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Digitalization as Vehicle for Innovation, Organizational Growth & Effectiveness

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DIGITALIZATION AS VEHICLE FOR INNOVATION, ORGANIZATIONAL GROWTH & EFFECTIVENESS

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Digitalization, as we call it today, is sweeping across every aspect of our daily lives in all possible ways. Right from gathering the news we find in newspapers every morning to the billing process at our neighbourhood grocery shop, it is digital technology that is making tasks faster and more accurate. The economy today is no longer driven by real currency transactions only, but also electronic transactions that take place, across the globe, within a matter of seconds.

The increasing use of digital media in business communication and data dissemination has led to a rapid growth of e-commerce, m-commerce, innovation and growth across the world. Dependence on internet has led to businesses getting established over the internet and leading to faster trade of wealth and assets, in most cases by using secured internet transaction systems. Business transactions over social networking sites have led to the coining of a new term called "social shopping".

Digitalization has brought a paradigm shift to the traditional ways of manufacturing, handling, storing and transporting things. Computer aided designing and manufacturing processes have revolutionized the manufacturing industry and the deployment of industrial robots (which are digitally controlled) have become the order of the day across industries. The scope of digitalization is immense and its role on the transformation of our lives may span across innumerable business sectors. As a part of the society, Prestige Institute of Management, Gwalior decided to address ever-increasing competition in the market due to digitalisation and innovation, wherein majority of businesses have developed a formal methodology for innovation, and many have R&D groups that explore the frontiers of science.

Virtually, every organization on the planet has in recent years, worked systematically to reinvent its business processes for the sake of growth and effectiveness. The edited book offers insights to latest challenges and opportunities faced by stakeholders of an organization and makes an attempt to offer direction to the researchers in the field.

The research papers included in the book have highlighted role of digitalization in current era. The current book is based on selected papers received and presented in the 12th International Conference organized by Prestige Institute of Management, Gwalior on the theme "***Digitalization as a Vehicle for Innovation, Organizational Growth and Effectiveness***" on 19th and 20th December 2020. It provides important insights on the adopting digitalization by the firms for organizational growth and effectiveness.

CHAPTER 1

A CONCEPTUAL FRAMEWORK ON ANTECEDENTS (PERSONALITY TRAITS, PERSONAL VALUES AND REFERENCE GROUPS) OF ONLINE TROLLING BEHAVIOR

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Abstract

Trolling is anti-social online behaviour, with intent to afflict psychological distress by producing havoc in online social communities. Internet trolls hide behind anonymous accounts and fake usernames. It includes starting aggressive arguments and posting malicious messages in online comment sections to offend others. Of late, it is attacking celebrity accounts, brands and even just unpretentious people. Factors such as anonymity, invisibility, a lack of authority are catalyst agents of trolling. Trolls can be costly in several ways. They deliberately disrupt the discussion on a newsgroup or online forum, disseminate bad advice, and damage the feeling of trust in the online community. It includes making controversial statements, making online spaces severely distressing, diverting values and beliefs in wrong directions. More alarming consequences of trolling are rising mental and physical torments caused to victims. Past studies certify that meaningful associations prevail among trolling, personality traits, personal values and reference groups of trolls. Two models, 'Myers-Briggs Type Indicator' and 'Big Five Personality Traits' are significant pillars in understanding & improving personality traits. It becomes relevant for the marketing community to examine the role of personality traits in online trolling behaviour. The present study aims to critically evaluate the relationship among trolling, personality traits, personal values and reference groups through exploratory research & offers a conceptual framework on online trolling behaviour & these constructs.

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1. Introduction

Trolling has become the ultimate 21st-century crime. It has emerged as a bane for netizens. The effectiveness and increasing use of this tactic was highlighted in 2016 at U.S presidential

elections. It is seeping from our smart phones into every aspect of our lives with relentless consequences. Derogatory comments, body shaming, obscenity, profanity and bullying are to name a few. World's population is 7.3 billion, the internet has 3.17 billion users. Online trolling is becoming a social contagion; therefore, it justifies increased attention. For prudent use of technology, these anti-social habits need to be regulated. A Pew Research Center survey (2017) published two years ago, found that 70% of 18-to-24-year-olds who use the internet had experienced harassment and 26% of women said they had been stalked online. It is a threat to freedom of expression; people will resist social rhetoric. Moreover, it may result in sidestepping crucial matters of contention. It becomes relevant to examine online trolling from a broader perspective, as it will help in minimizing its harmful psychological effects.

1.1 Online Trolling Behavior & Personality Traits

Trolling is now the internet pastime of the bored, unsecured and anti-social trying to bait members of the community into descending them to their level gutter boors (Wright, 2012). It is an interpersonal malicious behavior prominent within Internet culture across the world. It is a form of online bullying and harassment (Pew Research Centre, 2014). Online discussions are increasingly becoming part of our daily interactions, (Sanfilippo et al, 2017).

Figure 1:
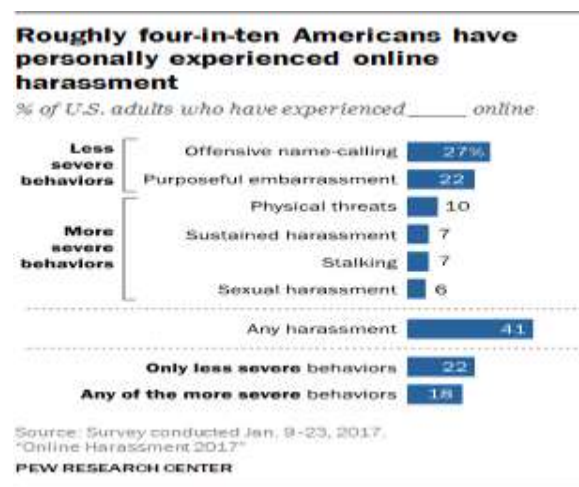
Individual behavior originates from one's personality (Robbins). Buckels et al. (2014) highlight the significance of studying dark tetrad personality traits to get more insights about trolling behavior. With the increase in the prevalence of social media and internet use, and the growing knowledge about the negative consequences of their use, it is critical to understand which personality traits relate to online trolling behaviors (Moor & Anderson, 2019).

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Websites provide consumers a platform to share feedback about the company's offerings, in the form of online brand communities, where they can interact with each other. Buyers' experiences can be pleasant or sour. Unpleasant opinions can become a source of dissatisfaction and grudges. Thus, marketers need to understand the personality traits of potential and present consumers to avoid problems like trolling later on.

1.2 Internet Trolling and Big Five Personality Traits

In this age of online media personality still offers an understanding on how we behave and why. It is possible to organize the personality traits in five broad dimensions referred to as Big Five Inventory or Five Factor Model.

Research suggests that personality traits are associated with motivations for online engagement as well as the type of online behavior exhibited. Several studies have shown that both Big Five and Dark Triad (Machiavellianism, narcissism, psychopathy) personality traits are related to traditional bullying and cyber bullying behaviors in adolescents (Fanti & Kimonis, 2013) as well as in adults (Baughman,) Increasingly, scholars call for sadism as an addition to the Dark Triad in the study of antisocial and delinquent behaviors (Lopes et al, 2017); Cracker and March,(2016); Geel Van et al, (2016); Buckels et al, (2013). Individuals high in dark personality traits may be more vulnerable in developing problematic online use (Griffiths, 2016).

Marengo et al, (2020) underlies the idea that extraverts have a stronger need for social interaction, which might result in them choosing to use social media to communicate with others via this digital channel in order to fulfill their needs for bonding. Individuals who score high on neuroticism are more likely than average to be moody and to experience such feelings as anxiety, worry, fear, anger, frustration, envy, jealousy, guilt, depressed mood, and loneliness (Thompson,2008), so are trolls. These people have a strong desire of innovative use of technology (Fichman & Sanflippo, 2016), suggesting high ranking on the trait of openness. With regards to agreeableness trust, straight forwardness, altruism, compliance, modesty, and tender-mindedness are discussed. People high on conscientiousness are less likely to engage in anti-social behavior on social media, due to less availability of leisure for the same (Russo and Amna, 2016).

1.3 Online Trolling and MBTI Model

The fundamental idea which forms basis of MBTI model is Carl Jung's theory of personality type which proposes the presence of dichotomous pairs of cognitive functions. The MBTI

arranges some of these psychological variations into four combinations, with a resulting 16 possible psychological types. Variations are psychology results from individual preferences (Myers & Briggs, 1995). Myers' dichotomous sets are extraverted or introverted (E or I), sensing or intuitive (S or N), thinking or feeling (T or F), and judging or perceiving (J or P). Collectively, these categories depict 16 personality types (Robbins). One letter from each category is taken to produce a four-letter test result, like "INFJ" or "ENFP" (Myers & Briggs, 1995). Present study is unique as it is first mover to use MBTI model for predicting personality traits of internet trolls.

1.4 Online Trolling and Personal Values

There may be various motivational forces for joining in social media platforms, so most likely they will act differently as per their set of values. The theory of values posits that each person has a set of values, or desirable and trans-situational goals, that motivate their actions (Rockeach, 1973). Theorists also posits that individuals' values are formed by upbringing and experiences of life and have a bearing on individuals' cognitive processes, decisions, and behavior (Weber,2017).

Several researches so far have shown that various dimensions of personal values determine workplace behavior (Finegan, 1994), consumer behavior (Vinson et al, 1977) etc. Chen et al, (2014) discussed association between basic human values and behavior manifested online. Past research linked personal values and social media behavior using Shalom H. Schwartz's theory of basic human values (Chen et al, 2014). The Theory of Basic Human Values tried to outline universal values that are recognized widely throughout all major cultures Schwartz and group sorted ten basic human values in four higher-order groups. Each of the ten universal values has an underlying motivator. People highly valuing self-transcendence are much concerned with welfare of others. Conformity, traditions and security is manifested in conservatism, people with this value are restricted to change. Openness to change shows negative association with conservatism.

Another approach to predict personal values is Milton Rockbeach's, Rockbeach Value Survey (1973). It includes two sets of values with 18 different value items broadly classified as terminal values and instrumental values.

1.5 Online Trolling and Reference Groups

Tomatsu Shibutani proposed the collective and communicative aspects of reference groups (Strauss, 1978). Each social world is a "universe of regularized mutual response." "Each is an

arena in which there is a kind of organization. Some distinguishable grouping to which a person is related in some manner and the norms and values shared in that group. One's online "reference group" may include Facebook friends, followers. Online comments could let users to stiffen their original attitudes toward, change their perspectives on, and even influence their willingness to speak out online about an issue, particularly when they perceive that others' share mutual thought premises on the issue (Lee & Chun, 2016). Therefore, in social media, a small group of people can easily induce the formation of positive or negative public opinions toward a particular issue or organization. Thus, when an organization faces negative news or information, not only the news threatens it, but the associated opinions or comments shared among users can also be detrimental to its reputation.

Very few authors have related reference groups to online trolling behavior. More research can be done in this regard to know about what forms the reference group of online trolls and how reference groups influences the trolling behavior on social media.

1.6 Need and Significance of Study

Websites are increasingly encouraging readers to leave comments, but internet anonymity promotes users for offensive participation. Often such attempts end in hatred, frustration, and restlessness. Big brands on Facebook, celebrities on Twitter with lots of followers face trolling every day. Unfortunately, as the web is becoming more social and people can access online platforms wherever they are with greater penetration of the internet and from their smart phones. Thus, trolling is turning to a stern negative outcome.

The tendency to be a troll and involve in this type of online misconduct is gigantic, with current statistics suggesting that over a quarter of Americans have engaged in trolling behavior at one time or another. Especially, brands have to be cautious about posting or commenting, lest they fall into the troll trap. A post or tweet may seem to be unoffending sometimes but can be played up by trolls as being racist or misogynistic, setting a trail of hate messages on social media.

Research on social media trolling seems to be scattered and offers diversified reviews. Existing literature has linked dark personality traits with online trolling and anti-social behavior. The present study aims to critically evaluate the relationship among trolling, personality traits, personal values and reference groups through exploratory research & offers a conceptual framework on online trolling behavior & these constructs.

2. Review of Literature

Along with the positive outcomes associated with increased internet communication, new antisocial behaviors contingent on the online context have also emerged (Cracker & March, 2016). One of the earliest definitions described online trolling behavior as, luring others online, commonly on discussion forums, into pointless and time-consuming activities (Herring et al, 2002). It is a deceptive, aggressive, disruptive attempt by users of computer mediated communication exhibiting pseudo-sincere intentions, with intent to seek attention, provoke conflicting environment for their own amusement and fun (Hardeker, 2010). Online trolling has become increasingly rampant and evident in online communities (Fichman et al, 2017). Trolling comprises of fake news, alt-facts, canards, fallacies, prevarications, hyperbole, illogic, exaggerations, and hate speech (Berghel, 2018). Aspects that characterizes trolling behavior are provocation, malicious intent, sadistic pleasure (Buckels et al, 2014), anonymity (Bishop, 2012), uncooperative attitudes (Griffeths, 2014) and using self-defeating humors (Coles et al, 2016). Unsecured internet network is also a cause resulting to effect of online trolling (Sanfilippo & Fichman, 2016). Cook et al, (2017) discussed trolling and its motivations from a troll's point of view. It is an act of (a) attack, (b) sensation-seeking, and (c) interaction-seeking in online communities. Underlying motivations are personal enjoyment, revenge, reformation, fun, etc. Trolling appears to be a cyclical, self-perpetuating phenomenon. Cook et al, (2017) Victims of trolling further tend to indulge in trolling. Thus, making it a never ending process. Trolling can be categorized on basis of context, culture and intention of trolls. Bishop (2012) differentiate between "kudos trolling" to describe trolling for mutual enjoyment and entertainment, and "flame trolling" to describe trolling that is abusive and not intended to be humorous. Modern day definitions of internet trolling seem more consistent with the definition of flaming, rather than the initial definition of trolling.

The next step in advancing this literature is to link personality measures with behavior. Overall, research thus seems to suggest that the three Dark Triad Personalities have different motivations and beliefs that may have an impact on the behavior they display. (Buckels et al, 2014) was the first to examine comprehensive personality profiles internet trolls. It was sadism, however, that had the most robust associations with trolling of any of the personality measures (Buckels et al, 2014). Sadists have a propensity for troll as they experience fun in others suffering and pain (Buckels et al, 2013). Cracker & March, (2016) also worked on the subject of dark personality tetrad and behavior on social media. Added the motivations behind dark personality traits. Trolls

are driven by negative power and influence others' search by including with the hidden motives of negative social rewards. (Lopes et al 2017) examined the influence of dark personalities in trolling behavior towards popular and less popular Facebook profiles. Psychopathy predicts trolling. With the motive to achieve higher self-esteem needs, psychopaths target more popular Facebook profiles. But same is not true with narcissism; they only troll when there is a question of their personal gain and self-advancement (Lopes et al, 2017). Thus, research supports the finding that trolling behavior is also influenced by social status. Trolls have lower affective empathy, and psychopathy moderates cognitive empathy (Sest & March, 2017). Moor & Anderson (2019) support the findings of previous cited studies on triad and tetrads were related to trolling.

Relations between the personality traits and aggressive behavior have been studied frequently. The predominant model of personality has identified the ''Big five'' personality, traits that repeatedly used across culture and gender. Barlett et al, (2012) tested the relations among the Big five, and aggression. Openness was directly and indirectly related to aggression. Conscientiousness was unrelated to aggression and violence. neuroticism was directly and indirectly related to aggression. Hardaker, (2010) described trolling as aggressive behavior, so may be big five traits can also predict online trolling behavior. Agreeableness appears a consistent negative predictor of bullying and cyber bullying (Van et al, 2016). Another model to which present study intents to associate with online trolling behavior is MBTI Model.

Values are critical motivators of behaviors and attitudes. The theory of basic human values has identified ten basic, motivationally distinct values that people in virtually all cultures implicitly recognize. These values are simulation, hedonism, achievement, power, universalism, benevolence, security, conformity, tradition. Some of these value a) power and achievement-social superiority & esteem; b) hedonism-self-centered satisfaction synchronizes with definition of trolling behavior (Schwartz, 2012). Do one's values draw him towards certain discussions, or lead one's actions? And if they do influence one's social media actions, what kind of behavior are indicative of which value dimension? Answering these questions can lead to more effectively tailored persuasive strategies or incentives, to tackle the trolling problem, plaguing many social media platforms (Chen et al, 2014). Trolls are also likely to be guided by some value system. These values are critical to extend the horizon of research in online trolling behavior.

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Cook et al (2018), found that friendships can be formed and cemented via trolling, as it stands, trolls are aware of and are connected to other trolls, creating a loose community. Now-a-days trolling happens more often in groups rather than alone. Historically, trolls have been treated largely as individuals (Buckels et al, 2014). However, this finding opens the way for the exploration of these trolling communities as group activities. Anti-social individuals have greater opportunities to connect with similar others, and to pursue their personal brand of ''self-expression'' than they did before the advent of the internet (Buckels et al, 2014). Thus, it results in formation of reference groups which can influence social media behavior." Do online trolls have any reference groups? Do these groups determine online trolling behavior? What are the agendas of these groups?" etc. are some questions that need further discussion, reference group theory may guide the group members in making self-appraisals, comparisons and moving into various social realm (Hyman & Singer, 1942). After throwing light on above literature, a conceptual framework with a linkage of online trolling behavior and personality traits, personal values and reference groups has been proposed in the paper.

3. Discussion

Online trolling is a purely malevolent effort to elicit the desired response from the target and to initiate some form of discord in online communities to succeed in their selfish motives. These motives are more destructive in nature rather than engaging. They indulge in such activities by the virtue of a shield called anonymity that has been advanced by the internet. Trolls could be anyone or anywhere serving their malicious intents (Cheng et al, 2017). Most of the time, trolls are influenced by factors such as boredom, meanness, pleasure in others' suffering, gaining attention, boasting power, taking out frustration, and revenge. They have higher levels of needs for something called negative social potency, which means they like to cause mischief and suffering, along with the attention that entails. They are eccentric minded, who only want to offend their targets by instigating posts and comments. The World Wide Web has invented a 'critic' personality among all of us. But with commenter's able to hide behind a cloak of anonymity and lack of authority, the blog and chat room have become forums for hatred and bitterness. Trolling is distinct from other forms of cyber bullying or harassment. Generally, it is not targeted towards any one person and relies on other people paying attention and becoming provoked. It is an internet-grown reactionary movement. Such behaviors are contextual and vary across platforms and communities. Therefore, the present research tried more to explore the

concept of online trolling. A conceptual framework relating trolling behavior to big five personality traits, MBTI traits, personal values, and reference groups has been suggested.

Individuals are product of their personalities and perceptions. Probably analysis of one's personality may not exactly predict the actions, but can give an indication as to the likelihood of behaviors that will be shown over time. Dark personality traits (psychopathy, narcissism, Machiavellianism, sadism) with special reference to online trolling behavior have been discussed extensively in the literature (Buckels et al, 2014; Cracker & March, 2016) but there is a dearth of research comprising the big five personality traits and MBTI (16 personality types) model for this purpose.

The Big Five personality traits are extraversion, agreeableness, openness, conscientiousness, and neuroticism. Each trait represents a continuum. Individuals can stand anywhere on the continuum for each trait. a) The trolls are high at the trait of extraversion that contains qualities such as gregariousness (sociable), assertiveness, energetic, seeking adventures, passionate, and outgoing. Above all, enjoys being the center of attention. b) They stand low at agreeableness as they are cynical, tough, ridicule, and downplay others, stubborn, unsympathetic (does not care about how other people feel). Cracker & March, (2016) emphasized that trolls are sadists. c) Trolls are high on the scale of Neuroticism which reflects their overall emotional stability. They are characterized as anxious, insecure, hostile, furious, one who experiences a lot of stress, offended easily and experiences dramatic shifts in mood. They are much vulnerable to get attracted to trolling. Moor & Anderson, (2019) says that trolls are proven, psychopaths. Trolls are often controlled by their impulses; they are not much disciplined too. Once frustrated, they end up grudging persistently. Thus, they fall much below in conscientiousness (Van et al, 2017). Lastly, they are creative and open to new experiences that seem listing high on the parameter of openness (Zezulka et al, 2016).

Another famous model designed to identify a person's personality type, strengths, and preferences is the MBTI model. Four dichotomies are presented by this instrument according to them a) Trolls prefer to be extroverted as they are action-oriented not thought oriented, choose for frequent interaction and their energies are multiplied by spending time with people. b) They go for dealing with facts, what they know, to have clarity, or to describe what they see, thus their preference is for Sensing. c) Trolls are sensitive, as they make decisions based on their emotions,

values, and the needs of others. They prefer to decide using values - i.e. based on what or who they believe is important – so their preference is for feeling. They tend to come to decisions by associating or empathizing with the situation. They are likely to maintain flexibility and respond to things as they arise, then their preference is for Perception.

Values have been a central concept in the social sciences since their inception. While relating online trolling behavior with Schwartz theory of basic human values it has been identified that trolls values a) Self-direction (derived by the desire of autonomy, urge to make own decisions, independent nature and curiosity), b) Stimulation (determined by the level of excitement, daring and ability to face challenges), c) Hedonism is one of the most robust values motivating trolling behavior as it describes the satisfaction of one's senses and pleasure (Chen et al, 2014). Trolls get immense satisfaction by hurting others (Buckels et al, 2014). d) Achievement implying social recognition. Cracker & March (2016), opined trolls are motivated by negative social potency. Thus, achievement too, is part of the trolls' value system. e) Power stands for social status and prestige, control or dominance over people and resources, trolls consider social power, so they utilize technology and provocative statements as their tactics to gain power. f) Security and g) Conformity h) Tradition i) Benevolence and j) Universalism are negatively related to trolling behavior.

Another approach to study personal values is the Rokeach Value Survey. Terminal values of internet trolls maybe freedom, pleasure, social recognition, a sense of accomplishment, and exciting life. The preferable instrumental values can be imagination, independence, cheerfulness and courage (Rockeach, 1973).

For analyzing trolling behavior and reference groups, virtual communities play a dominant role such communities are mostly informal in nature; chat rooms, blogging websites, Instagram followers, Facebook friends, subscribers, etc are common form of such communities. People often consider reference groups as benchmarks to measure their behavior, opinions, abilities, and possessions (Hyman & Singer, 1942). Online comments could serve as a reference group, influencing the willingness of people to speak out online. Individuals' prior attitudes and experiences determine their evaluation of others' comments on social media websites (Lee & Chun, 2017). People with negative prior attitudes were more willing to speak out online when they perceived others' comments as negative. Trolls' reference groups have social power (the

capacity to alter the actions of others), information power (ability to influence someone's opinion by the virtue of truth) and referent power (influencer power). Howard et al, (2019) supported that downward comparisons on social media emerged as being the key factors associated with membership in the participant group that exhibit trolling behaviors. Thus, reference groups too influence urge to involve in trolling behavior.

4. Conceptual Framework

The preeminent aim of the present study was to provide a comprehensive conceptual framework that may act as a guiding mechanism for understanding online trolling behavior and highlights its significance for social media marketing campaigns. From the above study, it will not be wrong to say that personality trait (discussed with reference to Big Five and MBTI models), personal values described by Schwartz in Basic Human Values & Rokeach in Value Survey) and reference groups are underlying variables which influence online trolling behavior directly or indirectly. Now this relation is presented in the form of a structural model that will show these underlying variables as antecedents of online trolling behavior and how they impact thinking, feeling and the acting component of trolls' social media behavior.

Figure 2
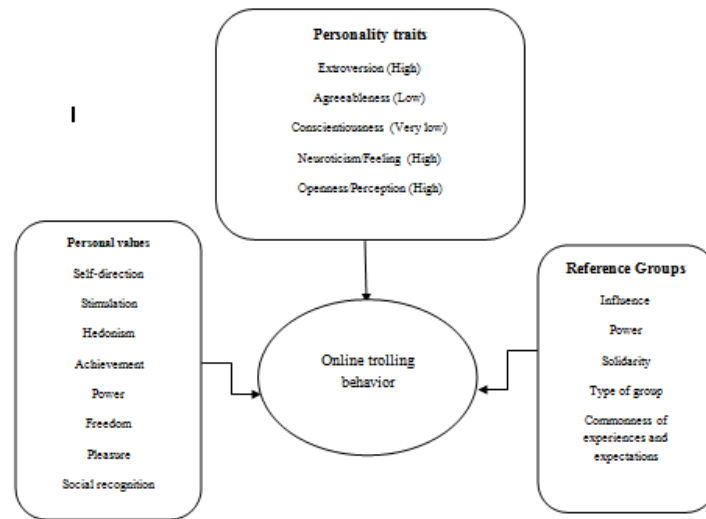
5. Implications of Study

Aggression, argumentation, a sick sense of humor and attention-seeking behavior characterizes the internet troll, social media users having above mentioned profile become addicted of trolling

and eventually are converted into a liability for internet. Studying online trolling behavior has considerable significance in the rapidly growing social media marketing environment. The present study has come up with a conceptual framework that describes notable antecedents heading such malevolent behavior. Analyzing these variables and predicting their probable effects on marketing campaigns can help marketers in crafting strategies to deal with them wisely and smartly without damaging brands' reputation.

