, n=62, p<0.01$) and strong negative correction between buying behaviour and reliability of the electric scooter ($r = -0.356, n = 62, p<0.01$) and moderate negative correction between buying behaviour and improved technology ($r = -0.298, n=62, p<0.05$). from this it is correlation table buying behaviour is negatively related to reliability to the vehicle and acceleration and technology.

From the above model of regression analysis, R^2 for the overall model was 14.1%, a small size effect is reported in the model.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.297	3	5.766	3.168	.031 ^b
	Residual	105.542	58	1.820		
	Total	122.839	61			
a. Dependent Variable: buying behavior of an electric two wheeler in future						
b. Predictors:(Constant), reliability, improved technology, acceleration						

The model was whole significant to predict the buying behaviour of electric two-wheeler $F(3,58) = 3.168, p < 0.031$ as shown by ANOVA table R^2 for the overall model was 14.1% and adjusted R^2 was 9.6% A small size effect is reported by the model of variation in buying behaviour is accounted by the combination of predictor variables (acceleration of two-wheeler, advanced technology of two-wheelers and reliability of two-wheelers)

Coefficients													
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	4.437	.617		7.190	.000	3.202	5.673					
	acceleration	-.212	.210	-.169	-1.009	.317	-.633	.208	-.333	.131	.123	.529	1.890
	reliability	-.228	.206	-.192	-1.107	.273	-.641	.184	-.344	.144	.135	.490	2.040
	improved technology	-.086	.191	-.069	-.454	.652	-.468	.295	-.267	.059	.055	.639	1.566
.Dependent Variable: Would you like to buy an electric bike/scooter in future													

From this model, it is clear that consumers have a negative impact on reliability, acceleration and improved technology & range of electric two-wheelers. Consumers not ready to accept these parameters which were not up to the satisfaction level compared to the conventional two-wheelers.

In final model is as below:

$$Y = B_0 - 0.212(\text{acceleration}) - 0.228(\text{Reliability}) - 0.086(\text{Improved technology})$$

Where Y (buying behaviour)

$$\text{Buying behaviour} = 4.437 - 0.212(\text{acceleration}) - 0.228(\text{Reliability}) - 0.086(\text{Improved technology})$$

To accelerate the buying behaviour of electric two-wheelers, all three parameters (acceleration, reliability and improved technology) must be positively related. The negative perception about these parameters compared to the electric two-wheelers among the consumers' barrier to the growth of electric two-wheelers.

Crosstab									
		Parameters							Total
		price	Charging time	Range	Max. speed	Look & Design	Riding quality	Service Network	
Buying behaviour	Definitely	2	2	4	2	0	0	3	13
	Likely to buy	7	0	5	0	0	3	1	16
	Considering if convinced	2	3	9	0	0	2	1	17
	Unlikely to buy	0	0	3	0	1	0	3	7
	Won't buy	0	3	2	0	0	0	1	6
	Already have	0	1	2	0	0	0	0	3
Total		11	9	25	2	1	5	9	62

From the above table, About 40.3% of respondent believes that range is the most important parameters while selecting the electric vehicle. The range is the distance travelled by a vehicle in a single charge. About 17.7% of respondent believes that the price of the electric vehicle is the deciding parameters while buying an electric vehicle. About 14.5% of the respondent thinks that charging time is the most important parameter of the electric two-wheelers while choosing the vehicle. 14.5% of respondent beliefs the service network of the brand is important parameters while choosing the vehicle.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	47.509 ^a	30	.022
Likelihood Ratio	45.960	30	.031
Linear-by-Linear Association	.024	1	.876
N of Valid Cases	62		

a. 39 cells (92.9%) have an expected count of less than 5. The minimum expected count is .05.

From this report, there is good evidence of the relationship between buying behaviour and the parameters that affect the decision-making process while selecting the electric vehicle

(Chi square = 47.509 ,df =30 , p <0.05)

F. Conclusion

From this study it is clear that electric two-wheelers are lagging in technology advancement, acceleration and reliability compared with conventional two-wheelers. There is a negative

perception of acceleration, reliability and technology advancement among the consumers .they still rely on the conventional two-wheelers on these parameters. It is a big barrier to the growth of the electric two-wheeler market. Another important barrier to the development of Electric two-wheelers is most of the product line is coming from non branded and recently developed organisation (start-up organisation), consumers are hard to believe in the after-sales support & reliability of the product line. Range (distance travelled in a single charge), price, charging time is the most important parameters to impact the buying decision and other comparative factors like zero-emission, the soundless machine does not affect the decision-making process (these are not statistically significant).