Trolls do not want a resolution to their complaints, as they only strive for attention in meeting their selfish motives. Ignoring such anti-social behavior will not only boost their confidence but also degrade the reputation of brands on the social media platform. Therefore, analyzing the personality traits of such idiosyncratic people is imperative for marketers. It will enable them to differentiate between a troll and an unhappy customer. The conceptual framework outlines the strongest and relatively weaker personality traits of trolls. Another focus is personal values that are principal motivators of behaviors and attitudes. Marketers can consider the underlying forces behind trolling behavior and construct their brand messages accordingly. Lastly, there are reference groups that share similar types of interests and experiences. They are in a position to have a strong influence on the behavior of trolls because they make them feel empowered. Marketers can monitor online communities by investigating these reference groups.

Thus, we can conclude this discussion by saying that in the current market scenario, where a single negative comment can cause a big nuisance for corporate brands, there is a need to professionally manage social media marketing channels and dealing with cyberspace problems.

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CHAPTER 2

PRODUCT INVOLVEMENT FOR ORGANIC FOOD PRODUCTS: A CASE STUDY OF VADODARA CITY

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Abstract

This research was conducted to study the overall consumer involvement and purchasing intention for organic food products in the city of Vadodara, India. A Sample size of 200 was considered as appropriate for this. Data was collected through a structured questionnaire from the respondents. The data collected was found to be reliable, based on which further statistical tests were conducted to analyze important results. The findings suggested moderate levels of consumer involvement while purchasing intention was found to be a bit higher than involvement levels. It was also found that there is a positive relationship between consumer involvement and purchasing intention for organic food products. However, notable information that was obtained was that there was lack of consumer awareness in general about organic food products in Vadodara. Based on the results it was concluded that involvement was found to be moderate due to lack of awareness about the product. If awareness increases, in future, consumer involvement is likely to be higher and resultant purchasing intention and a positive purchase behavior.

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1. Introduction

Everybody talks of green initiatives. Worldwide governments are concerned about the problems global warming is causing and is likely to cause if appropriate action is not taken right now. The responsibility of this action falls on all, the Governments, people as well as business organizations. All have a responsible role to play in this. Having said this, lot of groups is taking green initiatives in this regard. This research paper focuses on one such initiative, which are organic food products. Instead of the conventional foods which contain a lot of harmful elements like chemical pesticides. GMOs and synthetic fertilizers which are harmful for the health of people. Consumption of such foods leads to some of the most dreadful diseases like cancer. This research paper attempts to study the consumer involvement for organic food

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products. It also studies the impact of involvement on purchasing intention towards these products in Vadodara.

India is blessed with abundant natural resources. A vast majority of its population is dependent on agriculture for their subsistence. Being such a vast country and having varied climate, different crops are cultivated in different regions of the country. After the green revolution in the 1960s, the use of fertilizers has increased in agriculture in India. This has led to surplus growth in the production of food grains, fruits and vegetables as also increased productivity in animals with respect to dairy items. However, the use of pesticides and chemical fertilizers in agriculture and allied fields has led to some serious health issues. This has led to a number of people looking for a healthier option. The solution was Organic Food Products. Organic products are grown under a system of agriculture without the use of chemical fertilizers and pesticides with an environmentally and socially responsible approach. This is a method of farming that works at grass root level preserving the reproductive and regenerative capacity of the soil, good plant nutrition, and sound soil management, produces nutritious food rich in vitality which has resistance to diseases (APEDA).

As per the available statistics, India's rank in terms of World's Organic Agricultural land was 9th and in terms of total number of producers was 1st as per 2018 data (Source: FIBL & IFOAM Year Book 2018). The Government of India has implemented the National Programme for Organic Production (NPOP). The national programme involves the accreditation programme for Certification Bodies, standards for organic production, promotion of organic farming etc. The NPOP standards for production and accreditation system have been recognized by European Commission and Switzerland for unprocessed plant products as equivalent to their country standards. Similarly, USDA has recognized NPOP conformity assessment procedures of accreditation as equivalent to that of US. With these recognitions, Indian organic products duly certified by the accredited certification bodies of India are accepted by the importing countries.

Area under cultivation

As on 31st March 2018, total area under organic certification process (registered under National Programme for Organic Production) is **3.56 million Hectare** (2017-18). This includes 1.78 million ha (50%) cultivable area and another 1.78 million Hectare (50%) for wild harvest collection. Among all the states, **Madhya Pradesh** has covered largest area under organic

certification followed by Rajasthan, Maharashtra and Uttar Pradesh. During 2016, Sikkim has achieved a remarkable distinction of converting its entire cultivable land (more than 76000 ha) under organic certification.

Production

India produced around 1.70 million MT (2017-18) of certified organic products which includes all varieties of food products namely Oil Seeds, Sugar cane, Cereals & Millets, Cotton, Pulses, Medicinal Plants, Tea, Fruits, Spices, Dry Fruits, Vegetables, Coffee etc. The production is not limited to the edible sector but also produces organic cotton fibre, functional food products etc. Among different states Madhya Pradesh is the largest producer followed by Maharashtra, Karnataka, Uttar Pradesh and Rajasthan. In terms of commodities Oil seeds are the single largest category followed by Sugar crops, Cereals and Millets, Fibre crops, Pulses, Medicinal, Herbal and Aromatic plants and Spices and Condiments.

Exports

The total volume of export during 2017-18 was 4.58 lakh MT. The organic food export realization was around INR 3453.48 crore (515.44 million USD). Organic products are exported to USA, European Union, Canada, Switzerland, Australia, Israel, South Korea, Vietnam, New Zealand, Japan etc. In terms of export value realization Oilseeds (47.6%) lead among the products followed by Cereals and millets (10.4%), Plantation crop products such as Tea and Coffee (8.96%), Dry fruits (8.88%), Spices and condiments (7.76%) and others.

Benefits of Organic Products

The consumers are increasingly becoming aware of the food safety issues and environmental issues because of their increased concern about health, the environment's health and its global implications. Organic food now has become a viable alternative for an increasing number of consumers, who are worried about the presence of chemicals residue and the negative consequences on the environment caused by intensive production methods. Many farmers also now see organic farming as a way to stabilize or even increase their income due to public policy support and growing market demand. The benefits of organic products are threefold as summarized below:

Health

Organic agriculture regulates how food is grown and processed. In addition to meeting the health and safety requirements of conventional food, organic food must also meet the additional safety standards of organic farming such as tougher regulations on manure use. Studies have shown that organic food contains a lower concentration of pesticides as compared to conventionally grown food10. Hence, there is a good reason to believe that organic farming reduces health risk11. The health benefits of organic products are as follows:

i. Toxin and GMO-free: Organic products are the most heavily regulated food products in the US. Only organic products come with a guarantee that no toxic persistent pesticides, synthetic fertilizers or GMOs are used in their production. Additionally, no antibiotics or growth hormones are given to livestock. Organic producers and processors are subject to rigorous announced and unannounced certification inspections by third-party inspectors to ensure that proper due diligence procedures and protocols are being followed.

ii. Higher nutritional content: Recent studies have found that organic fruits, vegetables and grains have fewer nitrates and cadmium and fewer pesticide residues than non-organic crops, making them safer to consume.

Environment

Organic farming primarily focuses on eco-friendly agriculture practices. It might not eliminate the negative environmental impacts wholly, but it can help reduce water pollution and improve the soil quality. Organic cultivation promotes conservation of biodiversity, enhances ecological functions and ecosystem services. It is a self-reliance system that improves the economic productivity of crops and livestock. The stringent organic certification standards enable several measures like mulching, crop rotation, crop residual management, rules on carrying capacity defining a number of heads of livestock are allowed per ha., improved organic soil carbon biding significantly reduces green gases helps in mitigating climate change.

Economics

Certified organic foods fetch higher prices, in comparison to conventional foods as most of the organic produce is directly procured by companies thereby excluding the middlemen. The retail

price of organic food is high and eventually, organic production reduces cost also. This provides farmers a good return on an organized supply chain system.

Literature Review

Research has suggested that involvement is a moderating variable on purchasing intention for any product. Attitude plays an important role in creating purchasing intention for products or services, but consumer involvement moderates that impact of attitude. The concept of involvement has been introduced in psychology in 1947 by Sherif and Cantril and was used in the beginning to explain the receptivity of individuals on communications. Involvement is defined as the mental condition of an individual, which is judged by individual's cognition for things and the importance perceived. (Ming-Chuan Pan, 2007). It is a person's perceived relevance of the object based on inherent needs, values and interests (Zaichkowsky, 1985) [1]. The term "low and high involvement products" can be misleading in the sense that involvement is not a property of a product (Salmon, 1986). Involvement is recognized as the interaction between the product and the individual. "Although involvement tends to be defined as the relevance of a product rather than the interest of an individual in a product, involvement can be interpreted to be more on the side of the stimulus than on the side of the viewer" (Salmon, 1986). "If involvement can be defined according to the stimulus, then products can be organized into different product involvement categories and ideally, markets can be segmented on the basis of product involvement" (Grunig, 1989; Taylor & Joseph, 1984). One of the ways of identifying whether involvement is high or low is to find out the perceived risk and return from the purchase. In case of high involvement products, consumer perceives high risk and also high levels of satisfactions are achieved if the purchase is as per his perceived benefits. On the other hand if a wrong purchasing decision is made, it involves huge amount of risks in terms of costs, time and satisfaction. Hence, for high involvement products, consumer spends lot of time gathering information about the product. He inquires about its price and compares it with its features in detail. He also asks for feedbacks and experiences of others who have used the same or a similar kind of product.

Involvement with purchases leads one to search for more information and spend more time searching for the right selection (Clarke and Belk 1978). Therefore, each area might have its own idiosyncratic result of the state of being involved with the object" (Zaichkowsky, 1985)

Certain product classes may be more or less central to an individual's life, his attitudes about himself, his sense of identity and his relationship to the rest of the world [4] (Traylor, 1981). In other words, it is the level of importance of the product for the consumer. An individual's mental state for the goal or action, reflects one's interests (Mittal, 1983). In simple words consumer involvement may be taken to mean the importance a consumer attaches to the product. It shows his interest in the product. The greater the interest in the product or the desire to possess it, the greater is the consumer's involvement and vice versa. It is to be noted that an individual's product involvement is based on his own perception. Hence, in this sense it may be viewed as consumer involvement. Involvement can be classified as -

Situational Involvement: it is the degree of involvement evoked by a particular situation such as a purchase occasion and is influenced by product attributes (cost, complexity and similarity among choice alternatives) and situational variables (whether product will be used in the presence of others) (Houston and Rothchild, 1978). Situational involvement appears to result from perceived risk (Houston and Rothchild, 1978).

Enduring Involvement: it is the ongoing concern with a product the individual brings into the purchase situation (Bloch and Richins, 1983). It is a function of past experience with the product and the strength of values to which the product is relevant. (Houston and Rothchild, 1978).

Response Involvement: it arises from the complex cognitive and behavioural processes characterizing the overall consumer decision process. Carmen Garcia et al. (1996) developed a modified version of Zaichkowsky's model. They developed a questionnaire which measured involvement from consequences rather than directly asking the respondents about their involvement levels for a particular product. They measured involvement for two products and tested the model in Spain and England. They identified five distinct factors that affected a person's level of involvement which were named as 'affective link', 'search and information processing', 'social relevance', 'social interaction' and 'purchase purpose' [5].

Research Methodology

This exploratory research was conducted with the main intention of analyzing the impact of consumer involvement on purchasing intention for organic food products in the city of Vadodara, Gujarat. For this, a sample size of 200 respondents was considered as sufficient. Data was collected from around 239 respondents out of which 200 valid responses were considered for

analysis. For this, a structured questionnaire was designed which was divided into four parts. First part of the questionnaire covered statements measuring consumer involvement levels for organic food products. The second part contained statements aimed to measure purchasing intention for organic food products. The third and last part of the questionnaire was about the demographic characteristics of the respondents. The questionnaire contained statements asking respondents to provide their opinion on a five-point scale starting from "Strongly Agree" as 5 and "Strongly Disagree" as 1.

As mentioned earlier, Carmen Garcia et al. developed a 'Consequences of Involvement' questionnaire to measure involvement levels of the respondents. The newly developed CIQ measure involvement from its consequences instead of asking the respondents directly to state their involvement levels for an offering. In order to study the involvement levels correctly, five factors that affected a person's involvement levels were identified.

- **Affective link (AL)** - High involvement with a product implies some identification with it; some sort of affective link. The product is considered to be important in the subject's daily life and he/she shows a special interest in it (Krugman, 1965; Park and Mittal, 1985; Zaichkowsky, 1987).

- **Search and information processing (SIP)** - High involvement also implies an active search of additional information on the product and a deeper processing of this information. As a result, a change in the quantity and the quality of the knowledge on the product would be expected (Howard and Jagdish, 1969; Macquarrie and Munson, 1992).

- **Social interaction (SI)** - A high involvement also implies greater related social interaction, with the person trying to meet other people to talk about the product (Macquarrie and Munson, 1992).

- **Social Relevance (SR)** - People having high involvement with a product try to extrapolate their own personal interest and view the product as also important for others.

- **Purchase purpose (PP)** - High involvement is also related to purchase purpose, as people prefer to buy those products which they have high involvement with (Clarke and Belk, 1978; Zaichkowsky, 1985, 1986).

Objectives

The purpose of this research paper was to study and analyse the following with respect to organic food products in Vadodara-

- To study and analyse consumer involvement for organic food products in Vadodara.

- To identify antecedents of consumer involvement for OFP in Vadodara.

- To study purchasing intention for organic food products in Vadodara.

- To study the effect of consumer involvement on purchasing intention for organic food products in Vadodara.

Hypotheses

H1: There is no significant consumer involvement for organic food products in Vadodara.

H2: There is lack of correlation between antecedents of consume involvement for organic food products in Vadodara.

H3: There is no significant effect of consumer involvement on purchasing intention for organic food products in Vadodara.

Reliability Analysis

The data collected can be put to further tests only if it satisfies the conditions of reliability. For this purpose, Cronbach Alpha was calculated to measure the reliability of data obtained for consumer involvement, attitude and purchasing intention. The results obtained suggested that the data was reliable. The alpha values for all the parameters were found to be above the 0.60 value. Table 1 shows the reliability tests results for this research.

Table 1: Reliability Statistics

Factor	Alpha
Affective Link (AL)	0.784
Search and Information Processing (SIP)	0.811
Social Interaction (SI)	0.823
Social Relevance (SR)	0.901
Purchase Purpose (PP)	0.788
Consumer Involvement	0.921
Purchasing Intention	0.841

Based on the values it was clear that the data with respect to all the antecedents of involvement, consumer involvement and purchasing intention was reliable since all respective alpha values were above 0.60. It was inferred that further analysis of data would lead to results that are reliable.

2. Data Analysis

Table 2: Demographic Profile of the Respondents

Feature		N	%	Feature		N	%
Age	20-30	107	53.50	Income	< 1.5 Lac	31	15.50
	31-40	54	27.00		1.5 - 3.00	52	26.00
	41-50	24	12.00		3.01-4.5	37	18.50
	Above 50	15	7.50		4.51 - 6.00	31	15.50
Total		**200**	**100.00**		Above 6	49	24.50
Gender	Male	98	49.00	**Total**		**200**	**100.00**
	Female	102	51.00	Family Size	1-4	134	67.00
Total		**200**	**100.00**		5-7	42	21.00
Education	Under Graduate	14	7.00		Above 7	24	12.00
	Graduate	53	26.50	**Total**		**200**	**100.00**
	Post Graduate	92	46.00	Family Type	Nuclear	123	61.50
	Professional	41	20.50		Joint	77	38.50
Total		**200**	**100.00**	**Total**		**200**	**100.00**
Occupation	Service	73	36.50	Marital Status	Married	112	56.00
	Business	47	23.50		Unmarried	88	44.00
	Professional	37	18.50	**Total**		**200**	**100.00**
	Homemaker	14	7.00				
	Others	29	14.50				
Total		**200**	**100.00**				

It was observed that a majority of the respondents were around the age of 40 years (83.5%). Approximately half of the respondents were females suggesting a balanced view in the opinions provided in the research.

H1: **There is no significant consumer involvement for organic food products in Vadodara.**

Table 3: Consumer Involvement for Organic Food Products in Vadodara

Variable	Mean	S.D.	Chi-	Sig.	t-value	Sig.

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			Square			
Affective Link (AL)	4.06	0.616	144.642	0.000	97.391	0.000
Search & Information Processing (SIP)	3.92	0.670	153.45	0.000	86.325	0.000
Social Interaction (SI)	3.36	0.929	84.679	0.000	53.426	0.000
Social Relevance (SR)	3.66	0.618	206.11	0.000	87.454	0.000
Purchase Purpose (PP)	4.26	0.551	119.431	0.000	114.222	0.000
Consumer Involvement	3.85	0.551	135.706	0.000	103.296	0.000

The purpose of this research was to examine consumer involvement and purchasing intention for organic food products in Vadodara. Accordingly, the first step was to determine empirically the levels of involvement. Table no. 3 suggests that the overall consumer involvement was observed to be moderately high (mean=3.85, p=0.000). A mean of 3.8 on a 5-point scale can be justified as moderate involvement. The reason for this value can be appropriated to the fact that organic food products are as such a recent concept and the markets are in the stage of diffusing this idea. With passage of time and more consciousness about health and environment, this value is likely to increase. Consumer involvement in itself is determined by its antecedents. In this research, it was observed that the mean values for all antecedents were in the range between 3.36 and 4.26. The factor purchase purpose had the highest mean value (mean=4.26, p=0.000). While the factor social interaction had the lowest mean value (mean=3.36, p=0.000). Based on the antecedents' value the overall involvement was seen to be moderate. All the values observed were highly significant when subjected to parametric and non-parametric test. Based on the results of Chi-square and t-test, the null hypothesis was rejected and alternate hypothesis was accepted as follows –

There is significant consumer involvement for organic food products in Vadodara.

H2: There is lack of correlation between antecedents of consume involvement for organic food products in Vadodara.

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Table 4: Correlation between Antecedents of Consumer Involvement for Organic Food Products in Vadodara.

		AL	SIP	SI	SR	PP
AL	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	200				
SIP	Pearson Correlation	.676[**]	1			
	Sig. (2-tailed)	0.000				
	N	200	200			
SI	Pearson Correlation	.559[**]	.635[**]	1		
	Sig. (2-tailed)	0.000	0.000			
	N	200	200	200		
SR	Pearson Correlation	.528[**]	.551[**]	.550[**]	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
	N	200	200	200	200	
PP	Pearson Correlation	.660[**]	.584[**]	.480[**]	.524[**]	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	200	200	200	200	200

It was established in the previous hypothesis that there is moderate consumer involvement for organic food products in Vadodara. It was also observed that, the mean values for all antecedents of consumer involvement were positive. It was therefore thought appropriate that inter-relationships between these antecedents of involvement should be examined further to establish the effect of these variables on consumer involvement. Therefore, correlation analysis was undertaken. As can be seen in Table no. 4, Karl Pearson's Correlation Coefficient showed high positive correlation between all the antecedents. The highest correlation was observed between AL and SIP (r=0.676, p=0.000) while, the lowest correlation was observed between PP and SI (r=0.480, p=0.000). It can be seen from these values that; the correlation coefficient was between 0.676 and 0.480 suggesting high positive correlation. All these coefficients were significant at 99% confidence levels. Based on the correlation analysis it can be clearly said that there is a strong favourable inter-relation between all antecedents of consumer involvement. These observations further confirmed that higher consumer involvement for organic food products in

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Vadodara was a result of favourable values of all its antecedents. Thus, based on empirical results the null hypothesis was rejected and alternate hypothesis was accepted as follows-

There is high positive correlation between antecedents of consume involvement for organic food products in Vadodara. Having established a strong positive correlation between antecedents of involvement and consumer involvement, the next step undertaken was to propose a generalized model of consumer involvement. This was done through regression analysis.

Table 5: Regression Analysis for Antecedents of Consumer Involvement towards Organic Food Products in Vadodara.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.795[a]	0.631	0.621	0.53056

a. Predictors: (Constant), PP, SI, SR, SIP, AL
b. Dependent Variable: Consumer Involvement

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104.630	5	13.159	61.867	0.000.[b]
	Residual	63.084	212	0.248		
	Total	167.714	217			

a. Dependent Variable: Consumer Involvement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.057	0.226		0.263	0.793
	AL	0.098	0.050	0.107	1.978	0.041
	SIP	0.185	0.062	0.189	2.989	0.003
	SI	0.142	0.064	0.038	1.656	0.004
	SR	0.115	0.075	0.015	2.195	0.002
	PP	0.557	0.079	0.507	7.101	0.000

a. Dependent Variable: Consumer Involvement

The regression analysis was carried out to further study how antecedents lead to levels of consumer involvement for organic food products. In other words, consumer involvement was the dependent variable while antecedents were the independent variables. From the regression analysis the following model was obtained.

$$Y1 = \beta0 + \beta1X1i + \beta2X2i + \beta3X3i + \beta4X4i + \beta5X5i + \mu i$$

Where,

Y= Consumer Involvement for Organic Food Products in Vadodara

X1= Affective Link (AL)

X2= Search & Information Processing (SIP)

X3= Social Interaction (SI)

X4= Social Relevance (SR)

X5= Purchase Purpose

In this equation, *i* is the sample size from 1 to 200and μ is the random error.

$$CI\ (OFP) = 0.057 + 0.107AL + 0.189SIP + 0.038SI + 0.015SR + 0.507PP$$

It can be seen from this equation from among all the antecedents, purchase purpose (β=0.507, p=0.000) had the maximum impact on consumer involvement while, social relevance (β=0.015, p=0.002) had the least impact. All the coefficients were significant with values being less than 0.05.

In the equation, standardized β coefficients were considered since use of standardized coefficients ensures putting all the variables on the same scale in order to compare the magnitude of each individual coefficient and identify the which one has more impact on the dependent variable.

Based on the values of R (0.795) and R^2 (0.631), the regression model was found to be reliable.

H3: There is no significant effect of consumer involvement on purchasing intention for organic food products in Vadodara.

Table 6: Effect of Consumer Involvement on Purchasing Intention for Organic Food Products in Vadodara.

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Variable	Mean	SD	t	Sig.	Correlation	Sig.
CI	3.85	0.551	8.269	0.000	0.786	0.000
PI	4.07	0.615				

Confidence Level: 95%

The last logical step in this research was to examine whether consumer involvement is related to purchasing intention for organic food products in Vadodara. In order to understand this, paired sample t-test was carried out and the results showed a strong positive correlation between consumer involvement and purchasing intention (r=0.786, p=0.000).

It can be observed form the table that the overall purchasing intention was also positive at 4.07. Based on the statistical analysis, it can be clearly observed that a higher consumer involvement has a positive impact on purchasing intention. Therefore, the null hypothesis was rejected and alternate hypothesis was accepted as follows.

There is a positive effect of consumer involvement on purchasing intention for organic food products in Vadodara.

Findings

This research provided some valuable insights into consumer behaviour for organic food products in Vadodara. Through research, it has been found that low involvement respondents are at an evaluation behaviour stage whereas, respondents with higher involvement operate at purchase behaviour state. (E.H. Bonfield, 1983) [6]. In our research, consumer involvement was found to be positive. In other words, it was on the higher side (mean=3.85, p=0.000). This value of mean on a 5-point scale can be considered as moderately high involvement.

Along with the study of consumer involvement, antecedents of involvement were also analysed. Based on a previous research by Carmen Garcia, et.al. five antecedents were identified which were – Affective Link (AL), Search & Information Processing (SIP), Social Interaction (SI), Social Relevance (SR) and Purchase Purpose (PP). In this research, PP had the highest value (mean=4.26, p=0.000). This suggested that, consumers are in purchase behaviour stage as described earlier. On the other side, SI had the lowest mean (mean=3.36, p=0.000). This suggested that, people prefer to talk relatively less socially.

It was found that, there was strong positive correlation between the antecedents of involvement.

The highest correlation was observed between AL and SIP (r=0.676, p=0.000) while, the lowest correlation was observed between PP and SI (r=0.480, p=0.000). Based on the correlation analysis it can be clearly said that there is a strong favourable inter-relation between all antecedents of consumer involvement.

Since, there was strong positive correlation between the antecedents of involvement, regression analysis was conducted and a statistical model of ascertaining consumer involvement from its antecedents was developed. Based on the model, it was found that from among all the antecedents, purchase purpose (β=0.507, p=0.000) had the maximum impact on consumer involvement while, social relevance (β=0.015, p=0.002) had the least impact. These inferences were found to be reliable based on the values obtained for R (0.795) and R^2 (0.631).

Along with consumer involvement, another important objective of this research was to analyse purchasing intention for organic food products in Vadodara. It was found that there was a positive purchase intention (4.07). Further, it was found that there was a strong positive correlation between consumer involvement and purchasing intention. (r=0.786, p=0.000). This suggested that consumer involvement had a positive impact on purchasing intention.

Conclusion

Based on the data collected and analysis carried out, it can be concluded that consumer involvement and purchasing intention for organic food products in Vadodara was positive. It can also be concluded that consumer involvement is a function of its antecedents.

$$CI = f\,(AL,\ SIP,\ SI,\ SR,\ PP)$$

All the null hypotheses were rejected and alternate hypotheses were accepted.

The findings of this research have an important implication for producers and marketers of organic food products. The results will help them design effective marketing strategies for organic food products.

Directions for Further Research

This research focused only on specific organic food products. The list of organic food products can be widened to be included in future. This research was carried out in the urban areas of Vadodara it can be expanded to include other cities of Gujarat. The research focused only on two

variables, i.e., involvement and purchasing intention. Other variables like consumer attitude, reasons for preference, problems with consumption, etc. can be explored.

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AN ANALYTICAL STUDY WITH THE PRODUCT DIMENSIONS FOR CONSUMER BUYING BEHAVIOR TOWARDS ONLINE SHOPPING

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Abstract

"Happiness is not in money but in shopping" Shopping gives us experience to define the self-expression which reflects our personality, values, beliefs, possessions and purchased products together make a statement about what we are. Nowadays, online behavior becomes integral part of customers to interpret them. A cursory trend is noticeable in recent research and newspapers that consumers have confidence in online shopping only when they gone through with the product dimensions. The efficacy of the product will highly influence the buying behavior. The retail industry is transforming with the upgrading technology and these changes automatically reflect on shopping experiences. As the result, this is the burning issue for the research scholars and practitioners. Hence Consumer Behavior is challenging matter to the analytics of the market. Here consumer changes their taste and preference as per their needs. This led to the strong demand to replace the online methods with the conventional methods. Consequently, marketers have implemented various new schemes and strategies to attract and retain this Omni-channel shopper. This paper analyses the Consumer Behavior considering various product related dimensions, while shopping via online mode. Demographic Status, Age of the respondents, efficacy of product and the awareness to online shopping are the objectives of the study. The outcome of the study indicated that the Online shoppers are well pleased with the product dimensions and also with the other factors like educational status, know how for the online shopping, online services provided and accessibility features had a significant relationship with the awareness for the online shopping.

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Introduction

In the midst of COVID- 19, dependency on Internet has been arisen in India. This pandemic situation escalates the need of online transactions where consumer is more inclined towards the

factors like convenience, ease, safety, security etc. Along with the above mentioned factors it also provides newfangled design for shopping with wide range of merchandise which brings great customers. According to Google, an Indian connects to the Internet for the first time every three seconds, and the total number of Internet users in India is expected to reach 730 million by 2020 (Nasscom-Akamai Report, 2016).

As per Goldman Sach, India's e-commerce industry will reach $99 billion in size while online retail is expected to more than double to around 11% by 2024 from 4.7% in 2019 while increasing at 27% compound annual growth rate (CAGR). The above statistics clearly states that the consumers of India now rely upon the Online Service Providers also expects more facilities.

Consumer behavior is the study of individuals, groups, or organizations and all the activities associated with the purchase, use and disposal of goods and services, and how the consumer's emotions, attitudes and preferences affect buying behavior. According to Schiffman (2007), "the behavior that consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs" The American Marketing Association defines Consumer Behavior as "the dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives".

This emerging and constantly change behavior of consumers' needs the detailed study to be conducted by various scholars and marketers. This study focuses on how to learn and anticipate more about this behavior which affect the buying decision of the consumers. Also the product dimension which helps the consumers to analyses their needs and wants is dealt in the study.

Research Questions

In the last section, meaning and nature of the consumer behavior has been discussed. As the whole process of online purchase is through the Internet, in the virtual environment, there are many uncertain factors that are difficult for online consumers to control, such as online security, privacy protection, and after-sales service. Many groups of individuals believe that online transactions are as easy as pie. Whereas some believes it is hard nut to crack. Easy access, Time Flexibility, Transaction Convenience, Web Design features, Easy Check – out process, detailed product dimensions etc. makes the online shopping more easy. Thus, the research questions of this study are as follows:

- What is the level of awareness towards the consumers for Online Shopping?

- What are the product dimension features which affects their buying decisions?

- What are the factors that could influence consumers' attitude to adopting online shopping

Objectives of the study –

The main objective of this study is to search the awareness level of the Consumer towards Online Shopping features. In this study, the influencing factors that affect the buying decision of the consumer will be examined. The objectives of this research are:

- To study the   demographic status of the respondents.

- To search the awareness level of the Consumer towards Online Shopping features.

- To analyze the efficacy of the product over the product dimensions.

Review of Literature

Larissa Becker & Elina Jaakkola, (2020), their study revealed that by analyzing the compatibility of these research traditions through a meta theoretical lens, this investigation derives four fundamental premises of customer experience that are generalizable across settings and contexts. These premises advance the conceptual development of customer experience by defining its core conceptual domain and providing guidelines for further research. Shekhar Singh and Sandeep Srivastava, (2018) y provides a lot of practical insights for online vendors and their managers in the Indian context. As consumers overcome the stage of initial adoption and start to recognize the advantages of online shopping, it becomes imperative for the e-commerce players like Amazon and Flipkart to engage these consumers with outstanding online user experience. As suggested by the results of this study, online retail companies should focus on increasing the perceived usefulness of online shopping experience for the e-shoppers.

Arun Mishra and Dr. P.K. Chopra, (2014) implied that E-Tailors continuously upgrade their interface and consumer experience based on technological advancements as well as consumer behavior, expectations and maturity, otherwise risk becoming obsolete in the rapidly evolving online world. Ling (Alice) Jiang, Zhilin Yang and Minjoon Jun(2012) described the five dimensions of online shopping convenience are: access, search, evaluation, transaction, and

possession/post-purchase convenience. The study implied that online retailers can employ the five-factor measurement instrument to assess the degree of customer perceived online shopping convenience. This instrument can assist managers in identifying and overcoming key obstacles to the delivery of a highly convenient online shopping service to customers, and also helps them enlarge their loyal customer base.

Zuroni Md Jusoh and Goh Hai Ling (2012) analyzed the factors influencing the consumer's attitude towards ecommerce purchases through online shopping. The study revealed that e-commerce experience, product perception and customer service had significant relationship with the consumer's attitude towards e-commerce purchase. The study concluded that consumer risk in online shopping does not had significant relationship over the e-commerce purchases through online shopping. Guo Jun and Noor Ismawati Jaafar (2011) conducted a study on consumer's attitude towards online shopping. Marketing Mix and reputation were the factors found to have significant positive influence over the consumer's attitude towards online shopping. The local culture and reality determines the attitude and behavior of the local people towards online shopping was concluded from the study.

Methodology

The geographical area taken for this study is confined to Indore district of Madhya Pradesh. This district selected on basis of most populous and largest city of Madhya Pradesh. It has the highest elevation among the major cities in Central India. It has the census estimated population (2011) of 1,994,397 in Municipal Corporation and 2,170,295 in Urban Agglomeration. The data has been collected on both primary and secondary sources. For secondary data, research journals, bulletins, books, published reports and online resources were thoroughly studied. Further, a detailed questionnaire was used for the primary data collection. The snowball sampling method was used to identify the consumers who make online shopping and their behavior was studied in detail. After identifying them, primary data were collected from 402 consumers from all the selected area from which 372 consumers were finalized and remaining were eliminated due to incomplete information.

Limitations

The findings of the study are applicable to the selected areas and cannot be extrapolate for other districts and areas of Madhya Pradesh.

Data Analysis

The data collected through detailed questionnaire included related questions which help in to interpret the behavior of the consumers towards online shopping. Data were –

- Data collected and responses in return were the opinion reflected by consumers only during the study period. It cannot be applicable to the other period in Madhya Pradesh.
- Questionnaire were used and distributed in physical and online mode.
- Different models are there to evaluate but here only Business to Consumer model considered.

Demographic and Socio Economic Profile-

TABLE – 1
SELECTED DEMOGRAPHICS AND SOCIO- ECONOMIC PROFILE OF THE REPONDENTS

S.NO.	Profile of the Respondents	Category	Number of Respondents	Percentage (%)
1	Age	Below 18 Years	-	-
		18 – 25 Years	217	58.33
		26-35 Years	109	29.30
		36-50 Years	38	10.21
		50 Years above	8	2.15
2	Gender	Male	134	36.02
		Female	238	63.97
3	Educational Qualification	Graduate	207	55.64
		Post Graduate	110	29.56
		Doctorate	9	2.41
		Others	46	12.36
4	Monthly Income	Less than 10,000	202	54.30
		10,000 – 20,000	60	16.12
		20,000 – 35,000	48	12.90
		35,000 & above	62	16.66
5	Occupation	Student	102	27.41
		Service	121	32.52
		Business	45	12.09
		Housewife	32	8.60
		Others	72	19.35

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The Table 1 depicts the demographic and socio – economic profile of the respondents'. The majority of the respondents (58.33%) belong to the age group of 18-25 years. Majority of the respondents are female. Most of the respondents had completed their Graduation and major part of the respondents belongs to the employee category. The monthly income of the respondents was less than 10000.

H0- There is no association between the awareness towards the online shopping and preferential factors related to Online Purchase

TABLE – 2

AWARENESS ON ONLINE SHOPPING IN RELATION WITH ONLINE PURCHASE

Factor	Calculated Value	Table Value	D.F.	P. Value	Remarks
Gender	6.567	8.49	4	0.160	Not Significant
Education Qualification	52.46	32.41	20	0.0001	Significant
Knowledge about Online Shopping	68.998	32.41	20	0.000	Significant
Web Design & Security	2.423	8.49	4	0.661	Not Significant
Transaction Frequency	88.787	20.03	12	0.000	Significant
Preferred mode of payment	51.743	20.03	12	0.000	Significant

The above table depicts the association of the awareness of Online shopping with the various preferential factors. It reflects the Factor, Calculated Value, Table Value and its significance with the P Value. The Factors include Educational Qualification, Knowledge about shopping; Transaction Frequency and preferred mode of payment have an association with the awareness towards online shopping as their P value is less than 0.05. The other factors like gender and Web Design and security are not associated with the awareness level.

Analysis of Variance

The relationship between the income and occupation of the respondents and the level of satisfaction was analyzed with Analysis of Variance

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TABLE – 3

INCOME AND LEVEL OF SATISFACTION TOWARDS ONLINE SHOPPING

Source	Sum of Squares	DF	Mean Square	F	Significance
Gender	3.639	1	3.639	0.27	0.869
Age	442.313	3	147.438	1.111	0.345
Education	527.814	2	263.907	1.989	0.138
Income	12.242	3	4.081	0.031	0.993
Age*Income	2.369	1	2.369	0.018	0.894
TOTAL	988.377	10			

TABLE – 4

OCCUPATION AND LEVEL OF SATISFACTION TOWARDS ONLINE SHOPPING

Occupation	Sum of Squares	DF	Mean Square	F	Significance
Between Groups	16.240	4	4.060	1.863	0.116
Within Groups	887.166	407	2.180		
TOTAL	903.406	411			

The Table value of F at 5 percent level of significance for V1 = 4 and for V2 = 407 is 2.37. The F value is 1.863 which is less than 2.37. Hence there is no significant relationship between occupation and level of satisfaction towards online shopping.

H1- There is no significant relationship between the product features and level of satisfaction towards Online Shopping

TABLE – 5

CORRELATION BETWEEN THE PRODUCT FEATURES AND SATISFACTION TOWARDS ONLINE SHOPPING

			Product Features	Satisfaction towards online shopping
Karl Pearson Correlation	Product Features	Correlation Coefficient	1	0.005
		Significance	-	0.720
	Satisfaction towards online shopping	Correlation Coefficient	0.005	1
		Significance	0.720	-

The levels of satisfaction of the consumer towards the product dimensions were analyzed using correlation. Bivariate analysis of correlation was used to test the hypothesis. Following are the dimensions used for the product – Brand Name, Availability of Products, Offers or discount prices, Duration of the product, Quality of the product, Privacy concerns, Good packaging, Ingredients, Utility etc. All the values for the dimensions were positively correlated with P value less than 0.005 which indicated a good positive relation. This is the conclusion that the level of satisfaction increases with the all increase in the product features.

Findings and Results

- Majority of the respondents belong to the age group of 18-25 years.
- Majority of the respondents are female.
- Most of the respondents had completed their Graduation and major part of the respondents belongs to the employee category.
- The monthly income of the respondents was less than 10000.
- The Chi-Square analysis proves that the factors include Educational Qualification, Knowledge about shopping; Transaction Frequency and preferred mode of payment have an association with the awareness towards online shopping as their P value is less than 0.05. The other factors like gender and Web Design and security are not associated with the awareness level.
- There is no significant relationship between occupation and level of satisfaction towards online shopping.
- The product dimensions considered positively correlated with the satisfaction towards online shopping.

Conclusion

The online shoppers of the abovementioned district are satisfied with the simplified process of online shopping. They like the benefits provided with the online shopping like ease of convenience, Product features; preferred mode of payment, web design, secured transactions,

and product offers etc. the identified product features are highly correlated. The understanding of the behavior and perception of the online consumer is much vital and crucial for this study.

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CHAPTER 4

A STUDY OF EMERGING OPPORTUNITIES AND CHALLENGES FACING THE MARKETERS USING SOCIAL NETWORKING WEBSITES

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Abstract

Change brings opportunities, and the only way to make sense out of change is to plunge into it, move with it and join the dance. The firms have understood that the transformation of traditional media to the new internet-based social media has provided new directions through which marketing is being strategized. The new era customers are the same persons whom the firms used to target using traditional media like newspapers, television and billboards. Even the traditional media like newspapers are available online. It is much easier now for people to search for particular news as sifting through huge content has become much easier. In fact, nowadays almost all print media companies have created their presence on social networking sites. The only difference is that their behavior as 'individuals' and as 'customers' have changed because of their increasing presence on the new 'virtual market spaces' like social networking sites such as facebook, Twitter, LinkedIn, etc. These are the 'places' where they interact resulting in new expectations, new rules, new topics that drives them to be actively present on these platforms. To go 'social' is becoming a significant marketing tactic. Marketing through social networking sites is becoming a significant tool of engaging the customers into the interactions that revolve around a product, a brand, an organization or any person/activity. This Research Paper is based on exploratory research study, the data for which had been collected from 400 respondents who are the users of Social networking Websites. The prime objective is to find out the opportunities available to the marketer using social networking websites as a part of their Integrated marketing communication plan.

Keywords: SNW Marketing; Social Media marketing; Facebook marketing; Youtube marketing, Online Social media marketing

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Introduction

Change brings opportunities, and the only way to make sense out of change is to plunge into it, move with it and join the dance. The firms have understood that the transformation of traditional media to the new internet-based social media has provided new directions through which marketing is being strategized. The new era customers are the same persons whom the firms used to target using traditional media like newspapers, television and billboards. Even the traditional media like newspapers are available online. It is much easier now for people to search for particular news as sifting through huge content has become much easier. In fact, nowadays almost all print media companies have created their presence on social networking sites. The only difference is that their behavior as 'individuals' and as 'customers' have changed because of their increasing presence on the new 'virtual market spaces' like social networking sites such as facebook, Twitter, LinkedIn, etc. These are the 'places' where they interact resulting in new expectations, new rules, new topics that drives them to be actively present on these platforms. To go 'social' is becoming a significant marketing tactic. Marketing through social networking sites is becoming a significant tool of engaging the customers into the interactions that revolve around a product, a brand, an organization or any person/activity. Social networking sites continue to grow in strength because they provide a platform to people to connect quickly with their society and with the choice of whom to connect, what to share, etc. On the other hand, these 'connecting' networks provide solutions to the businesses on how to market their brands and it is the 'people who provide them solutions. Social networking sites offer the medium to the firms to learn about the preferences of their customers and also get feedback on whether and in what manner their products are viewed in the market. Social networking sites are providing the ways for the brand managers to connect with their audiences in a faster and economical way.

Significance of the study

An increasing number of people are joining social networking sites as the new media for social connectivity, entertainment, networking, news, information, etc. People are shifting from traditional media like television, newspapers, magazines etc. to new age media. Virtual world is the new 'place' where the target customers of the marketers are present and are spending a lot of time. This study is primarily focused on finding out the opportunities available to the marketers as well as the challenges facing them while marketing through social networking sites.

Objectives of the study

It is truly said that "A study without objectives is like a tree without roots".

i. To find out the opportunities available to the marketers in marketing through social networking sites.

ii. To study the challenges faced by the marketers adopting social networking sites as their marketing tool.

Scope of the study

The scope of the study is to know the opportunities available to the organizations while using social networking sites as a tool for marketing as well as to know the challenges that have to be faced while doing the same. For the purpose of this study, people who are the members of at least one social networking site have been chosen for the collection of data. A structured questionnaire has been developed by the researcher for the data collection. The present study is also undertaken to study the trends and shifts in the marketing practices from traditional marketing to online marketing.

Research Methodology

For this study, primary as well as secondary data have been used. A structured questionnaire was designed containing a series of questions for the collection of primary data. The respondents were contacted during the year 2012-13. Secondary data has been collected using various articles, research papers, case studies, stories etc. more than anything else internet in general and social networking sites in particular have been used in a big way to find relevant literature. After the collection of the relevant data through questionnaires and secondary sources, different types of statistical techniques have been used to analyze the data in this study. The data has been analyzed using Statistical Package of Social Sciences (SPSS 18.0). The data has been presented and analyzed in the form of tables, charts, using the following statistical tools-Analysis of Variance (ANOVA), Cross tabulation, t-test and Coefficient of variation. Chronbach alpha reliability test was applied to check the reliability of the questionnaire.

Results

As the title suggests the prime objectives of the study were to find out the opportunities and challenges in marketing through social networking sites, the findings have been broadly sub-divided into two sections- Opportunities and Challenges.

Opportunities

One of the significant opportunities for the marketer for using social networking sites is that the number of mobile phones and smart phones is increasing. Another significant opportunity for the marketers is increased places of access of internet and social networking sites. As suggested by data analysis, increasing number of people is also accessing the internet and social networking sites in their respective offices. It was also found that facebook is the most popular social networking site, followed by Twitter and LinkedIn. This is also indicated by the facts presented in the literature review, about the increasing number of members on such sites.

One of the most important implications for the marketers is the increased time that the people spend on the social networking sites. As indicated by data analysis and the facts studied, the time spent by people on the social networking sites is increasing. About two-third of the respondents spend 10-20 hours weekly on the social networking sites. Marketers must take advantage of the new space where the customers are spending abundant time. One of the most significant opportunities for the marketers is the availability of personal information of the target customers. The members on social networking sites include their personal information like email id, interest areas, choice of music, books, sports interest, activities, profession, relationship status, etc, which is of wide use to the marketers.

Social networking sites offer different kinds of methods for promotion to the marketers, which may be paid advertisements, at different space or through brand Pages or through community Pages, etc. Data analysis also indicates that about 25 percent of the respondents like to receive some kind of information on new products or sales promotion offers, etc through social networking sites. Social networking sites are the new external platforms where people are searching for the requisite information that is an integral part of the consumer-decision making. Social networking sites are the media where this element can be used as a significant element for promotion. And the beautiful point is that it is not only marketers but it is the people who have begun to upload the photographs of the product that they may like or even dislike.

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Data analysis also suggested that about thirty percent of the respondents have liked/joined a brand/community page just because their respective friends on those social networking sites have also liked/joined the same. The electronic word of mouth is one of the most significant opportunities that is available to the marketers with the use of social networking sites. The customers are able to generate and diffuse the information related to some products or brands. As indicated by data analysis, a little less than half of the respondents have shared information about their recent purchases on social networking sites. Viral marketing becomes an integral part of the e-marketing domain and easily complement the integrated marketing communication, which can have a strong impact on the behavior of the consumers and in their decision-making process.

Another opportunity available for the marketers is the opinion-sharing on social networking sites. Social networking sites have the ability of generating the word-of-mouth, which is considered as the strongest promotional element. Data analysis indicated that about thirty eight percent of the respondents have asked for others' opinions on social networking sites. As evident from the data analysis and the literature review, people tend to trust more on peer reviews. It is also indicated that about fourteen percent of the respondents communicated that their future purchase has been affected by the number of likes on particular brand pages. People tend to believe and trust on peers' recommendations.

Increased customers' engagement through innovative and novel methods on social networking sites is another advantage and opportunity available to the marketers. Social networking sites offer innovative elements for getting the customers engaged with a brand/organization. The customers may be attracted and engaged with the help of various models like contests, quiz, games, activities, puzzles, riddles, general knowledge tests, etc. (As depicted by data analysis). One of the most important opportunities available for the marketers is the electronic word of mouth generation through the social networking sites. It is evident from previous studies and also indicated by data analysis that people tend to share information about new product offerings on social networking sites.

It is also evident that people look for information about various products. Mobile phone is the most popular one followed by categories like electronic items, home appliances, services like hospitals, educational institutions etc. Marketer's brand information must be available to the target customers when they search for it on such sites. YouTube is one of the significant popular

social networking sites, which offers various kinds of videos. The marketers may use this site to run its video commercials. Data analysis also indicates that eighty two percent respondents have watched some videos on YouTube. Apart from the commercial videos, there are other methods also to promote using this site like advertisements at login/logout, advertisement videos that begin before the beginning of the primary videos, etc. Marketers may use one or more ways to promote the respective brand.

A highly significant utility of marketing through social networking sites is the dissemination of positive word-of-mouth about product/brand/organization that has worked to facilitate the businesses, to spread their positioning elements through social media such as social networking sites, as indicated through the literature review. The element of opinion leaders is active in the social networking sites. As the opinion leaders have the ability to have more impact on the belief and recommendations of the same, and also they will be able to have access to a larger number of people, who are the members of the social networking sites.

The social networking sites have the unique and powerful ability of being a two-way media, where it is not only the marketers that speak, unlike the traditional form of media. The customers are also available with the huge opportunity to interact with the marketers. It is rightly said that "the communication is incomplete without feedback". Social networking sites provide the customers with the opportunity to provide feedback to the customers. One big opportunity available before the marketers is that people readily share their personal information and requirements with the marketers on social networking sites. They may not have any issues related to the privacy intrusion or violation by providing such information. Data analysis also suggests that certain elements are most noticeable to the target customers. The advertisements that appear at the time of login/logout on social networking sites are the one which are most noticeable to the target customers, which may lead to increased brand-recall. This is followed by other forms like right-side advertisements.

Challenges

A major challenge for the marketers is the shortage of power supply and low internet accessibility in India, due to which there is relatively low accessibility to the social networking sites. About seventy four percent respondents agree that shortage of power supply is a major hurdle to the smooth access to the internet and thereby access to the social networking sites. One

of the biggest challenges for the marketers is that like any other media, the target customers are present on these sites also for the prime reasons like entertainment and other factors like networking, socializing, etc. People may not notice all the information/advertisements about some brands/organizations. Therefore, the marketers have to inculcate innovative ways of customers' engagement like lucky draws/free samples/contests/games/ general knowledge tests, etc, to enhance the customers' engagement. People are present on social networking sites for networking, socializing, as indicated by data analysis and not to discuss about brands.

EWOM is also the biggest challenge for the marketers. The customers may not always talk positive about a product/brand/organization. They may not be ready to share true experience about a brand on social networking sites or they may be ready to share the respective experiences only at the time of dissatisfaction from some brand(s). Data analysis also indicate that the about 18 percent of the respondents have shared information about their dissatisfactory experience from some brands on social networking sites. One other implication is that when people interact about a brand, they may tend to believe on others' opinions and recommendations. One big challenge for the marketers is that the purchase decision of the customers may also be affected by number of likes or recommendations of others; or interactions with others. People may skip the commercial videos that may appear before the beginning of the primary video, which one intends to watch. People are becoming smart enough to skip those advertisements that may appear before the target customers.

Another challenge for the marketer is the expectation of people regarding the availability of facility of placing orders and making payment. About 70 percent of the respondents agree that the facility of placing the orders and making payment should be there on the brand page on the social networking sites also. A simultaneous challenge is that despite the availability of links to the main website, many respondents (about 60 percent) may not like to buy anything from the social networking sites because they are of the opinion that the online payments are not safe and secure. Therefore, despite the availability of the adequate information and shopping links, people may not be willing to buy the products from social networking sites.

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CHAPTER 5

ETHICAL MARKETING – ONLY CONCEPT OR REALITY?

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Abstract

Ethics is an important issue in marketing. The usage of different forms of advertising and promotion strategies has led to people questioning the ethical aspects. In the era of intense competition, companies, brands and marketers are willing to go to any extent to win over competition and market share. In doing so, it has been observed that they cross the line of ethics. Customers are now a days very much aware of everything that happens around them. In this day and age of information, nothing can be concealed from them. It's high time that ethics are also given its due importance in designing and implementing marketing strategies. This research paper focuses on this aspect of marketing. It tries to understand public sentiment about ethical practices followed by marketers. A sample size of 300 respondents was surveyed by collecting data in the form of a structured questionnaire. The data so collected was analysed and conclusion drawn. The research found that customers are not satisfied with the ethical practices adopted by marketers. The research also revealed some important facts about misleading advertising, deceptive packaging, being environment-friendly in marketing practices, customer centricity and overall purchasing behaviour of customers in light of ethical practices. Except packaging, the overall opinion was not favourable. Customers are well aware of the practices followed by marketers in promoting and selling their offerings. This research is an eye-opener for marketers who fail to consider the importance of ethics in marketing.