G. Recommendation

The OEM should improve their product line with improved range, fast charging technology and performance. This can be only done by proper research and development.

References

1. Bhalla, P., Ali, I. S., & Nazneen, A. (2018). A study of consumer perception and purchase intention of electric vehicles. *European Journal of Scientific Research*, 149(4), 362-368.
2. Chan, C. C. (1993). An overview of electric vehicle technology. *Proceedings of the IEEE*, 81(9), 1202-1213.
3. Chan, C. C., Chau, K. T., & Chau, K. T. (2001). *Modern electric vehicle technology* (Vol. 47). Oxford University Press on Demand.
4. Ding, N., Prasad, K., & Lie, T. T. (2017). The electric vehicle: a review. *International Journal of Electric and Hybrid Vehicles*, 9(1), 49-66.
5. Junquera, B., Moreno, B., & Álvarez, R. (2016). Analyzing consumer attitudes towards electric vehicle purchasing intentions in Spain: Technological limitations and vehicle confidence. *Technological Forecasting and Social Change*, 109, 6-14.
6. *Propelling Electric Vehicles in India: Technical study of Electric Vehicles and Charging Infrastructure (BEE)*
7. Ding, N., Prasad, K., & Lie, T. T. (2017). The electric vehicle: a review. *International Journal of Electric and Hybrid Vehicles*, 9(1), 49-66.
8. Situ, L. (2009, May). *Electric vehicle development: the past, present & future*. In *2009 3rd International Conference on Power Electronics Systems and Applications (PESA)* (pp. 1-3). IEEE.
9. Sripad, S., Mehta, T., Srivastava, A., & Viswanathan, V. (2019). The Future of Vehicle Electrification in India May Ride on Two Wheels. *ACS Energy Letters*, 4(11), 2691-2694.

10. Tu, J. C., & Yang, C. (2019). Key factors influencing consumers' purchase of electric vehicles. *Sustainability*, *11*(14), 3863.
11. Wadekar, S. Motors and Batteries for Electric Vehicle: A Review.
12. Yong, J. Y., Ramachandaramurthy, V. K., Tan, K. M., & Mithulananthan, N. (2015). A review on the state-of-the-art technologies of electric vehicle, its impacts and prospects. *Renewable and sustainable energy reviews*, *49*, 365-385.

BOOK REVIEW

This page has been
intentionally left blank

Successful Aging: A Neuroscientist Explores the Power and Potential of Our Lives

Daniel J. Levitin

Professor, McGill University, Montreal, QC, Canada

Publisher/Year: Penguin Publishing Group, Dutton, NY, 2020

ISBN13: 978-1524744182

The standard of individual ageing has been critically redefined by ‘success’ that follows ageing. Although this term or concept of ‘successful ageing’ evolved from a biomedical perspective, it has now become applicable in the realm of social sciences – including management. It must be borne in mind that there is no universally accepted standard definition or description of ‘ageing’; however, basic elements of late-life socio-cultural, mental, environmental and appreciative implications will be included. With this backdrop, Levitin puts forward the multilayered identity for ‘ageing’, through the bases of optimal health. The readership may feel that most of the outcomes are commonsensical, though none of those negates the importance of research-based evidence.

Many misconceptions surrounding the idea of ‘ageing’ have been junked because of this work by Levitin. An individual’s memories, attitudes, social interactions, habits, experiences and professional exposure can influence the respective brain’s growth, supported by adequate coordination between nerves and muscle-driven activities. Levitin posits that it’s imperative to improve the possibilities of remaining alert, joyful, focused, intelligent and professional even while growing older – these are probable via his generic suggestions.

Labelling ‘ageing’ as ‘failure’ or a phase of ‘decay’ is not advisable. It will rather be wiser, according to the author, to think of ‘ageing’ as a unique developmental stage which may or may not be demanding and has a set of advantages (including disadvantages). The core philosophy behind successful ageing is strong mental and relational performance during the later years of one’s proficient engagement, which can very well maximize the number of balanced (in terms of work and life) and active (in terms of regular contributions towards various organizations/institutions) years of one’s otherwise mundane or stereotype existence.