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Introduction

It is often said that marketing starts with the need of consumers. If the need is naturally present, marketing of a product or service becomes easier. However, if the need is not present, many advocate that the need must be created in the minds of consumers. How do marketers create need? Through advertisements and promotion schemes. This is where the question of ethics in marketing, especially advertising pops up and we start wondering – is marketing really ethical?

Ethics has been termed the study and philosophy of human conduct, with an emphasis on the determination of right and wrong. For marketers, ethics in the workplace refers to rules (standards, principles) governing the conduct of organizational members and the consequences of marketing decisions[1]. Ethics is defined as an inquiry into the nature and grounds of morality where morality means moral judgments, standards, and rules of conduct[2]. Murphy et al., (2005)[3] mentioned ethical marketing as, practices that emphasize transparent, trustworthy, and responsible personal and organizational marketing policies and actions that exhibit integrity as well as fairness to consumers and other stakeholders. From the literature it is clear that ethical marketing is adoption of practices by organisations which do not result into any kind of deception or fooling of customers. Marketers must disclose all the facts about their offerings and create conditions where a consumer is free to decide what is best for him.

In the recent years, consumers have become more alert and aware about what is good for them and what is not. Hence, it is imperative for all marketers to practice ethical marketing. Looking at this scenario, the concept of societal marketing was put forward where social welfare is also to be given importance.

Literature Review

According to E.C. Alexander (1999), in the long run, ethics and social responsibility issues should have positive impacts on the success of an organization. A responsible and ethical business practice concludes in better customer and employee relations. This is why ethical judgments are made by consumers as well, and these judgments are likely to influence the consumers' acceptance or rejection of a company's products[4]. In fact, marketers could consider ethical marketing as a strategic tool to penetrate market and win consumers' hearts.

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[1] O.C. Ferrell, "A Framework for Understanding Organizational Ethics: New Challenges for Business Schools and Corporate Leaders". R.A. Peterson and O.C. Ferrell, (eds.) Armonk, New York: M.E. Sharpe, 2005, pp. 3-17.

[2] J. Tsalikis and D. Fritzsch, "Business Ethics: A Literature Review with a Focus on Marketing Ethics" Journal of Business Ethics, 8(2), 1989, pp. 695-743.

[3] Patrick E. Murphy et.al. Ethical Marketing, Upper Saddle River, NJ: Pearson Education, 2005.

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Marketing ethics examines issues related to 4Ps such as unsafe products, deceptive pricing, deceptive advertising or bribery, discrimination in distribution. According to some researchers, the fairness on trade practices construct which are also termed as the micro issues of consumerism consider various exploitative business practices among which the mostly discussed issues are misleading advertising, unfair pricing, deceptive packaging, caring about consumers and environmental issues, product adulteration, black marketing, misbranding practice etc. Ali Quazi empirically examined the managerial perception of consumerism with reference to the very different macro environments of two countries – Australia and Bangladesh. Consumerism is defined as a social movement seeking to augment the rights and powers of buyers in relation to sellers. The attitudes of a sample of CEOs towards various aspects of consumerism were analyzed. The results of ANOVA indicated that there are statistically significant differences between the two groups of managers in terms of their commitment to consumerism on such issues as government regulation, advertising to children, the role of consumer organization and industry self-regulation. Interestingly, Bangladeshi managers perceived most of the consumerism issues at a higher level than their Australian counterparts[5].

In the past, researchers have studied the effect of irrelevant information provided for a product in an advertisement on beliefs of consumers' in the product's ability to deliver the expected advantage. It was found that that irrelevant product information leads to systematically weakening of consumers' beliefs that the product will provide the desired benefit. Further, if there is a considerable effect of irrelevant information about the brand, it would weaken the impact of other relevant information. The relevant question in this would be what would be the effect of non-brand related information which is irrelevant? Would it irritate consumers? If it results into irritation of consumers, would it lead to negative reactions towards the product and the advertisement?

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[5] M. Ali Quazi, (2002), "Managerial Views of Consumerism: A Two Country Comparison", European Journal of Marketing, 36, (1/2), pp. 36-50; Sherlaker, ibid. 1999

Abhijit Biswas and Sweta Chaturvedi Thota[6] (2004), in their research examined consumers' response to irrelevant information regarding the product. They posited that consumers would be more irritated if exposed to unrelated and irrelevant information to the focal product as compared to when the same products are viewed as complementary to the focal product. It was suggested that the irritation would negatively affect consumers' attitudes towards the advertiser, the focal brand and even purchasing intentions.

Hairong Li, Steven M. Edwards, and Joo-Hyun Lee[7] (2002) examined consumers' perceptions about the intrusiveness of advertisements. They developed a scale following traditional methods of scale development to measure advertising intrusiveness. The study used expert-generated adjective lists, expands possible measures using a thesaurus, and finally reduced the number of items statistically to derive a new measure of advertising intrusiveness. The scale was validated using samples in different experimental conditions and was found to be valid, reliable, and parsimonious. The importance of such a scale for the field of advertising was discussed. A developed, refined, and validated scale was developed that measured the degree to which ads are perceived as intrusive. The research then distinguishes the new measure from feelings of irritation that result from intrusive ads.

Objectives

The purpose of this research is to find out whether marketers adopt ethical practices in advertising about their product or services. Specifically, the following areas were covered with respect to ethical marketing practices-

- Whether advertising for products is misleading.
- Whether deceptive packaging is used to attract customers.
- Are marketers concerned for environment while designing and implementing marketing programs?
- Are marketers taking satisfactory steps towards customer services and customer care?

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[6] Abhijit Biswas and Sweta Chaturvedi Thota (2004) ,"The Effect of Irrelevant Information on Consumer Irritation and Attitudes: the Moderating Role of Need to Evaluate", in NA - Advances in Consumer Research Volume 31, eds. Barbara E. Kahn and Mary Frances Luce, Valdosta, GA : Association for Consumer Research, Pages: 577-578.

[7] Hairong Li, Steven Edwards, Joo-Hyun Lee, (2002), Measuring the Intrusiveness of Advertisements: Scale Development and Validation, *Journal of Advertising,* Vol. XXXI (2), pp. 38-47

- To study whether consumers show a significantly different buying behavior towards those products or services which are offered through ethical practices.

Research Methodology

This research could be categorized as descriptive research. For the purpose of this research a sample size of 300 was considered suitable. For the purpose of sampling, probabilistic random sampling method was used. Further, stratified sampling method was used where, age group was considered as the strata. Primary data was collected through a structured questionnaire in which respondents were asked to give their opinion on a 5 point scale. In the scale, 5 was considered as "strongly agree" while 1 was considered as "strongly disagree".

For the purpose of collecting information, the questionnaire was divided into six parts. First part was to collect demographic information of the respondents. Remaining parts were to study the reactions of respondents to ethical practices in marketing. The second part of the questionnaire was to gather information about misleading advertisements, followed by questions inquiring about deceptive packaging. The fourth part of the questionnaire was about environmental care, while the fifth part asked respondents their opinion about customer care policies by companies. The last part of the questionnaire inquired about purchasing behavior of consumer towards companies which follow ethical practices in marketing their product or services.

The data was analysed with the help of relevant software. For the purpose of analysis, over and above the simple classification of data, statistical tests were applied to verify the hypotheses applied in this research.

The data collected was tested for reliability using Cronbach Alpha. It was found the data was reliable with an Alpha value of 0.755. Based on this, further research could be undertaken.

Discussion

The following table gives a highlight of the demographic characteristics of the respondents for this research. As mentioned earlier, age was taken as the base for stratified random sampling.

1. Demographic Profile

Age	N	N%
20-30	78	26.00
30-40	121	40.33
40-50	48	16.00
Above 50	53	17.67
Total	**300**	**100.00**
Education		
Undergraduate	73	24.33
Graduate	97	32.33
Post Graduate	107	35.67
Doctoral	23	7.67
Total	**300**	**100.00**

Occupation	N	N%
Service	121	40.33
Business	56	18.67
Profession	57	19.00
Homemaker	66	22.00
Total	**300**	**100.00**
Family Income (Lakh p.a.)		
0 to 4	78	26.00
4.01 to 8	89	29.67
8.01 to 12	65	21.67
Above 12	68	22.67
Total	**300**	**100.00**
Gender		
Male	168	56.00
Female	132	44.00
Total	**300**	**100.00**

Majority of the respondents were in the age group of 30-40 and 40-50. With reference to education, more than 42% of the respondents were post-graduate and above. Income wise, respondents were more or less spread equally across various income groups. In terms of occupation, more respondents were from service sector (40.33%), while 22% were home-makers.

Respondents were asked to give their opinion on ethical marketing practices. For this purposes, they were asked whether advertisements are misleading. The following table shows the summary of responses.

2. Opinion of Misleading Advertisements.

Aspect	Mean	S.D.	Chi-Square	Sig.	Agree (%)	Disagree (%)
Correct Information not Provided	3.53	1.076	61.928	0.000	69.2	30.8
True Claims not made about Product Performance	3.30	1.236	98.576	0.000	57.6	42.4
Must avoid Exaggerations in Advertisements	4.00	1.018	36.632	0.000	82.8	17.2
Overall Advertisements are Misleading	3.61	0.798	95.744	0.000	74.8	25.2

The data collected shows that 69.2% felt that correct information are not provided in advertisements about products and services. 57.6% respondents believed that false claims are

made about performance of products. The highlighting fact was that 82.8% respondents felt that marketers should avoid exaggerations in their promotional messages. This leads to further erosion of trust and belief in the claims. Overall, almost 75% respondents believed that advertisements are misleading. This is an important finding for marketers. Because of such practices, the intrinsic value of advertisements is just for the sake of watching or the celebrity, musical or other appeal. The effectiveness is missing. It just becomes more of either entertainment or hindrance to people.

The second factor where ethical practices are tested is packaging. In this research also, this aspect was covered to test ethical strength. Following results were obtained.

3. Deceptive Packaging

Aspect	Mean	S.D.	Chi-Square	Sig.	Agree (%)	Disagree (%)
Proper information is given on Label	3.79	1.123	17.528	0.000	74.8	25.2
Expiry Date is mentioned on Package	4.38	0.636	109.256	0.000	97.2	2.8
Maximum Retail Price is mentioned on Package	3.67	1.191	93.488	0.000	72	28
In General Packaging is Fair	3.95	0.752	93.68	0.000	86	14

In this compartment, the results were fairly positive. 74.8% respondents felt that proper, correct and sufficient information is provided on package label. Almost all respondents (97.2%) believed that correct expiry date is mentioned on the package, where it is mandatory. 72% respondents felt that correctly and conspicuously pricing information is mentioned on the package. Overall, 86% respondents felt that packaging is done in a fair and honest manner.

The next aspect of ethical practices is being environment-friendly. Respondents were asked whether eco-friendly practices are being followed by marketers, following results were obtained.

4. Environment Care in Marketing of Products/Services

Aspect	Mean	S.D.	Chi-Square	Sig.	Agree (%)	Disagree (%)
Consider effects of Products on Environment	2.89	1.262	106.000	0.000	42.8	57.2
Offer Products in Recyclable Packages	2.95	1.331	66.320	0.000	46	54
Offer Products that Cause Less Pollution	2.78	1.099	211.536	0.000	37.6	62.4
Overall Environment Care by Marketers	2.87	0.996	200.800	0.000	34.8	65.2

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More than 57% respondents were of the opinion that marketers do not consider the effects their products have, or are likely to have on environment. They believe that the materials used manufacturing, distribution and promotion of their products are not highly eco-friendly. Only 46% respondents agreed to the fact that products are offered in recyclable packages. More than 62% respondents felt that the products offered by marketers add to the pollution instead of lessening of pollution. 65.2% marketers believed that marketers do not take care of environment while marketing for their products and services. The material used for promotion is made out of material which is not at all eco-friendly. Use of single-use plastic is done freely by marketers during their promotion programmes and also in distribution of promotion material.

5. Are Marketers Customer Centric?

Aspect	Mean	S.D.	Chi-Square	Sig.	Agree (%)	Disagree (%)
Care about Customer Complaints	3.08	1.226	126.864	0.000	48.4	51.6
Good in Settling Grievances	2.68	1.034	102.752	0.000	36.8	63.2
Care about Customer after Purchases too	2.78	1.138	205.904	0.000	36.4	63.6
Work for Customer Satisfaction	3.07	1.161	149.456	0.000	50.8	49.2
Overall Customer Centricity	2.90	0.810	313.136	0.000	42.4	57.6

Effective marketing is all about finding needs of the customers and filling the needs with a product or service which is better than competitors. In other words, marketers must be customer centric. The thumb rule should be "I sell what you buy". But, a question that arises is, are marketers really customer oriented? If they are, do customers feel that marketers are customer centric? To examine this, respondents were asked to give their opinions on some statements which are shown in Table 5. It was observed that respondents are divided about the fact that marketers do care about customer complaints. 48.4% agreed to this while 51.6% felt marketers don't care about customer complaints. When it comes to settling grievances with customers, the opinion was not favourable. 63.2% respondents felt that companies are not good when it comes to settling disputes and grievances. Respondents also felt that till sales are completed, marketers show lot of care and compassion to their customers. However, after the sale is concluded, this care or compassion disappears. 63.6% respondents felt this. Whether marketers aim to satisfy their customers? The response to this was a mixed one with 50.8% felt positive while 49.2% disagreed to this. In general, respondents felt that there is lack of customer centricity with 57.6% agreeing to this.

6. Purchase Behaviour of Respondents to Ethical Practices.

Aspect	Mean	S.D.	Chi-Square	Sig.	Agree (%)	Disagree (%)
Buy Products from Socially Responsible Companies	3.29	1.158	42.104	0.000	57.6	42.4
Consider Ethical Issues while Purchasing	3.47	0.932	168.536	0.000	72	28
Switch Products/Brands for Ethical Reasons	3.41	1.120	162.896	0.000	66.4	33.6

Finally, the question is what is the response of customers to these ethical or unethical practices? The above Table 6 highlights the response. 57.6% respondents said that they purchase products from socially responsible companies and avoid those marketers who follow unethical practices. 72% respondents consider ethical issues related to the products while buying. An important fact was that 66.4% respondents were ready to switch brands for ethical reasons. This is an important observation for marketers and a note should be taken that customers are becoming more and more environment conscious. The observations are based on the fact that all the results were highly significant when subjected to chi-square tests. Hence, generalization of results could be considered highly valid.

Findings and Conclusion

The data collected revealed some important facts when it comes to consumer response to ethical or unethical practices adopted by marketers. Majority of the respondents believed that advertisements are in general misleading and cannot be relied upon too much. Companies and brands are spending tons of money on advertising and promotion. But, if customers don't find reliability in the messages, it's a lesson to be learnt. One of the main reasons why reliability is low is the fact that there is too much exaggeration in the messages delivered by marketers. Another feeling that the respondents had was that marketers are too much engrossed into marketing their offerings and increasing market share. In doing so, they ignore the cost in terms of environmental damage and pollution. This casts a negative vibe in the minds of the customers. Another belief that customers carry is that marketers just pretend to be customer centric. They are, in reality not so. The data revealed that marketers are not sincere in resolving customer complaints or grievances. They don't care about customers once the sale is completed. However, one positive side of this research was found in packaging. Respondents felt that

packaging and related norms were being followed by marketers. Details like pricing, expiry dates, information about products, etc. are honestly provided on the packages.

So, in general, the feeling in the customers is that marketers in general, are not keen to follow ethical practices. They are after the numbers when it comes to marketing. Though there are laws to ascertain that ethical practices are being followed, it was found that marketers find ways and means to circumvent these norms and laws.

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<p style="text-align:center">CHAPTER 6</p>

CONSUMER ATTITUDE TOWARDS THE NEW NORM OF LIFE – FACE MASKS & HAND SANITIZERS: A STUDY WITH REFERENCE TO PETER ENGLAND'S PE SHIELD IN KERALA

[1]Mr. Jithuram C M

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Abstract

The paper aims to study the consumers' attitude towards the new norm of life, which means the face mask and hand sanitizers. This study had been undertaken with the special support of a renowned brand that comes under the Aditya Birla Fashion & Retail Private Limited named Peter England. Numerous behavioural shifts among consumers culminated in the outbreak of the Covid-19 pandemic. In line with these, different options of personal safety aids, including face masks and sanitizers, were provided to clients. Kerala was in line with the introduction by Peter England of hand sanitizers and face masks. Although the company has launched the most sought-after goods in due time, most current and prospective consumers are unaware of this. There is therefore a real need to undertake this study to understand how well consumers know the latest products of the company and what their understanding of the new products is and how to draw customers to Peter England's products, especially the new PE Shields like face masks and hand sanitizers. The study showed that the items were highly satisfactory by most clients who used the PE Shield Mask and Sanitizer of Peter England. The research also found that filter layer masks, reusable and washable masks are more important to customers.

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Introduction

Fashion and apparel sector as an industry is emerging as a growth industry. It is therefore crucial to garner insights into drivers of consumer buying behavior to enable Indian retail marketers and corporate to realign their strategies to consumer expectations and thereby accordingly profile their consumers, communicate relevant messages and customize in-store experience to increase their market leadership. The outbreak of Covid-19 pandemic resulted in numerous behavioral

changes among consumers. In line with these, customers were offered with multiple choices of personal protection aids including face masks and sanitizers. Introduction of hand sanitizers and face masks by Peter England, Kerala was in accordance with this. Though the company introduced most sought out products in time, it is observed that most of the existing and prospective customers are unaware of this. Hence, there is a genuine need to conduct this study to understand how far customers know about the brand's new products and what their perception towards the new products is and how to attract the customers for the products of Peter England.

During the period of crisis COVID19 pandemic many companies are on the verge of closing down as a result of decrease in sales volume. Peter England is a renowned brand which comes under the Aditya Birla Fashion & Retail Private Limited headquartered in Mumbai, India. The brand is mainly concentrated in apparels. The company has faced a crisis as a result of the reduction in their sales volume in all stores in India. This challenge is converted to an opportunity by diversifying its product namely manufacturing and selling quality face masks and hand sanitizers, at a comparatively low price. The study is therefore concentrating on how companies can survive even in difficult situations. Therefore, an effort has been made by the researcher to study regarding a switchover of the company by producing masks and sanitizers and thereby surviving in the market.

Review of Literature

1. Determinants of Consumer Buying Behavior: An Empirical Study of Private Label Brands in Apparel Retail. Vilakshan: The XIMB Journal of Management. Sep2011, Vol. 8 Issue 2, p43-56. 14p. 19 Charts, 4 Graphs. **-** Krishna, C. V.

Indian retail is in a phase of growth and several businesses are entering the retail landscape. The next major retail segment is apparel after food and groceries, and the consumption of apparel is also very large in volume. In the early days, the manufacturing brands used to dominate the clothing category and the penetration of the private label brands was very minimal. But now things have changed, and in every category, private label brands lead. Many private label brands are also leading the market in the apparel sector. Consumer buying behavior is mainly influenced by several determinant factors and this paper aims at understanding and defining the significant determinant factors influencing the consumer buying behavior towards private label apparel. Private label labels are very effective because they give customers many benefits. Consumers are primarily influenced when buying apparel by many internal variables such as demographic,

attitude and lifestyle and many other variables. Consumers are often influenced by many external factors when purchasing private label apparel labels, such as brand image, price, design and quality.

Effects of Customer Brand Perceptions on Store Image and Purchase Intention: An Application in Apparel Clothing - Procedia - Social and Behavioral Sciences - Volume 207, 20 October 2015, Pages 196-205- T. SabriErdil

In recent decades, the intention to buy clothing items in retail stores has been taken into account as the industry has been rising rapidly. The purpose of this study is to examine the impact of price image, brand image and perceived risk on the consumer's store image and purchasing intention in the clothing industry. The research also looks at the metiating impact of the picture of the store on the relationship. The information was obtained by questionnaires distributed in face-to - face interviews. The results of the research carried out on 146 retailer shoppers supported the direct impact on the purchasing intention of the price picture, brand image and perceived risk. Empirical evidence of the mediating impact of the store image on the relationship between price image and perception of risk and purchasing intention has also been given.

Determinants of Consumer Buying Behavior: A Study of Readymade Garments - Malika Rani, Rajeev Gupta - International Journal of Research in Commerce & Management - Volume No. 4 (2013), Issue No. 04 (April) ISSN 0976-2183

Indian retail is rising very rapidly and there are new players joining this market. The next major retail segment is apparel after food and groceries, and the consumption of apparel is also very large in volume. The proportion of readymade clothing in India's total textile exports is around 45 percent. The purpose of this paper is to determine the different factors that influence the buying behaviour when buying ready-made clothing. A sample of 240 respondents from the 6 districts (Ludhiana, Moga, Firozpur, Patiala, Faridkot & Muktsar) of the Malawi region, including both men and women, was obtained. Using the main variable matrix, factor analysis was used to extract the factors. Four variables have been established that influence the purchasing behaviour of ready-made clothing by consumers. These are community economics, comfort, media & comparison.

Dynamics of Young Indian Consumers' Buying Behavior Towards Branded Apparels: Gender Perspective - Rajput, N., & Khanna, A. - Archives of Business Research, 2(5), 84-106

In today's global market place, the target market for fashion apparel has become more diverse with the emergence of designer labels, store brands, personalization and advertising. Positive attitudes towards western brands are growing. The fashion industry has gone through several big systemic changes over the past decade. This study looks at gender perspectives and sheds light on shopping preferences, brand recognition, young customers ' brand choice in the apparel market. It focuses on the variations in the shopping orientations of male and female shoppers with regard to the different dimensions of purchasing behaviour divided into five characteristics , i.e. Store features, qualities of goods, comparison classes, features of customers and promotional factors. The findings gathered can be a helpful ingredient to strategize on the basis of gender perspective for the marketer.

Exploring The Influence Factors Towards Consumer Buying Behavior In Retail Industry. Yazid, M., & Iffah, N. (2014).

Nowadays, customer behaviour in buying product becomes very critical for buying activity to maintain the business output. The goal of this study is therefore to explore and evaluate the variables influencing consumer buying behaviour towards the retail sector, where researchers are more focused on the apparel industry. Following a study of the related literature, this report used the method; the paper introduces a conceptual model of customer purchasing behaviour towards the retail industry. Using a sample of 150 consumers who are decision-makers in their buying behaviour of a commodity, this study used the quantitative approach. In addition, the researcher uses version 22.0 of the Statistical Package Social Science (SPSS) and computes the result from this data. Using reliability analysis, descriptive frequency statistics, correlation and regression analysis, the finding result was calculated by circulating the questionnaire and calculating the result from the SPSS data. The originality or merit of this research is that this research first analysed Malaysia's consumer profile in the sense of purchasing behaviour and added useful empirical results to the existing restricted retail industry literature to help retailers recognise consumer buying factors based on consumer buying behaviour.

Customer Analytics in Fashion Retail Industry - Giri C., Thomassey S., Zeng X. (2019) - Majumdar A., Gupta D., Gupta S. (eds) Functional Textiles and Clothing. Springer, Singapore.

This paper aims to provide an overview of consumer analytics in the Big Data age of the fashion retail industry. Due to increasingly varying consumer expectations, the fashion retail industry has encountered major challenges over the last few years. Nowadays, because of social media and

other platforms on the Internet, clients are far more educated and linked. They demand more personalized services, and to understand our customers, awareness is not enough. Therefore, to understand our clients and meet their needs, we need data. In the fashion retail industry, we will explore how customer analytics can produce value, techniques and methods to analyse consumer data. Using and investing in these strategies and innovations, the industry would benefit from increased profits, increased prices, higher customer retention rates, and thereby sustainable growth in volatile markets. Using recency value of the clients, segments are created, and their future behaviour is predicted using transition matrix.

Consumer Preferences Towards Private Label Brands In Indian Apparel Retail - A Pilot Study - International Journal of Research in Management ISSN 2249- 5908 Issue2, Vol. 2 (March-2012) Page 87-96 - C.V.Krishna , Dr. Manjusmita Dash

Indian apparel retail is the second largest category in the food and grocery segment of organised retail and the rise in private label brands is also strong in the food and grocery segment as well as in the apparel segment. Many of the retailers in their product range are rising the percentage of private label products as the store brands exit the retailer with higher margins. Consumers are also strongly choosing store brands now-a-days because they can save on cash. The present paper is based on a pilot study conducted to evaluate customer preferences for private label branded apparel in India as part of a PhD study, which is an observational study using collaborative analysis. The paper provides the research results of a pilot study conducted in the twin cities of Hyderabad and Secunderabad. This allows one to understand the purchasing behavior of customers towards private label branded clothes.

Objectives of the Study

- To understand the factors that influences the buying behaviour of consumers while shopping for masks.
- To analyze the influence of location on the buying behaviour of consumers while purchasing masks and sanitizers from Peter England.
- To study the consumer perceptions towards new products of Peter England.
- To analyze the perception of consumers towards the quality of PE Shield masks and sanitizers.

Scope and Significance of the Study

During the period of crisis COVID19 pandemic many companies are on the verge of closing down as a result of decrease in sales volume. Peter England is a renowned brand which comes under the Aditya Birla Fashion & Retail Private Limited headquartered in Mumbai, India. The brand is mainly concentrated in apparels. The company has faced a crisis as a result of the reduction in their sales volume in all stores in India. This challenge is converted to an opportunity by diversifying its product namely manufacturing and selling quality face masks and hand sanitizers, at a comparatively low price. The study is therefore concentrating on how companies can survive even in difficult situations. Therefore, an effort has been made by the researcher to study regarding a switchover of the company by producing masks and sanitizers and thereby surviving in the market.

Research Gap

A number of studies have been carried out to study the consumer behaviour for fashion retail industry throughout the world with skewed focus on apparels and accessories, but no or very limited such studies have been conducted for masks and sanitizers. With a change in the environment the consumers' attitudes and perceptions regarding the retail brands is also changing and with the consequent changes in the purchase behaviour of the consumers, there arise a need to study and analyze the various factors affecting the buying decision of the consumers for products like masks and sanitizers which have now become a necessity. As this new market of protective gears is experiencing a significant growth, a comprehensive study on understanding the market potential and consumer behaviour for such products become important.

Methodology

Research methodology is a way to systematically solve the research problem. It is the description, explanation, and justification of various methods of conducting research

Hypotheses

Based on above objectives, the following hypotheses are framed and tested.

- There is no significant relation between psychological factors and consumer buying behavior.
- Family income and intention to continuous usage of Peter England products are

independent of each other.

- Consumer Satisfaction has no linear relations with the intention of continuous usage of Peter England products.

- Motivation and Buying Behavior of the customer of Peter England have no relationship.

- Perceived usefulness and intention of continuous usage have no relationship.

- Subjective norms have no linear relationship with the intention of continuous usage of Peter England Products.

Sources of Data

- Primary Data: - A structured questionnaire was used to collect Primary Data in this Project Work.

- Secondary Data: - Secondary data are collected from the records of the company, websites, journals, books, and internet.

Sampling Method

Convenience sampling was taken for collecting the samples from the population as the area was wide. A sample of 250 from the entire population is selected for the study, it would be ideal to test the entire population but in most cases the population is just too large that it is impossible to include every individual. This is the reason why the research relies on sampling technique like convenience sampling.

Convenience sampling (also known as availability sampling) is a specific type of non-probability sampling method that relies on data collection from population members who are conveniently available to participate in study. Facebook polls or questions can be mentioned as a popular example for convenience sampling. It is fast, Inexpensive, easy and the subjects are readily available.

Tools for Data Collection and Presentation

- Simple percentage analysis of data - Percentage of respondent = (no of respondents / total respondents) x 100.

- χ^2 = Chi Square value= $(O-E)^2 /E$ - Where = Observed frequency, E = Expected frequency, $\sum$ =Summation

- ANOVA Test

- Correlation

The main tools adopted for presentation of data are tables, Pie charts and Bar diagrams.

Limitations of the Study

- The study is restricted to Kerala. Hence it may not be possible to generalize the finding to the entire population of the country.
- Some of the respondents may not give accurate information, as they may not like to reveal their actual identity, income etc.
- There may be some positive and negative biases of the respondents.
- Shopper's may not have the patience to answer all the questions accurately; and
- Consumers would like to portray themselves as trendy and elite and may not give their actual preferences.

Data Analysis and Discussion

Chi Square I (Mask)

H_0: Two attributes namely Consumer Behavior & Psychological Factor (Perception) are Independent.

H_1: Two attributes namely Consumer Behavior & Psychological Factor (Perception) are Dependent.

Chi Square I (Mask)

O	E	O-E	(O-E)^2	χ^2
6	5.5	0.5	0.25	0.0454
9	8	1	1	0.125
36	34	2	4	0.1176
92	90	2	4	0.0444
97	102.5	-5.5	30.25	0.2951
5	5.5	-0.5	0.25	0.0454
7	8	-1	1	0.125
32	34	-2	4	0.1176
88	90	-2	4	0.0444
108	102.5	5.5	30.25	0.2951
Degree of Freedom = 4	Level of Significance = 5%			**1.255**

P = 0.8689

Here the p value (0.08689) is more than the Level of significance (0.05) so we accept the null Hypothesis i.e. the attributes namely Consumer Behavior and Psychological Factor (Perception) are independent.

Chi Square II (Sanitizer)

H$_0$: Two attributes namely Consumer Behavior & Purchasing Power (Monthly Income) are Independent.

H$_1$: Two attributes namely Consumer Behavior & Purchasing Power (Monthly Income) are Dependent.

Chi Square II (Sanitizer)

O	E	O-E	(O-E)^2	χ^2
5	5	0	0	0
6	6.5	-0.5	0.25	0.0384
35	33.5	1.5	2.25	0.0671
90	89	1	1	0.0112
104	106	-2	4	0.0377
5	5	0	0	0
7	6.5	0.5	0.25	0.0384
32	33.5	-1.5	2.25	0.0671
88	89	-1	1	0.0112
108	106	2	4	0.0377
Degree of Freedom = 4	Level of Significance = 5%			**0.309**

P = 0.989

Here the p value (0.989) is more than the Level of significance (0.05) so we accept the null Hypothesis i.e. the attributes namely Consumer Behavior and Purchasing Power (Monthly Income) are independent.

ANOVA

H$_0$: There is no significant difference in means of districts.

H$_1$: There is a significant difference in means of districts.

DATA

District ↓	Response→	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Alappuzha		3	0	0	5	7	**15**
Ernakulam		0	0	3	17	20	**40**
Idukki		0	0	0	0	0	**0**
Kannur		0	0	4	4	12	**20**
Kasaragod		0	0	0	6	4	**10**
Kollam		0	3	3	3	9	**18**
Kottayam		0	0	1	3	1	**5**
Kozhikode		0	0	0	14	14	**28**
Malappuram		1	1	6	6	1	**15**
Palakkad		1	0	6	7	3	**17**
Pathanamthitta		0	0	5	7	8	**20**
Thiruvananthapuram		0	0	0	9	23	**32**
Thrissur		0	0	2	10	3	**15**
Wayanad		0	0	0	1	4	**5**
Total		**5**	**4**	**30**	**92**	**109**	**240**

SUMMARY				
Groups	**Count**	**Sum**	**Average**	**Variance**
Alappuzha	5	15	3	9.5
Ernakulam	5	40	8	94.5
Idukki	5	0	0	0
Kannur	5	20	4	24
Kasaragod	5	10	2	8
Kollam	5	18	3.6	10.8
Kottayam	5	5	1	1.5
Kozhikode	5	28	5.6	58.8
Malappuram	5	15	3	7.5
Palakkad	5	17	3.4	9.3
Pathanamthitta	5	20	4	14.5
Thiruvananthapuram	5	32	6.4	101.3
Thrissur	5	15	3	17
Wayanad	5	5	1	3

ANOVA					
Source of Variation	SS	df	MS	F	P-value
Between Groups	306.3428	13	23.5648	0.9171	0.5414
Within Groups	1438.8	56	25.6928		
Total	1745.1428	69	Level of Significance = 5%		

Here the p value (0.5414) is more than the Level of significance (0.05) so we accept the null Hypothesis i.e. there is no significant difference between the Consumer's Behavior in various districts of the state.

CORRELATION I

Correlation between Recommending (X) the PE Shield Mask & Customer Rating (Y) the product.

X	Y	$X-M_X$	$Y-M_Y$	$(X-M_X)^2$	$(Y-M_Y)^2$	$(X-M_X)*(Y-M_Y)$
5	6	-43	-42	1849	1764	1806
10	9	-38	-39	1444	1521	1482
33	36	-15	-12	225	144	180
87	92	39	44	1521	1936	1716
105	97	57	49	3249	2401	2793
$\Sigma = 240$	$\Sigma = 240$	$M_X = 48$	$M_Y = 48$	$\Sigma = 8288$	$\Sigma = 7766$	$\Sigma = 7977$
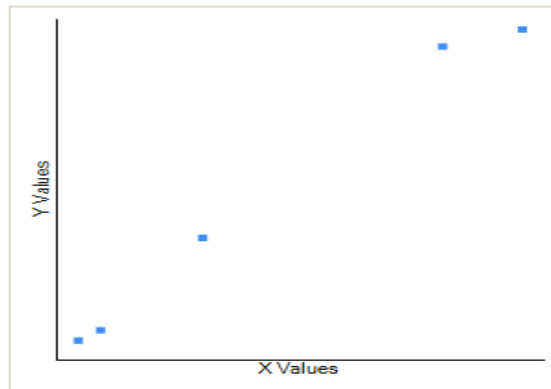
Result Details & Calculation

X Values

$\Sigma = 240$

Mean = 48

$\Sigma(X - M_X)^2 = SS_x = 8288$

Y Values

$\sum = 240$

Mean = 48

$\sum(Y - M_Y)^2 = SS_y = 7766$

X and Y Combined

N = 5

$\sum(X - M_X)(Y - M_Y) = 7977$

R Calculation

$r = \sum((X - M_X).(Y - M_Y)) / \sqrt{((SS_x).(SS_y))}$
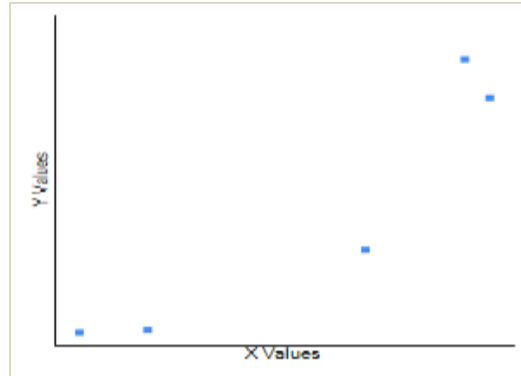
$r = 7977 / \sqrt{((8288).(7766))} = 0.9943$

r = 0.9943

This is a strong positive correlation, which means that high Recommendation scores go with high Rating scores (and vice versa).

CORRELATION II

Correlation between Recommending (X) the PE Shield Sanitizer and Customer Rating (Y) the product.

X	Y	$X\text{-}M_X$	$Y\text{-}M_Y$	$(X\text{-}M_X)^2$	$(Y\text{-}M_Y)^2$	$(X\text{-}M_X).(Y\text{-}M_Y)$
11	5	-37	-43	1369	1849	1591
22	6	-26	-42	676	1764	1092
57	35	29	-13	81	169	-117
77	90	0	42	841	1764	1218
73	104	25	56	625	3136	1400
$\sum = 240$	$\sum = 240$	$M_X = 48$	$M_Y = 48$	$\sum = 3592$	$\sum = 8682$	$\sum = 5184$

Result Details & Calculation

X Values

$\sum$ = 240

Mean = 48

$\sum$(X - Mx)2 = SSx = 3592

Y Values

$\sum$ = 240

Mean = 48

$\sum$(Y - My)2 = SSy = 8

X and Y Combined

N = 5

$\sum$(X - Mx)(Y - My) = 5184

R Calculation

r = $\sum$((X - My)(Y - Mx)) / $\sqrt{}$((SSx)(SSy))

r = 5184 / $\sqrt{}$((3592)(8682)) = 0.9283

r = 0.9283

This is a strong positive correlation, which means that high Recommendation scores go with high Rating scores (and vice versa).

Findings

- The study found that the attributes namely Consumer Behavior and Psychological Factor (Perception) are independent of each other.

- The study found that the attributes namely Consumer Behavior and Purchasing Power (Monthly Income) are independent of each other.

- It is found that there is no significant difference between the Consumer's Behavior in various districts of the Kerala state.

- There exists a strong positive correlation between the customers rating the PE Shield Mask and recommending it to others.

- There exists a strong positive correlation between the customers rating the PE Shield Sanitizer and recommending it to others.

Suggestions

- Though most of the customers (38%) are using the PP Melt blown layer mask which is in favour of the company. The next majority is of people preferring N95 filter or cloth face coverings (23% and 22% respectively), steps should be taken to satisfy the needs of these customers also by introducing masks with N95 filter layer and cloth masks could also be introduced.

- No customers were found from Idukki district, new stores could be opened in different places for providing customers with easy proximity to the store.

- 22% of the respondents have rated the PE Shield mask as average or below and 19% have rated PE Shield Sanitizer as average or below, customer feedback can be taken regarding the products in order to provide them with the products which can make them highly satisfied.

- Consumer Behavior and Perception of quality are found to be independent. So, the quality of the products can be improved to make them dependent on each other.

Conclusions

Here we have researched the customers' attitude towards the new products of Peter England which were launched during the COVID-19 period as per the market requirements. It could be seen here through the analysis and study that customers had a positive attitude towards the new products. This study examined the influence of demographic variables, consumer buying attributes and other factors on consumer buying behaviour for protective gears. The researcher

tried to understand the impact of various factors which influence the consumer buying behaviour while purchasing masks and sanitizers. The customers found the products to be of high quality and are highly satisfied with the products.

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CHAPTER 7

CHALLENGES IN DIGITALIZATION OF MARKETING EFFORTS IN CURRENT INDIAN CONDITIONS

[1]Dr. Suresh Abhyankar

Abstract

Technology brings in changes in all activities in the world, E-commerce or digital marketing one such change brought in by the advent of internet connectivity going Global. Every new process and or technology brings in challenges along with the ease of operation. This study is trying to put light to the challenges that faced by the marketers as well as the customers

[1]Faculty, BIMM (part of SBUP), Pune

Introduction

Digital marketing is also called as E-commerce Or E-marketing as it uses Internet as a tool. Digital marketing is the promotion of products or brands using electronic devices or the internet. It also includes text messaging, instant messaging, video, apps, podcasts, electronic billboards, digital television and radio channels, etc. Digital marketing uses multiple channels and technologies that allow an organization to analyze campaigns, content and strategy to understand what's working and what isn't – typically in real time. Digital Marketing came in to effect in the new millennium through explosion of information technology. Since there are no geographical boundaries in internet marketing it becomes very easy for the marketer to go GLOBAL and that too at a very low cost/expense.

Traditionally the marketing was game of making product available physically at various locations wherever there was chance to have availability of customers and making it known to the customers that the product was available at nearest locations and was having various unique features that would give various benefits to the customers. If competition is present then you have to also ensure that your quality and benefits are better than competition in the eyes of the customers.

The marketing promotional efforts were introduced just to prove that the company products better than and /or giving better benefits than the competitive products. In this game creativity of

the marketing personnel played a major game and ensured that more creative marketing personnel ensured better results.

Marketing efforts needed support of various media; originally it was only display windows/shelves in the retail outlets along with billboards, posters and leaflets. As the technology went on developing then came the radio, cinema, TV commercials and finally now the all-encompassing web.

Media always had problems of reach; print media had problems of literacy and purchase parity. Cinema was only for cine-goers and that too reaching the cinema hall in time as the advertisements were shown before the movie started. Radio was only available with rich class people; the transistors made a revolution reaching to lowest of low class; but advertisement time was limited and only audio was available. TV changed the game after ASIAD 1980 when color TV and multiple channels were made available, where advertisers can choose the segment they want to address to. Cable and DISH TV increased the reach multi-fold.

If your product was used in production of other products as raw material or OEM (original equipment in manufacturing) then you will have two options depending whether you have competition or not. If you have competition you have to prove to the customer that your price and service is better than the competition as the customer won't compromise on quality of the product. Now many times the difference between one supplier's service and other supplier's service depends on the personal relationships between the purchase manager and the supplier's sales person. To ensure that the relationship develops fruitfully various companies started offering entertainment allowances to their sales persons and also memberships to elite clubs where they can meet the purchase managers and influencers unofficially and develop relationship in the friendship.

In OEM market the market got classified as direct to manufacturer and the aftermarket as replacement spares. Many suppliers concentrated on the aftermarket giving quality replacement spares at much higher rates than the OEMs. This after market depended on the quality of distribution set-up, if your reach and service could reach the farthest of the customer; your replacement spare became popular and sold high quantities. Here again the relationship with the mechanics and the retailers played a major role.

In all the professional organizations major cost reduction technique to ensure that proper sales forecasting is done in advance (forward fore-casting for at least three months) that ensures inventory control of raw materials and also the finished goods. The better the sales fore casting by sales team better the inventory control leading to competitive cost advantages making more money available for advertising and promotions. This also gave better financial control of operations ensuring maximum rotations of the capital (at least 10 times in a year) leading to higher profit earning with low profit margins.

The marketing efforts always remained complex and the results always depended on the perseverance and efforts on ground level. Has it changed with digitalization? To find the same this research paper will try put light on it.

Objectives

With the above scenario the objectives of the research are as follows

1. Can digital marketing reach all the customers?
2. Can digital marketing be directed to specific customers?
3. Can we forecast sales growth on the basis of digital marketing?
4. Can digital marketing be used for all the types of products?
5. What challenges will be encountered in doing digital marketing for different product types?

Research methodology: This is going to be entirely exploratory desk research based on secondary data.

Findings

Internet Users

As per the internet usage statistics, as of July 2017, 50% of the world population is using the internet. (i.e.) 3.42 Billion Users. The total number of users in 1995 was less than 1% of the world population.

Internet Users in the World
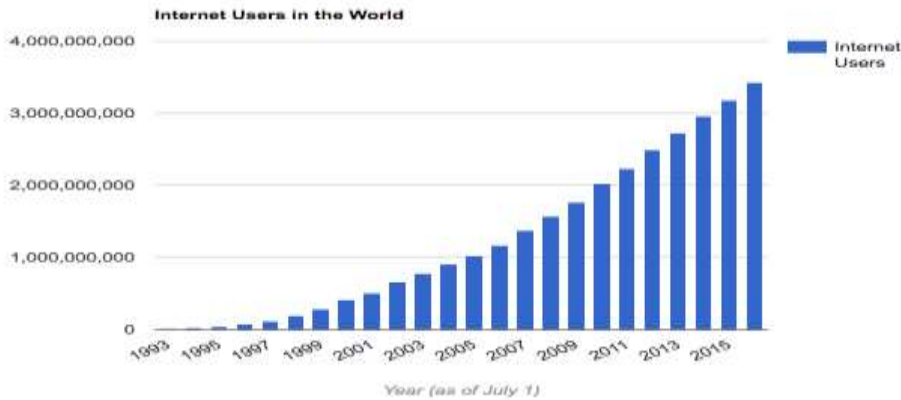
As we can clearly understand from the above stats that in the next few years more users will be connected to the internet, which gives more scope for digital marketers to reach target audience globally. India has surpassed USA as the 2nd largest country in terms of number of internet users.

Top 4 Internet Users by Country (Feb 2019)
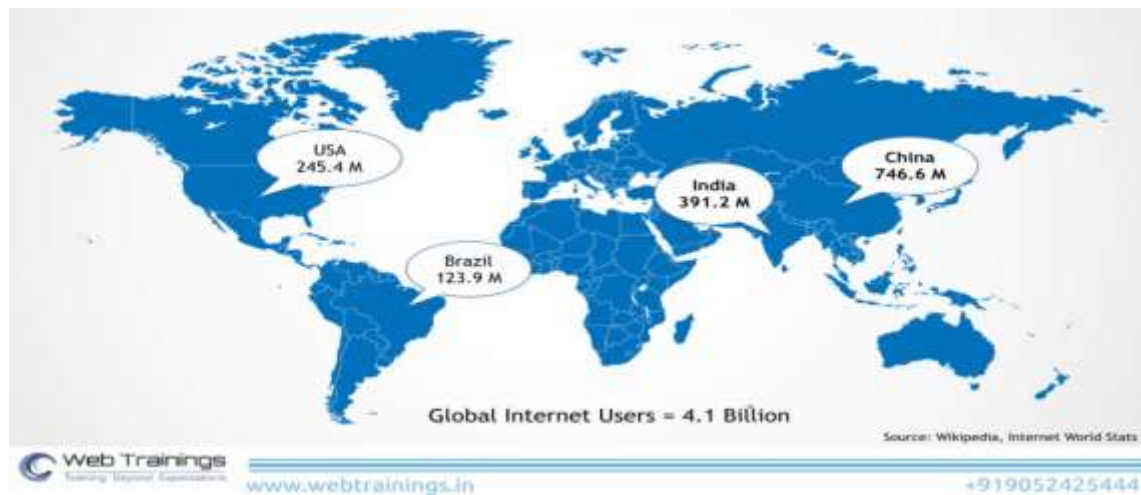
Mobile Phones

Most of the users globally today use mobile phones for communication. As per a report 4.77 billion mobiles phone users globally, which will increase to 5.07 billion by 2019. Today's majority of mobile phones are smart phones with internet access, which allows to customers to connect with businesses anytime & anywhere

Falling smartphone prices, cheaper data plans and an increase in local-language and mobile-first content have powered a phenomenal explosion in the number of internet users in India. In the last four years alone, India's internet population has almost doubled to 430M.
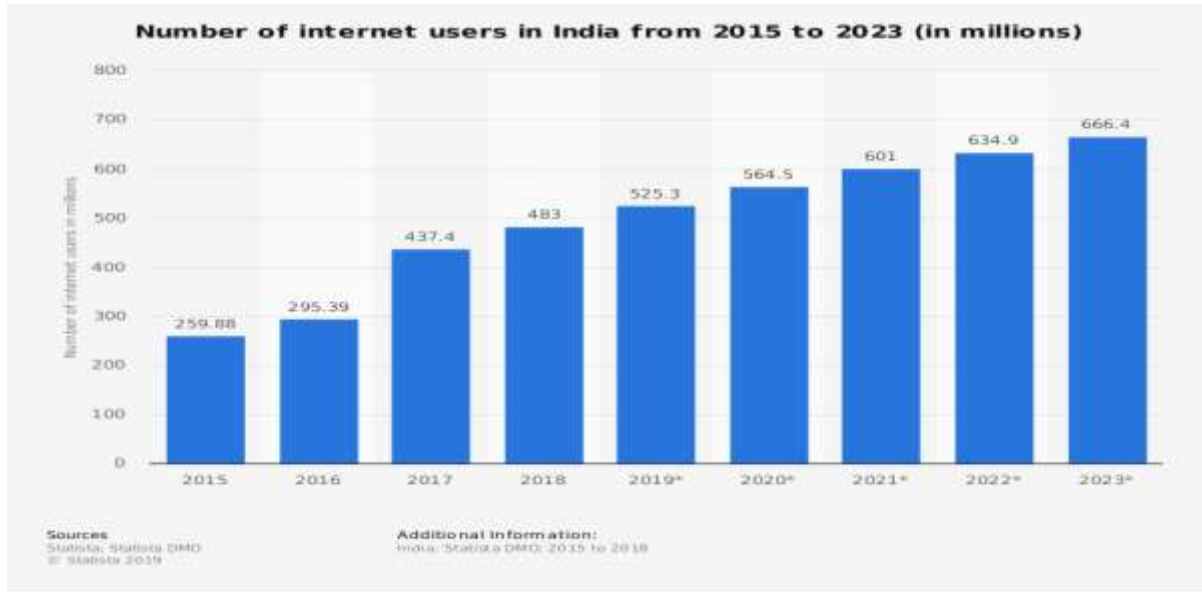
Source: Statista

Online Shopping Adoption in India
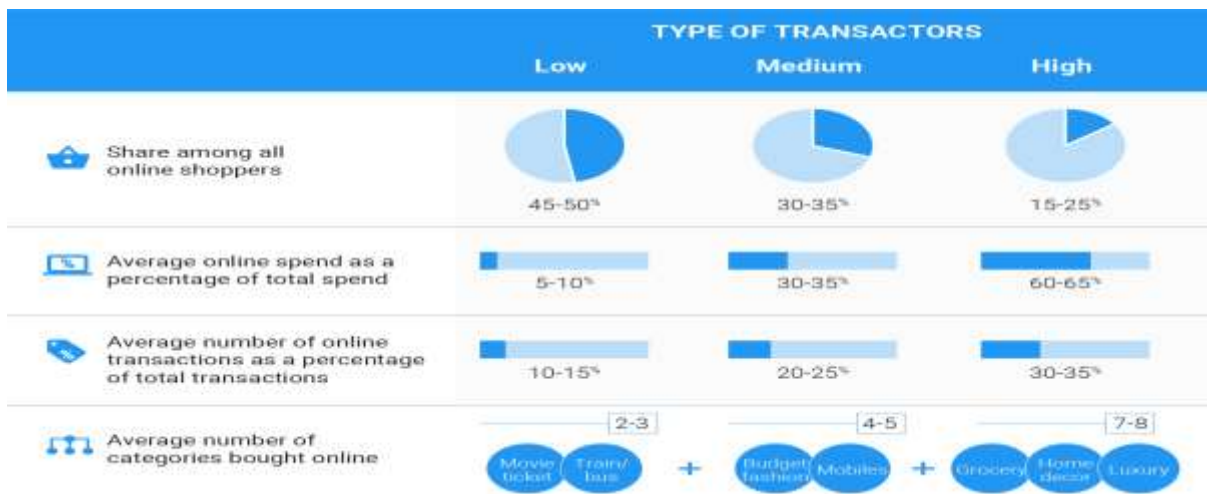
Note: Data representative of e-commerce, travel, and other bookings. Does not include spends on media (online or offline).

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Source: CCI digital deep dive daily survey 2017 Q1 (N=11,094 daily transactions), BCG analysis based on project experience and research.

Currently, 75-80% of internet users in India do not spend online yet. They make purchases either occasionally, spend limited time online, or do not spend a significant part from their overall wallet at all. By 2020, however, with further improved infrastructure and greater digital maturity, online transactions in categories such as e-commerce for apparel, electronics, durables, and food and groceries are likely to drive rapid growth, inching us closer to the $100B opportunity.