It will be interesting to note that environmental factors can positively or negatively impact how the perception of ‘ageing’ is shaped in different individuals. Levitin asserts that a community’s interactions with the outside world, based on the established habits of its members, can modify the notional tendencies of ‘ageing’.

The book has demonstrated how an individual’s attitudes, beliefs and value systems may impress upon characteristic ‘ageing’, which also meant that the level of core competencies can justify the significance of ‘ageing’ as contained in society. In Chapter 4, the COACH (Curiosity, Openness,

Associations, Conscientiousness, and Healthy practices) has been described, which will ensure fruitfulness as far as ‘ageing’ is concerned.

Amidst a myriad of things, flexibility would entail necessary willingness to conduct relevant experiments to gauge whether enthusiasm for fresh concepts exists within individual selves and whether off-beat methods of performing tasks are appreciated enough. With augmented maturity, the natural inclination towards rejecting fresh but radical concepts and adhering to the tried and tested path of the past instead may give rise to potential intellectual loss. Therefore, ‘ageing’ must not be allowed to control or initiate professional degradation of individuals.

In the latter phase of the book, Levitin states that we are supposed to remain utterly conscious of our involuntary and voluntary actions. It will help in combating arrogance to achieve the same desired outcomes repeatedly. It is also critical to connect with absolute strangers, especially the younger generations, and go ahead with trying unsullied conceptions and theories in order to let innovation proliferate within organizational set-ups. Highly risky activities may still be discarded; however, a novel deliberation should be considered for sure!

“Successful Aging: A Neuroscientist explores the power and potential of our lives” outlined an exceedingly effective scheme to achieve ‘successful ageing’. Pocnet et al. (2021) believe that older and experienced individuals have already gathered more knowledge and insights by virtue of their longevity. Scholars, researchers, other experts from the field of Knowledge Management opine that this results in an expanded capacity for general trend extraction, recognizing unique patterns, spotting convergence of views and understanding of connections between contexts or environments can lead to improvised comprehending skills and problem-solving acumen. This book is strongly recommended because it serves as a near-to-perfect reminder to people that being meticulous, being amenable to opportunities, maintaining winning relationships with almost everyone possible, being fervent and passionate, and sticking to a healthier lifestyle, which involves nutritious food, decent sleep, and exercise are always decisive from the viewpoint of continued workplace excellence.

Reference:

Pocnet, C., Popp, J., and Jopp, D. (2020). The power of personality in successful ageing: a comprehensive review of larger quantitative studies. *Euro. J. Ageing*. DOI: 10.1007/s10433-020-00

Reviewed by:

Prof. Abhilash Acharya

Assistant Professor

Army Institute of Management

Email: acharya.abhilash@aim.ac.in

Machine Learning

Dr. S. Sridhar

Professor, Department of Information Science and Technology, College of Engineering, Anna University, Chennai, India

and

Dr M. Vijayalakshmi

Associate Professor, Department of Information Science and Technology, College of Engineering, Anna University, Chennai, India

Publisher: Oxford University Press

ISBN13: 978-0-19-012727-5

Machine learning is a type of artificial intelligence that allows software applications to become more accurate at predicting outcomes without being explicitly programmed to do so.

This book aims to provide a simple algorithmic approach and comes with numerical problems to explain the concepts of machine learning. It targets undergraduates and postgraduates students in computer science, information technology, business analytics, and in general, engineering students. This book is also useful for those who are studying data science, data analysis, and data mining. This book comprises chapters covering the complete concept of machine learning, a laboratory manual that consists of 25 experiments implemented in Python. The theory part includes many numerical problems, review questions, etc. This book covers Regression, Bayesian model, Probabilistic Graphical Model, Artificial Neural Networks, Support Vector Machine, Cluster Analysis, Generic Algorithm and Deep Learning. Some of the chapter highlights are given below.