Emerging consumer segments soon will become the key drivers

The Changing Demographics of India's Online Shoppers

	2017	2020E
User base as per city tier¹		
● Metro + Tier 1	60%	51%
● Tier 2, 3, 4	40%	49%
Profile of online shoppers across India		
Age		
18–24 years	33%	24%
25–34 years	41%	43%
35+ years	26%	33%
Gender		
Male	63%	55%
Female	37%	45%

1. In the period from Jan-Sep 2016 to 2017; Tier 1 cities include Bengaluru, Chennai, Delhi, Faridabad, Ghaziabad, Greater Noida, Gurgaon, Hyderabad, Kolkata, Meerut, Mumbai, Navi Mumbai, Noida, Pimpri-Chinchwad, Thane.
2. Google Consumer Barometer Survey, 2016.

Source: BCG CCI Digital Influence 2017 Study (N=18,000), BCG analysis based on Project Experience and Research, Google search query data 2017.

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In addition to today's typically male, millennial and metropolitan users, the demographic profile of online spenders will undergo a major shift in the next few years. According to estimates, there will be 2.5X as many women shoppers and approximately 3X as many older (35+ years old) shoppers as there are today. And with the steady increase in the share of search queries in India's non-tier-1 cities, smaller markets will be hopping on the bandwagon and contributing close to 50% of the online shopper base by 2020.

With this imminent growth at arm's length, marketers need to refresh their offerings in terms of price, delivery, and return policies in order to gain their fair share of the market.

Digital spending in India is on the cusp of a tidal wave, with the total volume of digital transactions expected to surpass $100B by 2020 - a mere two years from now. While we have seen enthusiastic adoption of new forms of digital payments in recent years

Best B2B Marketplaces India:

1. Alibaba – Wholesale B2B Marketplace
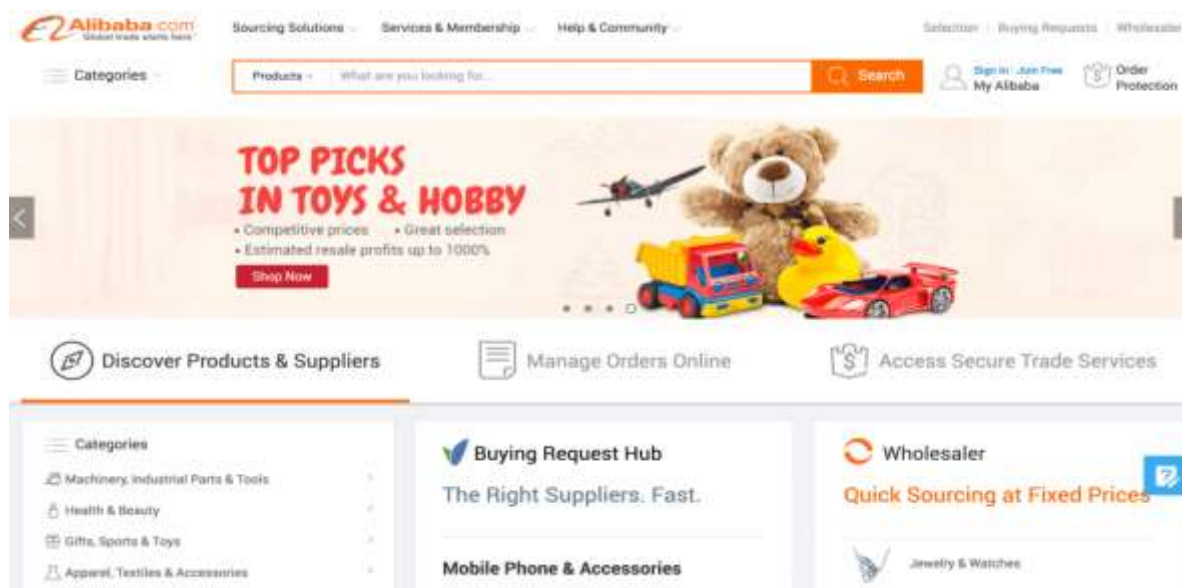
Alibaba is the leading platform for global wholesale trade.

Alibaba brings you hundreds of millions of products in over 40 major categories, including consumer electronics, machinery and apparel. It's the go-to platform for cross-border trade of goods and helps small/medium businesses worldwide expand to overseas markets.

Founded in: 1999

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Website: http://alibaba.com
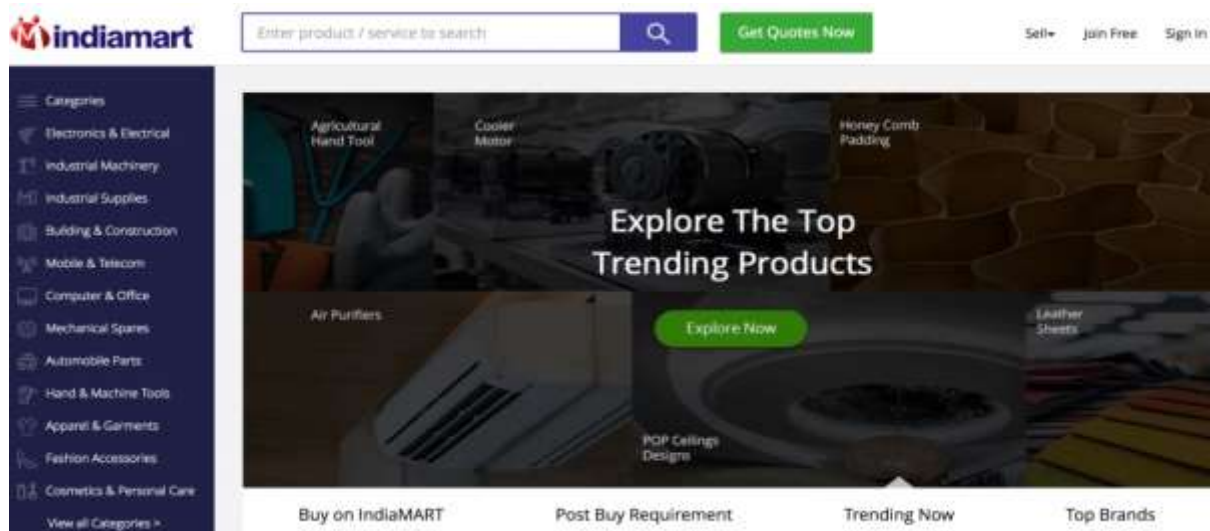
Some numbers:

- Alibaba serves more than 18 million buyers and sellers from more than 240 countries and regions, showcases products ranging from raw materials to finished goods.

- Covers more than 40 industry categories.

Costs and Pricing:

If you are a seller, you can display up to 50 products completely free of cost or if you get the Gold membership you get a really nice mini-site to display unlimited products or services.

If you are a buyer, post what you need in a 'Request for Quote' and let sellers come to you.

2. IndiaMART

IndiaMART is India's one of the largest online marketplace, connecting buyers with suppliers.

The online channel focuses on providing a platform to SMEs, large enterprises as well as individuals.

Founded in: 1996

Website: http://www.indiamart.com/

Some numbers:

Approximately 1.5 million suppliers registered in this portal and generating business from over 10 million buyers.

3. TradeIndia – Online B2B Marketplace in India

India's one of the largest online B2B e-commercial center, offering on the web business listing and yellow pages of Indian and Foreign manufacturers, suppliers, exporters, importers & service providers

TradeIndia is an ideal forum for buyers and sellers across the globe to interact and conduct business smoothly and effectively.

Founded in: 1996

Website: http://www.tradeindia.com/

Some numbers:

- 37,26,397 registered users

- Product catalogs under 2,215 different product categories and sub-categories.

- It receives around 20.5 million hits per month.

4.   **go4WorldBusiness--Great   Wholesale   B2B   Marketplace**

go4WorldBusiness.com is an online B2B marketplace for global exporters & importers.

Founded in: 1997

Headquarters: New Delhi, India

Website: https://www.go4worldbusiness.com/

Parent Company: Wyzen Systems Pvt. Ltd

5. **JimTrade**

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JimTrade is another Indian Business Directory featuring Indian suppliers directory, manufacturers and products directory, Trade Fairs from India.

JimTrade provides the complete and updated information on Indian products and suppliers for buyers.

JimTrade is the number one destination for buyers to source Indian products and for Indian sellers to find trade opportunities and promote their businesses online. This makes JimTrade a perfect fit for the list of b2b websites India.

Founded in: 2005

Website: http://www.jimtrade.com/

Headquarters: Mumbai, Maharashtra

Some numbers:

- It has information of more than 1,50,000 Indian suppliers and products.

- JimTrade has thousands of registered buyers who access this information daily.

6. Tradeford

Is one of the leading global B2B marketplaces for global buyers, suppliers, and manufacturers. It creates free company websites, showcase unlimited products.

Proceedings of 12th International Conference on the theme "Digitalization as a Vehicle for Innovation, Organizational Growth and Effectiveness"

Website: http://www.tradeford.com/

TradeFord's extensive database of quality buyers and suppliers covering all major industries starting from Apparel, Fashion, Chemicals, Construction, Electronics, Furniture, Food & Beverages, Health & Beauty, Machinery, Transporation and many more

7. **Amazon Business**

Taking advantage of the unlimited FDI provision for B2B segment in India, Amazon has recently launched their dedicated portal: AmazonBusiness.in for small business owners and traders in India.

Amazon is currently targeting small offices, entrepreneurs, department stores, Kirana stores, drugstores, clinics, hospitals, hotels, and restaurants.

Website: https://www.amazonbusiness.in/

Founded in: 2015

Specialized in:

Currently, Amazon supports targeted niches like

- Office Products & Stationery,

- Cleaning & Housekeeping Supplies,

- Bed & Bath,

- Kitchen & Dining,

- Health & Personal Care, and

- Food & Beverages.

Amazon is claiming that they are listing thousands of products across these categories

8. ExportersIndia

Exporters India is one of India's largest searchable B2B marketplace and Exporters Directory that connects Manufacturers, Exporters, Suppliers and Buyers.

Founded in: 1997

Website: http://www.exportersindia.com/

Exporters India is the home for countless products and businesses across the globe.

9. WebdealIndia

The portal is designed to foray a uniquely ideated B2B and B2C marketplace, where the buyers can choose the products from a colossal inventory, take the smartly packed wholesale offers, interact with the stores and above all, pay online

Impact of COVID-19on online shopping

CORONA pandemic had positive impact on digital marketing; but only in Metro, tier 1&2 Cities and some tier 3& 4 cities reported digital business but there were many complaints of orders being decline by websites, or being delayed for longer time due to infrastructure issues.

1. Shopping websites like Bigbasket and Amazon.in were initially closed for operations from 25th March'20 but after the initial lockdown was opened there was huge rush for grocery and essential commodity buying and these sites have reported never before sales volumes.

2. Modern retailers like MORE contacted their entire regular user for online/mobile orders. The only problem faced here was for payments as they insisted on advance payments that

too by mobile apps. All those customers using credit/debit cards and cash were deprived of this facility

3. When restaurants started TAKEAWAY orders all websites like Swiggy/Zomato had a gala time supplying the stocks, they were required to appoint additional delivery boys and ensure sanitization and care against spreading the virus

4. Shopping habits of shoppers changed rapidly due to the pandemic and there was huge increase in the number of online shoppers in many parts of India

5. Retailers shifting to selling essential goods: Since most of the customers were neglecting purchases on non-essential goods these shopkeepers shifted towards selling essential goods

6. Digital transformation of local neighborhood Kirana shops: Many local kirana shops started their websites and accepted orders through E-mail/SMS/WhatsApp and delivering the goods. Since the supplies were mostly to known customers credit facilities were also offered.

7. Amazon has started field trials of Amazon Scout, a small, self-driving delivery vehicle with a prime logo on it. Amazon Scout will distribute packages in the pilot during daylight hours, Monday through Friday

8. **Online sales doubled for many FMCG companies**: Online contributed just 1% of groceries sales in the country until mid-2017, which nearly doubled to 1.9% by 2019. Industry estimates this may shoot up to over 4-5% this year, according to the latest Nielsen report, online contribution to India's FMCG sales rose nearly 50% year-on-year in the March quarter as consumers increasingly shopped from e-grocers, while local grocer's share fell 220 basis points, entirely overtaken by ecommerce and modern retailers

9. **Online business will touch $85 Bn.** In India: According to Business standard report the online business will touch $85 Bn. In 20202 and will reach $200Bn by 2030

10. Digital streaming: The OTT platforms like NETFLIX, AMAZON, YOUTUBE, HOTSTAR were the major gainers due to pandemic as fresh contents were not available on cable channels

Challenges faced by traders and customers in digital marketing

The availability of facilities is growing but challenges still remain that are found to be as follows

1. **Unorganized sectors:** Most traders and wholesalers are in unorganized sector having unprofessional/traditional behavior with no proper data of sales and purchases or the inventory making it difficult to assess availability and requirements

2. **Supply chain logistics**: With bad quality roads one cannot be sure of the time required for reaching any goods from one place to another. Major transport operators also depend mostly on contractual truck operators reducing operational efficiency and also the safety and security of the goods

3. **Tedious taxations:** Though the GST (goods & Service tax) have brought some semblance in taxation, the number of slabs of GST (seven) makes it difficult the taxation working and to add more confusion the bifurcation of state GST and central GST is required to be worked out. In some cases, same product/services are taxed at different slab depending on the location and condition (A/C restaurant 28% GST, non-A/C restaurant 18%, Multiplex 9% GST and single screen cinema 18%)

4. **Rural Outreach:** 60% Indians are in rural background, with no or intermittent connectivity. People are still afraid of using digital payments and cyber security. In many semi-urban areas also digital payments and credit/debit cards are still not accepted. Real time information gathering becomes very difficult.

5. **Payment collection:** Indian businesses are habituated to longer credit cycles e.g. in textiles it is very common to have credit cycle of 180-210 days and entire B2B (industrial business) is habituated to 90 days credit cycle, in FMCG 15-30 days credit cycle is normal along with pharma sector having credit cycle 30-45 days even in retail. In many businesses' payment is not realized unless follow-up is done. Personal rapport plays biggest role

6. **Non-availability of AI (artificial Intelligence), VR (Virtual reality) and AR (Augmented realty):** For complex buying situations availability of such tools is must without which customer avoid buying the products? This has been proved by Mintra/Lensecart where the sales are higher with availability of Augmented realty

7. **Buyer-vendor relationship development**: Developing buyer-vendor relationship in B2B business is very important without which business cannot grow. This is seen in all the businesses that is the reason for one sales person getting higher business while another lesser or even no business.

WHY BUYER-VENDOR RELATIONSHIPS BECOME STRONGER

Reasons buyers give for vendor relationships getting stronger.

Trust	52%
Personal relationships	45%
Responsiveness	45%
Quality improvements	43%
Value for the money	38%

Data source: shopify.com - B2B in Ecommerce: How the Best Succeed in a $7.6 Trillion Online Industry   IFLE[X]ION
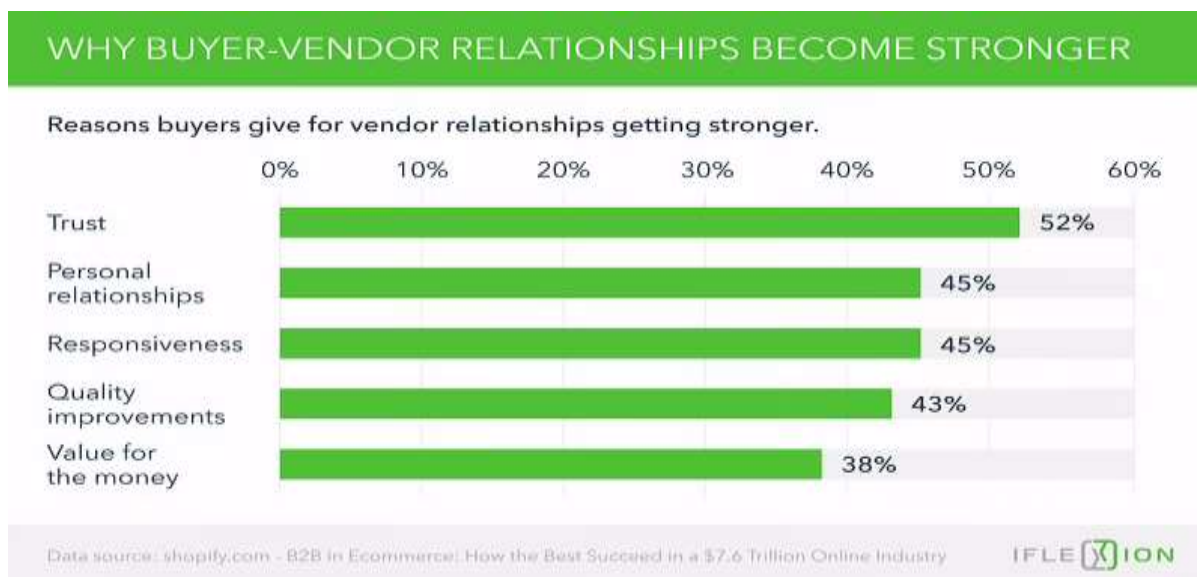
8. **Difficulty in forecasting sales:** Without having developed buyer-vendor relationship, it is very difficult forecast the business as the customer may change the vendor any time leading to complete loss of business from that buyer. With proper forward forecast planning of production, buying raw material in optimum quantity and ensuring required amount of product at right time and right location becomes very difficult leading to both shortages and one place and overstocking at another place increasing the cost of purchases, inventory and transportation. Many organizations are using digital platforms as additional mode of sales rather than sole mode of sales

9. **Product loyalty:** in most products consumers are still not loyal to particular brand and buy whatever is available (this is happening in e-commerce also). Ensuring product availability on all the platforms along with proper physical distribution has become a challenge.

10. **New business entrants:** Many new comers are entering digital marketing and since they are willing to pay high commission to the e-commerce platforms; the digital platforms push the products where their earnings are high. Customers choose digital platforms for ease of operation and many times sacrifice on quality examples of Swiggy and other food suppliers are well known. Many reputed restaurants and textile manufacturers agitated against the digital platforms for demanding higher security deposits and commissions.

Conclusion

Looking in to the data available on internet users and internet shoppers and the challenges faced by the digital marketers we can safely draw following conclusions

1. Only about 50% population is using internet

2. Only 20% of internet users (i.e. 10% of population) is using online shopping

3. In metro cities use of online shopping is only about 60%

4. In tier 1 & 2 cities the online shopping has started, but at very low level

5. B2B business is facing challenge of adoption to digital marketing because of many reasons like, credit norms, infrastructure, logistics and Buyer-vendor relationship problems

6. Challenge of cheap imitators is major problem faced by B2B suppliers, that makes them continue traditional contractual sales

7. Many organizations are using both traditional as-well-as digital platforms to safeguard cost management related to sales forecasting

8. COVID-19 has positive impact on digital sales with FMCG companies reporting 100% sales growth on digital platform and many tiers 2&3 customer adopting to digital shopping

9. Local Kirana shops have also gone digital to fight modern retailers and safe guard their sales by offering credit facility that is not available on digital platforms

10. Bad road conditions and non-availability of logistics still remain major challenges for digital marketing.

11. Payment gateways is another challenge faced by digital marketers

12. Challenge of timely delivery is a major problem faced as reliable transporters are not available in many areas.

Limitations & Further scope of study: Since the entire study is based on secondary information and authors contacts with sales fraternity, study based on primary data will be more authentic and useful.

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CHAPTER 8

CONSUMER BEHAVIORS STATUS DURING COIVID19 ON PRODUCT PLANNING AND PRODUCT LIFE CYCLE

[1]Dr. Ashish Sharma

Abstract

Product Planning is an important factor in product decision companies keep on taking the decision as per available data at both macro and micro level. Companies are having the routine practice of routine product decision. There is not much extra ordinary challenge in normal conditions. The companies already remain with the category of reviews on following aspects of Product Planning; Product mix decision, Product line selection, Product line modification, Product line addition, Product line deletion. Product planning is having an important decision with Product Life Cycle. Product Life Cycle is having following stages; Introduction, Growth, Stability, Decline. Companies are having standard strategies on each stage of Product Life cycle. The Consumer Behavior is one pattern which can't be an avoidable factor in product planning stage. Consumer present particular set of behavioral pattern at each stage of product life cycle. Ceschin (2016) has presented exploration between and sustainability. The companies have no difficulty for analysis of Consumer Behavior during non covid situation because we don't get much shifting in consumer behavior. There are emerging forces for the companies to analyze consumer behavior in covid -19 situations. The important question arises about continuing an existing Consumer Behavior or changing consumer Behavior. The Research plan is to analyze the status of consumer behavioral variable during covid 19 situation for product planning and product life cycle situation al phases. This will be having limitations up to consumer products only. The Researcher will follow both combination of qualitative and quantitative research methods. Researcher will have series of statistical testing on challenge of Hypothesis testing and will have a responsibility of presenting clear findings about consumer behavior al status.

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Introduction

Product life cycle will be applied for both living and non living in market. Like human all this products come to an end of life so they are mortal in nature. A human take birth, develop and grow old. Brand also get birth and work on growth and this way reach to attain maturity and thereafter go for declining stage. Dhalla (1976) has referred to profit volume concept in this regard. The life starts grow get stable and started decline. Sales and time aspect shows the result for this purpose. Levit (1965) had mentioned about market development and its implication for product life cycle. Role of supply side also plays an important role in this regard. Lambkin (1989) had advocated the role of supply side in this aspect for evolution of Market. Many products may have shorter duration life cycle. This depends on nature of the product. This may affect the implication of the product. Goldman (1982 has written about this fact. Products attained different levels at different schedules. The different periods may have relatively different positions on PLC curve. Smallwood (1978) had written about these aspects. Social impact has connectivity with life cycle assessment. Social impact can have local assessment in life cycle assessment. Norris (2006) had mentioned about. Companies are functioning in complex and dynamic condition. They are exploring new ways of working in the new system. The business survival is getting difficult. The New environment is highly recommendable. Innovation became need of an hour. Laforet (2007) had worked for combination of relationship with Product life cycle. Companies have been also taking competitive condition in to consideration. Tann (2006) had examined this issue

Life cycle has affected the industry performance. The life of Industry has been also working with the life cycle of product. There are cases where we have the performance impact in relevant literature. Daily (2004) has mentioned about pharma industry has worked this regard. Automotive Industry had to face the same situation in this regard. Korth (2003) had done research in this regard and presented facts. Demand chain has been associated with the Product Life cycle. The customer needs Identification has an important role. As per need existence the demand has to be managed in this regard. Heikkilä(2002) had mentioned the facts in this regard. Demand has a direct relation with customer. That may indicate customer reflection. Aitken(2002) has mentioned the indications in this regard. Customer may also have a role for Management of Product Life cycle. The decision on the customer feedback plays an important role. The customer has a role for identification and use of the product. Customer may be one

important selection and non selection during the purchase role. Francis (2006) has made a research point in this issue.

Companies are now globally operated. They are having various facilities which earlier were not available. Companies have reduced lead time in this regard. Companies have learnt to integrate Process, People, Business and Information. This has given easiness in various aspects of company's function. Lee(2007) had mentioned about adoption about the Products Life cycle Management. Product Life cycle management assists the companies to take care of Business Operations. Today the corporate have to survive in globally competitive world. Globally companies are free to apply competitive spirit in practices. Practical world give an idea about more focus in global requirement. Ming(2008) has mentioned about use of technology in company's Management. The use of ERP and CRM will help in promotion of Product Life cycle. Sustainability is an important issue .Sustainability is an issue for working of organization. Ming(2002) had mentioned about these issues in a relationship with plc. Product consolidation also plays an important role for optimal results. Companies tried to bring consolidation before maturity stage of product life cycle. Akarte(2015) has also raised the role of consolidation in plc stage as an adopted strategy.

Cooper(2008) had identified that consumption patterns of consumer have some influence on purchase intention. There is a gap of clear framework that how consumer behaviour has a relationship role for product lifecycle. This paper will have following contribution

1. The paper will examine the influence between consumer behaviour and product life cycle
2. The paper will study inter relationship between consumer behaviour elements and product life cycle.
3. Paper will have drawn hypothesis on the basis of relevant reviews and then testing of Hypothesis with relevant 490 sample size.

Consumer Perception and PLC

Country of Origin gives some impact on Product and Product life cycle. National image has appropriateness on product and Product life cycle as a perception. Niss(1996) had mentioned about these aspects. Consumer has a situation of early a adoption which work for Country of origin affect. There can be a case for dropping the product in some other country at last stage of Maturity. Chen(2004) has explained this phenomenon. Individual purchase decision plays an

important role in country to country basis. Bilke (1982) had explained this. Product s have extended in to other countries openly of they are on the maturity stage. Li (2004) has explained this situation. Country of origin also works with the image life cycle. Lamper (1998) had explained some kind of relationship between these two. Positive image plays an important role for product development. Florek (2009) had mentioned this aspect. Companies have challenging situations with the Personality. Horvath (2013) has explained this phenomenon consumer has a relationship with the product as per the need situation and for new product consumer data can also plays an important role for this. Granato (2019).had mentioned all these facts.

Reproduction of the product also depends on product life cycle. Green elements also have perception impact on Product Life Cycle. Rink (1979) had explained these aspects. Sustainability life cycle also plays an important role. The cost and other resources help for life cycle survival. Bidanda (2009) has explained this phenomenon in his research. Sustainable products are known by life sustainability comes through crossing challenging steps. Gmelin (2014) has explained this aspect in his research. Experience and learning curve also work for life cycle assessment. Kortge(1994) had explained this fact. Communication can increase the consistency about the use of product among customers. Customer can get benefits about getting new product. This also indicates the different aspects of product life cycle. Jiao (2003) had presented his research on this. Sociological aspects also work for lifecycle stage of the product. Personality and social class work for stages of the product to be selected. Bernice (1973) had researched on this aspect.

Life cycle can extend an understanding about the product. It can also express value to the customer. Eggert(2006) had explained these facts. Packaging can create understand ing about life cycle of the product. Packaging can be modified as per life cycle. Sudarshan (2005) had explained this fact. Competitiveness has an important link with the life cycle of the product. The variation in the attributes also takes care by competition which supports life cycle changes. Murphy (2000) has mentioned these facts. Entrepreneurship has also got some role in product life cycle. Some specific attributes like Entrepreneurial orientation and organizational performance plays an important role in this regard. Lumpkin(2001) has explained this in his work. Fashion product life cycle also work for short and long period. Shepard (2013) had worked in this direction.Product life cycle also work in global direction. Global effects also have a different trend in different countries. Guinee (2008) has also mentioned these facts. Economic innovative approach also has an upper age on new product development. Pujari (2008) jihad

worked in this regard. Pujari, D. (2006). Eco-innovation and new product development: understanding the influences on market performance. Technovation, 26(1), 76-85.

Technology plays an important role for acceptance in product life cycle. Satisfaction may also be having a relationship in technology aspects. Liao(2009) had explained these facts in research findings. Quality also plays an important role in this regard. Quality may also be a discussable issue in product life cycle. Grunert(2000) had written about these observations. Design also keeps checking challenge so it would be a focused issue in product life cycle. Speakman (1988) had explained these issues

Consumer Personality and Attitude with Product Life Cycle

Entrepreneurial personality may give impact to product life cycle. Pragmatic and charismatic personality can give impact to product life cycle. McCarthy (2003) had presented this concept. Different styles of managers work at different stages of product life cycle. Different styles may be suited to different stages of product life cycle. Personality helps to some extent in endorsement by celebrity. Celebrity endorsement helps to some extent in identifying their status. Maltby (2006) had explained this system. Brand personality also help consumer in purchasing.

Design(2012) has explained these facts.

Cognitive approach and user innovative approach can develop personality in decision making. Foxall(1993) has covered these aspects. Corporate mindset may be effective elements for innovation in product performance. Katrin(2007) has explained these aspects. Product innovativeness also plays an important role in different stages of product Grewal (2000) has explained these aspects. Interactive personality may help in software. Extroversion can also play an important role. Rory(2017) had explained this phenomenon. Champion behaviour plays an important role for product growth. It helps in product innovation. Dr. Howell(2005) had expressed these points. Professional personality may affect product growth. Bano (2016) had expressed these points. Relationship life cycle is also attached with product lifecycle to manage customer loyalty. Jevon (2009) has explained this phenomenon. Person's persona can impact product design. Person's personality may have influence to affect role for product improvement. Kozar (2011) has explained this phenomenon. Lifestyle and culture reflect the working of product. Demographics affect the function of product life cycle. Korukonda(2007) had explained this phenomenon.

Personality has one situation to manage different conditions. Customer conscious employee can also help in product monitoring. Power of personality and social economic background help in understanding the reality of the product status. Kuncel (2007) had written on this. Transformational leadership can handle shortening of lifecycle. Gumusluoglu(2009) has explained this concept. Collaborative consideration plays an important role. This helps in fashion retaining. Armstrong (2018) has explained this concept. Global products require change in the competitiveness and strength. They have to be flexible and adaptable. Malhotra (1996) had explained this fact. Brand personality and brand loyalty may impact product involvement. Lada(1970) has written on this. Perception and brand personality can be instrumental for international development of product. Lopez(2020) has explained this fact. Agile personality also works on different aspects of software development. It works on the different stages of software development cycle. Nerur(2006) had explained this aspect in his research. Personality plays an important role for digital adjustment of the product. Digitally it has a limitation in adjustment. Virtually It is easy to get feedback. Tian (2020) had explained this concept. One also has to cross motivation al barriers. That also works as challenge. Edbring (2015) has explained this phenomenon. Fashion barriers have also issue in fashion world. This can be crossed through participation. Netter (2015) has conducted this work. Some personality believes in renting and swapping of the product. This shows particular set of behavioral trend. Past behaviour plays an important role for deciding the factors of product usage.Ajzen (1980) had worked in this aspect. Customer likes to buy the product as they are. The likeliness meets when choice comes together. Smith(2007) has explained this phenomenon. Materialistic approach also plays an important role. Azjen(1991) had explained this fact. More and more opportunities may come but only if positive Personality is there then only purchase will take place. Workman (2000) had explained this aspect. Customer has an inbuilt personality which explains the role of consumer for purchasing. Personality and cognitive ability plays an important role in product outcome prediction. Shiner (2007) has explained this aspect. Socioeconomic status also plays an important role. Role of project Managers are also very important. They have personality Traits which can help in project success. Creasy(2013) has expressed these facts. Communication, Apprehension, Innovativeness, Self Monitoring, Conflict Management Change Orientation are the requisite traits for project Managers for project success.

Role of Employee personality can play an important role. It can extend attractiveness of Product. Rahimi (2018) had explained these facts. Crant (1996) had mentioned about personality qualities which work to motivate individual in product status conditions. Entreneurship also plays an important role for individual to work in with tolerance, ambiguity and behavioral for product decision. Kickul (2002) mentioned these qualities for product decision. Autonomy is also an important factor for product decision. Moderate risk taking is also an important aspect. Chell (2008) also presented this aspect.

Research Intention

The research has a purpose to work out the inter relationship between consumer behavior and the product life cycle. The research had been focused to explore the behavioral profile of the consumers. The Research was to think and notice the behavioral trends at the different interval of Product life cycle. The operational variables in this regard are consumer behavior, Personality, Perception, consumer Intention, Consumer purchase and Product Life cycle stages.

Hypothesis development

Here following Hypothesis gets developed through Intense Literature Review. They are proposed in following manner

H01 - Consumer Intention Influence the Product Life cycle stage decision in a significant manner

H02 - Product Life cycle stage impact the consumer Purchase Decision.

Research Model- In this way Proposed Research Model can be presented

Indicator Variables	Unobserved Variable	Observed variable
Personality		
Perception	Consumer Intention	Product Life Cycle
Consumer Purchase		
Attitude		
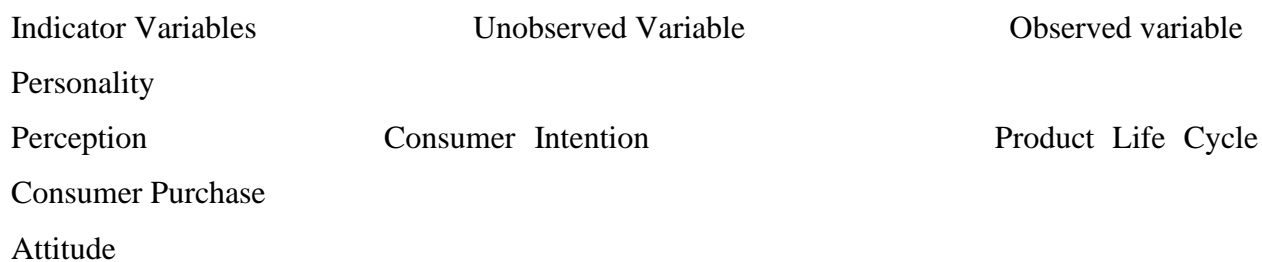
Participants and procedure

The sample of the research consisted of 320 male and 170 female. They were college students, within age group between 20-25, candidates. Candidates have been contacted at College Libraries, Canteen and Malls. They have been explained about research objectives and Procedure. The Researcher has to explain them brief of the Project Life Cycle. The Semi-

structured Interview has been, conducted through independent questionnaires.

Research Design

Statistical Test have been conducted as per Research Objectives. Researcher has opted for

Factor Analysis

Confirmatory Factor analysis

Structural Equation modeling

Confirmatory Factor Analysis

Researcher has applied CFA after Exploratory Factor Analysis.

The result is as follows.

Consumer Intention (F) has a relationship value 1 with Personality as Indicator Variable (Variable1)

Consumer Intention (F) has a relationship value 3.82 with Perception as Indicator Variable (Variable2)

Consumer Intention (F) has a relationship value -5.53 with Attitude as Indicator Variable (Variable3)

The error term e has value with Personality as .88

The error term e has value with Perception as .78

The error term e has value with Attitude as .55

RMESA is .074

GFI is.980

This indicate the status of CFA

Structural Equation Modeling

On Applying SEM following Result comes

Consumer Intention (F) has a relationship with Product Life Cycle as-.6.77. This confirms the one Hypothesis. CI is an exogenous and PLC is a Endogenous variable. Product Life Cycle has a relationship value with Consumer Behavior as .53. This Confirm another Hypothesis.
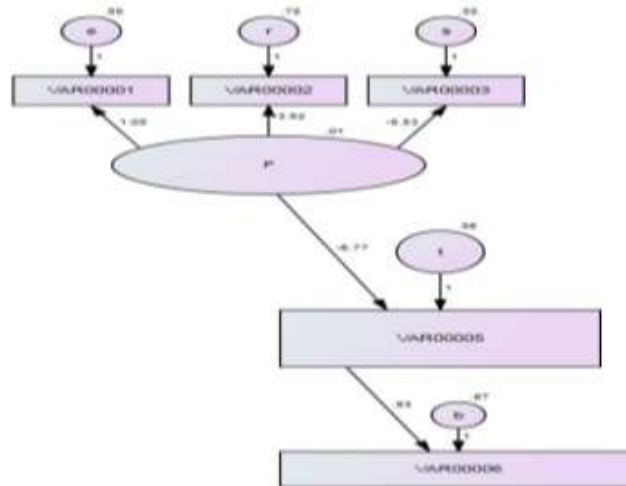
RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.000	.000	.104	.786
Independence model	.133	.086	.185	.003

RMSEA value is 0.

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.015	.998	.991	.200
Saturated model	.000	1.000		
Independence model	.095	.933	.888	.560

GFI valueis .998 and AGFI is .991.

11. Result Discussion

The factor analysis has given identification of factor i.e. Consumer Intention. It has merged variables called Personality, Perception and Communication. Martin(2012) has expressed this option. Personality, Perception and Communication became associated with the Consumer Intention. On Applying CFA we have seen Personality, Perception and Attitude have become measurable scale items with Consumer Intention. On applying SEM Consumer Intention work as exogenous model and Product life cycle will work as endogenous variable. Product Life cycle will work as exogenous and Consumer behavior will became endogenous behavior

12. Findings and conclusion.

The Personality, attitude and perception work as important indicators. The consumer Intention is the important variable for association with Product Life cycle. PLC did not been observed in different stages as no suitable reviews were available. Product Life cycle has not shown stage wise Consumer behavior. Researcher had to be depending on absolute measurement. Product Life cycle had touched the various Consumer Behavior issues in an analytical manner. This is an Indicative research. The Research tool can be applied and extended to general public manner with specific characteristics of Product Life Cycle.

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CHAPTER 9

DETERMINANTS OF INVESTMENT BEHAVIOUR IN MUTUAL FUNDS: AN EMPIRICAL
INVESTIGATION

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Abstract

Background and Objectives – Mutual funds are the one of the prominent investment options in India. The mutual fund investments also contribute to the economic growth of India. Hence, mutual funds play a crucial role in strengthening the economy of the country. So, it is important to know the key factors contribute the behaviour of investors towards mutual funds.

Methodology – To achieve the objectives, the study collected data from 255 Indian investors. The collected data were analysed by using multi-variate data analysis techniques. To find out the factors we had used exploratory factor analysis, to explore the determinants of mutual funds investment behaviour of working professionals.

Major Findings – The research found three factors that determine investors' behaviour towards mutual funds such as return potential, financial literacy and risk levels.

Research limitations/implications – As the study has been done in Bangalore city, hence, the other cities of India can be considered for this kind of research. The asset management companies can utilize the findings of this study to formulate their strategies.

Practical implications – The study has marketing implications with respect to mutual fund investments and for the regulators. The study highlights return potential, financial literacy, and risk levels were the factors which determine investors' behaviour towards mutual funds. The mutual funds and regulators need to focus on these factors to improve their awareness about mutual funds. This would improve their investor base and flow of funds.

Originality – This study has been a unique contribution to explore the factors influencing working professionals towards mutual funds investment.

Keywords: Return potential, Mutual funds, Risk levels, Investor behaviour, Economic growth.

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Introduction

The economic growth of India depends on so many factors; one among them is the financial product. In recent times, mutual funds have become one of the popular financial products for investment among investors. Mutual funds play a crucial role in, not just prompting a healthy capital market, but also growing the economy significant in financial intermediation (Hari and Ayappan, 2014). According to data from Association of Mutual Funds in India (AMFI, 2020), the number of mutual fund accounts in India rose to 8.97 crore in March 2020 from 8.25 crore in March 2019, with a growth rate of 9 per cent per annum. India become one among the top 20 countries in the world in terms of penetration of mutual funds (Assets Under Management/Gross Domestic Product ratio is 11.8 per cent) but is low compare to several emerging markets (Reserve Bank of India Report, 2018). Hence, there is an opportunity to increase the penetration levels in the mutual fund industry in India. To increase the penetration levels, we have to understand the investor behaviour towards mutual funds. Therefore, this study attempts to explore the determinants of investor behaviour towards mutual fund investment in India.

Mutual Fund Industry in India

The history of mutual fund concept emerged in India in 1963, when the Government of India launched the Unit Trust of India (UTI). UTI enjoyed a monopoly in Indian mutual fund market till 1987. The mutual fund industry offers the provision of diversified investment option with different level of risks; hence it was supposed to be the most attractive way of investment for Indian investors. It was believed that mutual fund will tap the saving of common man. As per their objectives, many people have chosen mutual fund as their primary ways of investment. Retail investors make their investment decision and opt for a mutual fund which suit to their investment time and risk tolerance capabilities. Apart from the traditional products like equity fund, debt fund and balanced fund, the mutual fund industry in India expanded the product portfolio. Today, the industry has come with a wide range of products such as liquid/money market funds, sector specific funds, index fund, gild fund, capital protection oriented scheme, special category funds, exchange traded funds etc. It also has introduced gold Exchange Traded Fund (ETF) in 2007 with an objective to allow mutual fund to invest in gold related investment option. Later on the industry has also launched special scheme to invest in overseas markets. As a result, the common man in India has got a wide range of products to invest in mutual funds. Assets Under Management (AUM) of Indian Mutual Fund Industry (MFI) stood at ₹26, 85,982 crore (September 30, 2020). The

AUM of the Indian MF Industry has grown from ₹ 6.57 trillion in September 30, 2010 to ₹26.86 trillion in September 30, 2020 about 4 times in a period of 10 years (Association of Mutual Funds in India, 2020).

Review of Literature

Kaur (2018) examined investor's buyer's behaviour towards mutual funds and concluded that education and income of the investors influence their investment behaviour. Kaur and Kaushik (2016) found that age, income, occupation and gender affect the behaviour of investors towards mutual funds in India. Generally, investors' decisions are influenced by financial risk tolerance (Deb & Singh, 2016) and risk and return factors (Arathy, Nair, Sai & Pravitha, 2015). Additionally, accessibility and benefits of mutual funds have been found to be important determinants in influencing South Africans investors (Rootman & Kruger, 2016). Yusuff and Mansor (2016) proposed that product knowledge may influence the choice to invest in mutual funds.

Within the Malaysian context, Jamaludin and Gerrans (2015) found that perceived plan design, risk tolerance and perceived importance of financial advisors are the factors that influence the likelihood of Malaysian mutual fund investors. Studies have shown that mutual funds are preferable to most investor for their safety in terms of risks and their potential for returns (Hari and Ayappan, 2014). A research conducted to determine the level or awareness among the mutual fund investors showed a very high level of financial and mutual funds illiteracy among these investors (Kumal and Goel, 2014).

Subramanya and Murthy (2013) found that education and level of awareness about the mutual funds affect the investors in India. Barber and Odean (2013), based on the literature survey on behavioural finance, maintained that the decisions/choices of individual investors have been influenced by their social settings. Girdhari and Satya (2011) analysed that investment decisions of investors depend on their age, sex, income, marital status and education. Investment behaviour of individuals is significantly influenced by their demographic and socioeconomic variables such as gender (Powell and Ansic, 1996 and Sunden and Surette, 1998), age (Higgins, 1998; and Singh and Bhattacharjee, 2010), income (Watson and McNaughton, 2007; and Walia and Kiran, 2009), marital status (Grable and Roszkowski, 2007; and Arano et al., 2010), education level (Bellante and Green, 2004; Al-Ajmi, 2008; Das, 2011), and experience (Corter and Chen, 2006; and Engström, 2007).

Mian Sajid Nazir and Muhammad Musarat Nawaz (2010) found that management fee, turnover of funds, size of fund, and the proportion of fund in the family, expense ratio and risk-adjusted rate of return were the major determinants of mutual fund growth in Pakistan. The attributes like age, income, gender and occupation, have been found to be significant determinants of perception and awareness about mutual funds (Parihar et al., 2009). Wang (2009) provided that knowledge and risk-taking behaviour also influence investor behaviour. Singh and Bhowal (2009) found that risk perception level of individuals affect their investment in equity shares.

Mutual fund investment decision-making behaviour is prejudiced by risk perceptions (Sitkin & Weingart, 1995; Riaz et al., 2012). Investors' expected return is also governed by the level of his/her risk perception (Yang & Qiu, 2005). While investing in risky assets such as mutual fund, people attempt to establish a balance between risks and return (Fischer & Jordan, 2006). In Malaysia, Ramasamy and Yeung (2003) explored the selection criteria of 56 financial advisors and found that past performance of the mutual fund has been the most important criteria followed by cost and size of the fund.

Mutual funds are generically designed to mitigate risk levels by diversifying the investments across different portfolios (Saha and Dey, 2011). This lowered level of risk in the nature of mutual funds is described as the key attraction of investors. Conventionally, investors are not just attracted to an investment because of its rate of return, but also the risks associated with it. Higher risk investments are perceived by investors as being very speculative which repels them away. Investors need both a stable return as well as a minimal risk on their investment. Mutual funds happen to have both. It has very levels or rates of returns and at the same time very minimized risks. These reduced levels of risk are courtesy of diversification as well as management of the fund by professionals (Simons, 1998). A risk factor include exchange rates, interest rates, commodity prices as well as indexes of stocks can influence the value of a given portfolio. Investments in mutual funds fetch more in returns than equity shares and bears significantly lower levels of risks as compared to equity shares (Sharma, 2014).

Research Instruments

The instrument used in this research was a self-administered questionnaire containing two parts. Part one consisted of five (5) questions related to the demographic profile. Part two contained fourteen (14) variables adopted from qualitative research (review of literature and focus group discussion (FGD)). From literature review we have identified 9 variables and 5

variables added by the help of FGDs. The details of all the variables with its reference are given in Table 1.

Table 1: List of Variables

Sl. No	Items/Variables	References
1.	Product knowledge	Yusuff and Mansor, 2016
2.	Fund size	Mian Sajid Nazir and Muhammad Musarat Nawaz, 2010
3.	Redemption fee and load	Cashman et al., 2014
4.	Tax savings	Saini et al., 2011; Das, 2012; Kothari and Mindargi, 2013; Prabhu and Vachalekar, 2014.
5.	Past performance	Singh and Vanita, 2002; Bu and Lacey, 2008; Sapp and Tiwari, 2004; Ramasamy and Yeung, 2003
6.	Type of fund	**FGD**
7.	Current market condition	**FGD**
8.	Risk and return elements	Arathy, Nair, Sai & Pravitha, 2015; Hari and Ayappan, 2014
9.	Ranking by rating agency	**FGD**
10.	Redemption facility	**FGD**
11.	Perceived risk	Falk and Matlulich, 1976; Mitchell and Greatorex, 1993).
12.	Better efficiency and flexibility then stock market	Vyas, 2012; Kaur et al., 2013
13.	Risk taking ability of investor	Walia and Kiran, 2009; Pandey, 2011; Wang, 2009; Deb & Singh, 2016
14.	Fund strength and sustainability performance	**FGD**

Source: Compiled by the author

Need of the Study

From the literature review, it is clear that different demographic and socioeconomic variables like age, gender, income, marital status, education, and experience have an influence on investment decision of investors (Falk and Matlulich, 1976; Mitchell and Greatorex, 1993; Kaur, 2018). Earlier studies on factors affecting investors towards mutual funds have been confined to developed countries. A few studies such as those by Ramasamy and Yeung (2003) and Jamaludin et al. (2012) have been conducted in emerging economies. As the level of economic development in different economies could affect the behaviour of investors, the present study has investigated the context of an emerging economy like India. Moreover, we also wanted to explore and understand the impact of these new variables (type of fund, current market condition, ranked by rating agency, redemption facility, and fund strength & sustainability performance) which came as a result of focus group discussion in this study. Therefore, all these identified variables have been taken in the present study to investigate

whether they also have an impact on investment behaviour towards mutual fund in India and at the same time to fill the gap of previous studies.

Objectives of the Study

1. To understand about the mutual fund industry in India.

2. To explore the various dimensions influencing Indian investors towards mutual fund investments.

3. To suggest strategies to the mutual fund companies so that they can understand their investors in a better way.

Methodology

The present study has used both qualitative and quantitative research approach. The qualitative research method was used to identify the variables. These identified variables were used to design the questionnaire. The questionnaire has two parts, the first part contained the questions related to demographic profile (age, gender, education level, income, and occupation) of the respondents and the second part contained the 14 variables. The final questionnaire mailed to 270 respondents with a request to mark their response in a five point likert scale (1-strongly disagree to 5-strongly agree). Finally, we received 255 responses with a response rate of 94 per cent. The collected data were analysed by using exploratory factor analysis with principal component method.

Analysis and Results

Demographic Profiles of the Respondents

The Table 2 showed the demographic profiles of the respondents such as age, gender, educational level, income and occupation. It is cleared from the table that 50 per cent of the respondents were less than 30 years, 40 per cent of the respondents were in the age group of 30-50 years, and 10 per cent respondents were more than 50 years. The data consisted of 75 per cent male and 25 per cent female. With respect to education level, 7 per cent were intermediate, 35 per cent were graduates, 48 per cent were post graduate and rest belongs to others. 10 per cent of the respondents' monthly incomes were less than 25,000 rupees, 20 per cent of the respondents were having the monthly income in between 25,001 to 50,000 rupees, and majority of respondents were having the income between 50,001 to 1, 00,000 rupees. Most of the respondents (65 per cent) were salaried employees and professionals.

Table 2: Demographic Profiles of the Respondent

Measure	Item	Frequency	Percentage
Age	Less than 30	128	50
	30-50	102	40
	More than 50	25	10
	Total	**255**	**100**
Gender	Male	191	75
	Female	64	25
	Total	**255**	**100**
Educational Level	Inter	18	7
	Graduate	89	35
	Post Graduate (PG)	123	48
	Others	25	10
	Total	**255**	**100**
Monthly Income (Rs.)	Less than 25,000	25	10
	25,001-50,000	51	20
	50,001-1,00,000	102	40
	More than 1,00,000	77	30
	Total	**255**	**100**
Occupation	Salaried employees	77	30
	Business men	38	15
	Professionals	89	35
	Others	51	20
	Total	**255**	**100**

Source: Primary data

To find out the number of factors, exploratory factor analysis with eigen values criteria were used (Hair et al., 1998). Based on the Exploratory Factor Analysis (EFA) we have extracted three factors influencing investors towards mutual funds in India. Before using EFA, sampling adequacy and significance was tested through KMO and Bartlett's test. KMO value justified that sampling adequacy for this study was 0.840. Bartlett's test was justified (as the value is more than 0.500, $p< 0.05$)) and were significant. Hence, factor analysis was suitable for this study.

Table 3: Factors influencing investors towards mutual funds

Name of the Variables/Factors	Factor Loadings	Total variance explained (%)	Eigen Values
Factor 1: Return potential		**26.60**	**7.15**
V5: Past performance	.570		

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V3: Redemption fee and load	.792		
V12: Better efficiency and flexibility than stock market	.687		
V10: Redemption facility	.835		
V14: Fund strength and sustainability performance	.763		
Factor 2: Financial literacy		**22.94**	**1.19**
V1: Product knowledge	.680		
V9: Ranking by rating agency	.677		
V4: Tax savings	.768		
V2: Fund size	.663		
V6: Type of fund	.567		
Factor 3: Risk level		**17.85**	**1.09**
V11: Perceived risk	.784		
V8: Risk and return elements	.640		
V13: Risk taking ability of investors	.710		
V7:Current market condition	.668		

Extraction Method: Principal Component Method. **Rotation Method:** Varimax rotation method.