In chapter 2, Understanding of Data, all the concepts related to data, types of data, big data, data collection, and preprocessing are properly explained. Linearity, correlation, linear regression, different validation model, multiple regressions, polynomial regression and logistic regressions are covered in chapter 5, Regression Analysis. Decision Tree learning model, different algorithms on the decision tree, like ID3 Tree construction, C4.5 Construction, Regression Tree, etc. properly covered under chapter 6, Decision Tree Learning. Bayesian Learning is a learning method that describes and represents knowledge in an uncertain domain and provides a way to reason about this knowledge using probability measures. It uses Bayes Theorem to infer the unknown parameters of a model. Bayesian inference is useful in many applications which involve reasoning and diagnosis such as game theory, medicine theory, etc. This concept with fundamentals, algorithms, and applications is covered under chapter 8, Bayesian Learning. In chapter 9, Probabilistic Graphical Models BBN (Bayesian Belief Network) concept, construction and inference are properly covered along with the hidden Markov model. Concepts of biological neurons, artificial neurons, perception learning theory and types of the artificial neural network along with proper examples and mathematical solutions covered in chapter 10, Artificial Neural

Network. An extension of the artificial neural network, deep learning is also covered in chapter 10.

This book covers all the major areas of machine learning with examples, but more programming on python may be added in their next edition. This will help not only the students but also the data analyst.

Reviewed by:

Prof. Anindya Saha

Assistant Professor

Army Institute of Management

Email: saha.anindya@aim.ac.in

Note for Contributors

The Chief Editor invites original, scholarly articles and research papers consistent with the aim and scope of the Journal. Articles, research papers, etc. that have not been published previously or submitted elsewhere, and that are not under review for another publication in any medium (e.g. printed journal, conference proceedings, electronic or optical medium) should be submitted to the Editor, Kindler – The peer-reviewed Journal of Army Institute of Management Kolkata. The author(s) should obtain copyright clearance for materials used in the article. It will be assumed that the submission of an article to this Journal implies that all the foregoing conditions are applicable.

Peer Review: All contributions submitted will be subjected to peer review. To allow anonymous refereeing, please submit the author's identification, affiliation, etc. in a separate sheet (not in the main text of the article).

Format: Papers (4000-8000 words normally, 8000-10000 words in exceptional cases), case studies and short communications (2000-4000 words) on new ideas/new areas of work/innovations/action research/ongoing investigations/conference and seminar and workshop outcomes, and book reviews (within 1500 words) should be neatly typed in Times New Roman 12 font size with 1.15 line spacing. Authors may submit their contributions electronically to the e-mail ID(s) given at the end.

Organization: The general organization of research papers should be as follows: the nature and scope of the study should be stated first, then the details of methods, materials, tools, procedures and/or equipment used, followed by findings, discussion and conclusion. Appendices may be used to amplify details where appropriate. Scholarly papers should have introduction, objective of the study, literature review, methodology, results/findings, discussion/managerial implications and conclusion as mandatory sections. Every paper should have an Abstract, followed by keywords before the main text.

Tables and Figures should be typed in their respective position in the text. Please supply camera-ready copy of all figures, as these shall not normally be redrawn. The print version will have only black and white tables/figures.

Footnotes to the text should be avoided, but where used, should be numbered consecutively and presented as end notes.

Citations of other works should be limited to those strictly necessary for the sake of arguments. Short quotations should be included in the text within inverted commas (“ ”) while quotations of more than 30 words should be placed in a separate paragraph indented from the main body of the text. However, all quotations should be accompanied by precise references, in author data style. The authors themselves, wherever applicable, shall obtain copyrights of others' works in the text.

References should be indicated in the text by giving the names of author(s), with the year of publication in parentheses. If more than one paper by the same author(s) from the same year are cited, a, b, c, etc. should be put after the year of publication. All references should be *alphabetically listed* at the end of the paper in the APA format. References should be typed in Times New Roman 11 font size with 1.15 line spacing.

Army Institute of Management Kolkata or Kindler – The peer-reviewed Journal of AIMK assumes no responsibility for the views expressed or information furnished by the authors.

Authors interested in sending their contributions or any correspondences pertaining to the Journal through e-mail may send it to **kindler@aim.ac.in** with a copy to protik.basu@aim.ac.in.



ARMY INSTITUTE OF MANAGEMENT, KOLKATA

**Plot No III /B-11, Action Area III, New Town,
Rajarhat, Kolkata - 700160**

Ph: 033-66032019 / 20 / 21 / 22 / 23 / 24 / 25