Source: Primary data

Discussion and Conclusions

The analysis revealed 'return potential' as the first and most important factor, which accounted for the largest proportion explained 26.60 per cent of the total variance with an eigen value of 7.15. This factor was represented by five items including past performance of the mutual funds, redemption fee and load, better efficiency and flexibility than stock market, redemption facility, fund strength and sustainability performance.

The second factor, 'financial literacy', explained 22.94 per cent of variance with an eigen value of 1.19 and was created by five items, including product knowledge, ranking by rating agency, tax savings, fund size and type of fund. The third factor, 'risk level', accounted for 17.85 per cent of the total variance with an eigen value of 1.09 and comprises of four scale items primarily associated with risk level like perceived risk, risk and return elements, risk taking ability of investors and current market condition.

The present study revealed that return potential, financial literacy and risk level were the factors which influence the Indian mutual fund investors. Out of these three, return potential was the most important factors influencing mutual fund investors and this findings of the study is in line with the previous studies (Kumar and Goel, 2014), where they found that 'return potential' influence the mutual fund investors. The paper found that, financial literacy as the second important factor which influences the mutual fund investors in India. This finding was in line with the past research conducted by Kumal and Goel, 2014. The third

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important factor came out as 'risk level' which is also in consistent with the past studies ((Saha and Dey, 2011; Sharma 2014). Hence, the mutual fund companies must give more importance to the items which contribute to return potential followed by financial literacy and risk level to attract the mutual fund investors in India.

Reliability test of the Factors

The analysis has extracted three factors that influence investors towards mutual funds investment in India such as return potential, financial literacy, and risk level. Reliability test has been done to evaluate the internal consistency among the factors. Table 3 exhibits the alpha value of these four factors which were ranging between 0.72 to 0.88. According to Hair, Anderson, Tatham and Black (1998), a Cronbach's Alpha value of 0.7 and above is considered as reliable.

Table 4: Reliability test of the Factors

Sl. No	Factors	Cronbach's alpha value
1.	Return potential	0.88
2.	Financial literacy	0.82
3.	Risk level	0.72

Source: Primary data

Implications of the Study

The outcome of the study was a unique contribution to the literature. The study developed a scale with three factors which influence the mutual fund investors. The paper proposed a theoretical model with three factors (as shown in the Figure 1) influencing mutual fund investors. The study is of importance to financial institutions especially when they are conducting promotions on policies related to mutual funds. Additionally, it is important for asset managers to understand investors' behaviour and reaction towards certain policies as well as ensuring success when faced with challenges or opening up to opportunities. Additionally investors and prospective investors can acquire very important information on mutual funds from such researches. Readers in general can use the results of these studies for their own benefit, to further their knowledge as well as gain some skills on investment. Mutual funds start-ups can also learn a lot from such studies by examining the segments of the markets that are not satisfied or the problems that prospective and current investors are facing. The findings of the study will help the product designers to craft strategies to introduce innovative products to improve the scope of the mutual funds market.

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Figure 1: Proposed Model
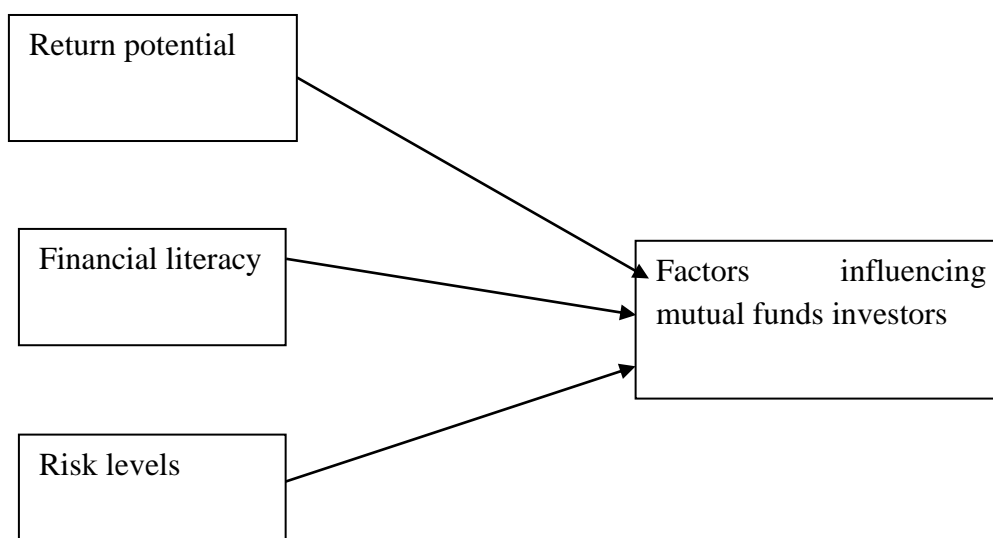
Limitations of the Study and scope for further research

The present study was conducted in Bangalore and with a limited sample size. So, future study can be extended to other part of the country and may also be replicated outside India to understand the mutual fund investor behaviours. The model proposed in this study can be used for future research to better understand the mutual fund investor behaviour. The future research can be done to understand the impact of demographic variables on investors' behaviour towards mutual funds.

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CHAPTER 10

EXPONENTIAL BANKING: EMERGING ORDER OF INDIAN BANKING – A CRITICAL STUDY

[1]Ms Rama Mokkarala

Abstract

Banking is the core industry which stimulates an economy. The rapid digitalization, mobile penetration and improved internet connectivity had changed the way we carry out banking. But, digital banking is still at a nascent stage when compared to other Fintech industries in adoption of technology. Exponential banking is the way forward. Banking has to weave itself into the fabric of exponential technologies like Blockchain, Artificial Intelligence, Data Analytics to name a few. The technologies can be leveraged to build efficient and customer centric banking models. The present study aims to identify the opportunities which the exponential technologies like Blockchain and Artificial Intelligence offer to improve the various activities of Banking Industry Value chain. The study highlights the crucial aspects of roadmaps and Proof of Concepts built by RBI for adoption of these technologies. The study tries to focus on the various use cases of Blockchain and Artificial intelligence in Banking value chain activities. The study highlights the initiatives already taken by select Indian Banks and identifies the gaps existing, yet to be harnessed. The study uses secondary sources of data. The study is descriptive in nature. The study adds to the existing body of knowledge. The new order of Banking would be efficient, increase revenue, provide information security and enrich customer experience. Exponential Banking would offset a new era of Banking which is a critical determinant of India's economic success and its road onto Digitalization.

Keywords: Exponential Banking, Blockchain, Artificial Intelligence, digitalization

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Introduction

VUCA Environment demands change from all sectors of the economy to thrive and flourish.. Financial world is no exception to change. It is disrupted with new technologies and business models. Banking in specific is the right candidate for rapid and early digitalization. The two important raw materials for banking industry is data and money, both can be digitized. Exponential technologies like Artificial Intelligence and Blockchain have the potential to substantially expand the area of contact, quality of service and drastic cut in costs and transaction times.

Exponential technology has ushered in a new era that is being referred to as the fourth industrial revolution. Exponential technology such as artificial intelligence and Blockchain can vastly improve the customer experience in banking. These technologies offer the financial industry an opportunity to transform their business models and meet the emerging needs and demands of their customers.

Financial institutions can benefit enormously from these new technologies: by delivering more personalised and customised products and services at the most appropriate time with the least time lag between concept and availability. Many studies have suggested that the ease at which one can provide a service is what determines the leader in that industry.

Successful implementation of the exponential banking approach requires transformation on three levels: Business, Technology and Organisation. The four key banking operations to be transformed are Customer Experience, Open Organisation and Data Management as well as Process Optimisation.

The traditional Indian banking had already migrated to online and mobile banking. A new generation of clients has grown up in a digital marketplace, and it demands different services and new ways of accessing them. What these clients need is agile, rapid service—ideally, in real time—that is competitively priced and personalized, and all this in a safe environment, where their data is protected.

Today, customers expect faster, personal, and meaningful services and interactions with their banks and little tolerance for generic unsolicited messages. Therefore, banks must leverage AI to balance the need for privacy and security with personalisation and engagement .The next wave of exponential technologies is set to change the existing banking to meet the customer expectations by leveraging the exponential technologies and changing to augmented, Cognitive and automated banking.

The exponential technologies enable banking with "conversational interfaces" that improve user experiences; "automated complex reasoning," which permits totally automated decision making; and "deep learning" anticipating more advanced systems for fraud detection. In addition, there's "risk scoring" the definition of dynamic clusters of customers, the construction of artificial stress scenarios, and much more. Artificial intelligence is fundamental for the development of

natural-language processing, which allows computers to maintain a conversation with human beings. These technologies would enormously accelerate customer digitalization.

The Indian banking industry had adopted these technologies to an extent and started harnessing the benefits. The study identifies the various Banking value chain activities which adopted the exponential technologies .The study highlights the usage of two select exponential technologies, Artificial Intelligence and Blockchain for various banking value chain activities and economies harnessed.

Earlier in 2019, 11 Indian banks, including ICICI, Axis, Yes Bank, HDFC, Kotak Mahindra, Standard Chartered, RBL and South Indian Bank, have formed a consortium to introduce and run a blockchain-linked loan system for small and medium enterprises in the country. Bank of Baroda, the State Bank of India (SBI) and IndusInd Bank are involved in this consortium as outside members.

ICICI Bank, Axis Bank and Yes Bank, which have been at the forefront of blockchain efforts in the country, have joined JP Morgan's blockchain platform, 'the Interbank Information Network (IIN)' in September 2019, which enables faster cross-border payments by providing secure exchange information to banks at lower cost.

The three key aspects for use of AI in banking are Fraud detection, digitization of processes (Digital KYC) and decision making (ex- Identification of Potential defaulters and risk mitigation strategies)

From personalisation to customer service, fraud detection and prevention to compliance, and risk monitoring to intelligent contract documents, AI has helped banks gain better control and predictability.

Review of Literature

Meha Agarwal (2019) , How artificial Intelligence Algorithms are changing India's Banking Industry/inc42 Website; https://inc42.com/features/how-artificial-intelligence-algorithms-are-changing-indias-banking-industry/

The article focusses on uses of Artificial Intelligence in banking. The article highlights the use cases of Artificial Intelligence in select public sector and private banks. The regulatory and other

challenges faced due to adoption of AI had been discussed. The future potential of AI had also been discussed.

Report: Financial Services Technology 2020 and Beyond: Embracing Disruption by pwc; https://www.pwc.com/gx/en/financial-services/assets/pdf/technology2020-and-beyond.pdf

The article identifies top technology drivers. The various applications of technology drivers in various industries are discussed with special focus on financial services. Blockchain technology is discussed in financial services area. The priorities for 2020 and the changes required in infrastructure are focused. The uses of disruptive technologies in financial services industry had been discussed

Francisco Gonzalez (2017), The next Step in Finance: exponential Banking; MIT Technological review; https://www.technologyreview.com/2017/02/06/154162/the-next-step-in-finance-exponential-banking/

The article focusses on defining exponential banking and the suitability of banking to harness the technologies. The growing demands of customers and the technologies that can help bring them to practice have been discussed. Key cognitive technologies for banking that improve user experiences are discussed.

Report: Banking on Blockchain – A Value Analysis for Investment Banks(2017) : Accenture Consulting;

https://www.accenture.com/_acnmedia/accenture/conversion-assets/dotcom/documents/global/pdf/consulting/accenture-banking-on-blockchain.pdf

The article focusses on uses and importance of blockchain in banking. The action plan for leveraging blockchain technology had been discussed. The data sharing processes would change entirely with blockchain. The components of blockchain such as cryptographic hashes, distributed databases and consensus building are combined through the technology to improvise data sharing and asset transfer models.

Report: Banking on the Future: Vision 2020 (2017); CII-Deloitte; https://www2.deloitte.com/content/dam/Deloitte/in/Documents/financial-services/in-fs-deloitte-banking-colloquium-thoughtpaper-cii.pdf

The above article focusses on future of banking and role of technology in banking. Role of Blockchain and robotic process automation in Banking had been discussed. The partnerships between banks and fintech companies have been studied. The role of innovative technologies in making banks more customer centric had been highlighted.

Research Gap

The above articles focused on leveraging exponential technologies to transform banking to agile and customer centric. The articles highlighted applications of blockchain and artificial intelligence and made a mention of some use cases in Indian banks. The present study highlights the banking value chain and associates the uses of blockchain and artificial intelligence with banking value chain activities. The present study also discusses the various areas of usage in select 8 banks and benefits reaped. The study also highlights the RBI roadmap and uses for the technologies.

Objectives

The primary objective of the study is to identify the various banking value chain activities where exponential technologies of Artificial Intelligence and Blockchain are being used by various Indian Banks

The secondary objectives of the study are:

- To identify primary and support activities of banking value Chain
- To associate the areas of usage of exponential technologies with value chain activities and identify the benefits of Artificial Intelligence and Blockchain
- To study the use cases of select Indian Banks using the exponential technologies in value chain activities
- To study the uses and roadmap built by RBI for adoption of the select Exponential Technologies

Methodology

The study is descriptive in nature. The two exponential technologies selected for study are Artificial Intelligence and Blockchain. Important activities of a bank had been grouped under various primary activities. The primary activities considered were Inbound Logistics, Products, operations and Mraketing/Sales. The areas where artificial Intelligence and Blockchain can be used are studied and are associated with various value chain activities. Some 8 select banks from Public

and private sector had been considered to study the areas of adoption of technologies. Public sector Banks SBI, Bank of Baroda, Punjab National Bank and Allahabad Bank are considered for the study. The private sector banks considered for the study are ICICI, YES bank, AXIS Bank and HDFC bank. The benefits harnessed due to adoption of technologies had been discussed.

Secondary Sources of Data were used.

Data Analysis

BANKING VALUE CHAIN ----ACTICITIES AND BLOCKCHAIN APPLICATIONS
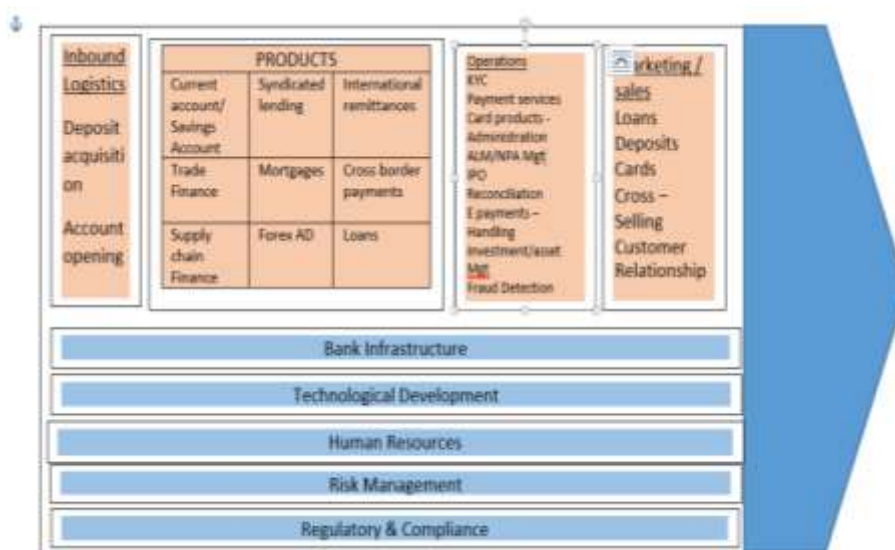
Usage areas of Exponential Technologies—Association with Value Chain Activities

Exponential technology	Area of Usage	Value chain Activity
Artificial Intelligence	Digitization of Operations	Operations ; Marketing
	Personalized Customer Service	Marketing/Sales
	Loan Assessment-Identification of Potential defaulters	Products
	Risk Mitigation Strategies	Risk Management
	Enhancing security and regulatory compliance.	Regulatory & Compliance
	Improving data and risk management	Risk Management ; Operations ; products ; Marketing
Blockchain	International Remittances	Products ; operations
	Trade Finance	Products; operations
	Centralised KYC	Inbound Logistics

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	Cross Border payments	Products ; operations
	Loan Syndication	Products
	Supply Chain Finance	Products; operations
	Smart Contracts	Operations
	Vendor Financing	Products

Benefits of Artificial Intelligence

- ✓ Faster approval and processing of loans.
- ✓ Create a credit profile for first-time loan applicants.
- ✓ Enable banks to bring more borrowers to the lending ambit and ensure business growth.
- ✓ To bring down servicing costs for banks.
- ✓ Digitization of routine processes

Benefits of Blockchain

- ✓ A blockchain exchange for NPAs that help banks to have a database of documents related to assets, obtain data driven price discovery of stressed assets
- ✓ Blockchain payment systems have the potential to eliminate layer of intermediaries and deliver real-time payment to end customers more securely in cross border payments making them efficient
- ✓ Blockchain systems can deliver real-time clearing and settlement of securities by putting them on a common ledger
- ✓ Blockchain technology also enables banks to monitor the movement of borrowed funds and its end-use, which can also lead to the reduction of NPAs
- ✓ Improve the efficiency of supply chain Finance

Indian Banks Using Exponential Technologies –USE CASES OF ARTIFICIAL Intelligence and Blockchain

SBI

- ➢ SBI INTELLIGENT ASSITANT (SIA) --- AI enabled Chatbot provides instant solutions on everyday banking queries in the chat box on the SBI Portal
- ➢ Conversational AI flow via Facebook Messenger App during lockdown for download of YONO and other apps

➢ AI enabled pre approved credit card issuance, pre approved digital personal loan and lead generation for agri-gold loans,

➢ AI /ML to identify high traffic branches and optimisation of proper channel mix

➢ SAFAL(Safe and Fast Agricultural Loan) – providing loans to organic cotton growers who do not have credit history by using AI and ML. Database of Organic cotton growers created with blockchain

➢ Use of blockchain technology for remittances, reconciliation and trade finance.

➢ Blockchain-based smart contracts and KYC solutions

➢ Is also a founding member of the 'Bankchain' consortium

Benefits

✓ SIA is enabled to handle 10000 inquiries per second

✓ AI/ML dept had a net income creation of about ₹1,100 crore in the last two years the bank has more than 40 Machine Learning based models which it uses across the spectrum for business, risk mitigation, fraud management

✓ 1.7 million pre-approved loans and 21,000 crore businesses have been booked under this product during the lockdown.

Bank Of Baroda

➢ AI enabled Chatbot ADI (Assisted Digital Interaction)
  o Trade Documents

➢ Setting up of hi-tech digital branch equipped with advanced gadgets like artificial intelligence robot named Baroda Brainy and Digital Lab with free Wi-Fi services

➢ Planning to introduce self-service within the organisation using these chatbot engines to reduce the cost from the manual help desk. And gradually extending these chatbots to HR operations

➢ The bank's cross-selling and upselling opportunities in Retail, MSME, Liability and Wealth Management are driven by a significant number of ML and predictive models to deliver cross-channel go-to-market strategies

➢ To support the collection department in prioritizing its efforts, more than five predictive collection models are built to indicate high-risk cases

➢ To ensure a bank-wide drive in managing delinquent customers, a self-service NPA and delinquency dashboard is deployed for all its branches.

➢ The ML-based models for predicting core deposit balances allow the bank to better manage its ALM

Allahabad Bank

➢ App 'emPower' is scheduled to get major enhancements like Chatbot and artificial intelligence based e-commerce payments.

Punjab National Bank:

Artificial Intelligence for

➢ Reconciliation of Accounts

➢ Analytics for improving audit systems

➢ Credit Card Default Prediction

➢ Slippages in MUDRA loans

➢ Identifying next-best offers for various customers segment

➢ Targeted selling of third party of products

➢ Review of various rating tools

ICICI

➢ ICICI Bank's Artificial Intelligence (Al)-powered chatbot iPal completes 6 million responses, interacts with 3.1 million customers in eight months

➢ Software Robotics:

Emulates human actions to automate and perform repetitive, high volume and time consuming business tasks.

The software robots at ICICI Bank are configured to capture and interpret information from systems, recognise patterns and run business processes across multiple applications to execute activities including data entry and validation, automated formatting, multi-format message creation, text mining, workflow acceleration, reconciliations and currency exchange rate processing among others.

➢ 1350 business processes running on RPA, currently being used in

Customer on-boarding

Transaction processing/ post transaction servicing

Reconciliation

Loan processing

Bank reconciliation

Form 15G / 15H

➢ ATM query resolution: This is the process of handling ICICI Bank customer queries who have encountered unsuccessful cash withdrawal while using an ICICI Bank ATM.

Earlier, the turn-around-time for resolving such queries was seven days. Now, with software robotics, the resolution time has come down to four working hours.

➢ Time efficiencies for

Mobile number updation for internet banking alerts,

ECS presentation for loan repayments,

Aadhaar details validation importer-exporter code validations,

Debit card re-issuance to name a few among many others.

➢ Deployment across Organization Functions

Retail/wholesale/agri banking operations

Treasury operations

Human resources management

International remittances and private banking.

Portability of accounts

➢ AI led engine in international remittance operations.

Helped to reduce the query resolution time from 12 hours to real time.

➢ ICICI Bank, on-boarded over 250 corporates on its blockchain platform for domestic & international trade finance, the most by any bank in India.

➢ Digitises the paper-intensive international trade finance process as an electronic, distributed and unalterable ledger, and gives the participating entities including banks the ability to access a single source of information.

➢ It enables all the parties- buyers and sellers across domestic & international locations, all branches and locations of ICICI Bank in the country and overseas, to view the data in real time.

It also allows them to track documentation and authenticate ownership of assets digitally and execute a trade finance transaction through a series of encrypted and secure digital contracts.

Further, it allows each participant to check online the status of the application and transmission of original trade documents through a secure network.

➢ The country's first voice-based international remittance service on its Money2India application, Country's first instant credit card

➢ Instant small ticket digital lending with a leading payments platform

➢ Instant opening of Public Provident Fund account facility

Future Roadmap and Learnings

The bank aims to expand the blockchain ecosystem by co-creating another blockchain based system for trade finance in partnership with other banks.

This consortium seeks to invite various constituents of trade including buyers, sellers, logistics partners, insurance companies and other authorities on to the blockchain ecosystem for providing an end-to-end digitised trade solution

➢ ICICI Bank is moving into more complex automation, which is RPA + OCR + AI, ML. "It involves, going through multiple processes, picking data through OCR, running AI, ML on it and also validating the same data and updating an altogether different system

Yes Bank

➢ AI enabled YES Pay Bot

Carries out financial transactions over a friendly chat

Answers banking queries and requests in a conversant manner

Gives quick, personalized responses and real-time insights on transactions.

Works harmoniously across multiple channels like web, mobile and IVR.

➢ AI Enabled Chatbot YES ROBOT

A customer can apply for over 65 banking products

Check his/her eligibility for a loan and then get serviced by a Relationship Manager after all the basic checks are done by the Bot.

YES ROBOT can provide an indicative loan amount using Machine Learning (ML) and advanced credit scoring algorithms.

Books fixed deposits (FDs) and recurring deposits (RDs) by simply conversing with it, without the need of registration or remembering passwords (only OTP based)

Do comprehensive management of their credit cards and even pay bills

Do instant funds transfer (authentication is required).

➢ AI-enabled bots are helping the bank to launch new products and deepen customer engagements, it has the potential to become a revenue generator in the future
➢ Blockchain enabled Vendor Financing

Benefits

✓ Rs. 9.2 billion worth deposits booked through YES ROBOT since December, 2018.
✓ Even with human errors, the chatbot can identify the intent of the user with over 90% accuracy and over 8.3 million customer interactions have already been reported on YES ROBOT since its launch.
✓ Accuracy and productivity of mundane repetitive tasks improves Operational Efficiency
✓ Customers across the globe can avail services in an uninterrupted manner.

Future Roadmap

➢ YES BANK plans to integrate the bot with services such as contextual & real-time transfer of chat from bot to the live agent of the Bank
➢ Integration with different platforms and applications such as WhatsApp, Alexa, Google Assistant and Siri
➢ To provide the Bank's services on IoT platforms for customers and other MS cognitive services & tools such as RPA, OCR etc.

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➢ The Bank also plans to enable cross sell and acquisition services on YES ROBOT as a strategic tool to further empower the sales force

Axis Bank

AI enabled chatbot AXIS AHA

➢ Axis Bank unveils AXAA – an AI powered conversational banking IVR • A multilingual BOT; can converse in English, Hindi and Hinglish • AXAA is capable of recognizing the intent and nature of the customer's query effectively • Accelerates engagement and problem solving, using automated speech recognition and natural language understanding (NLU)

This automated voice assistant has been deployed to enhance customer experience by enabling in-depth understanding of their queries, its context and the intent of the call. AXAA provides an augmented customer experience that automates the contact center operations and is capable of handling a lakh customer queries and requests per day with ability to scale up faster.

AXAA is capable of recognizing the intent and nature of the customer's query with success rate more than current industry benchmark and is able to contain the call on IVR without any human intervention. In case AXAA is unable to service or cater to a particular customer query, she will direct the call directly to one of the expert service officers (a human assistant), minimizing the navigation time on conventional IVR.

Blockchain

➢ Axis Bank, India's third-largest private sector bank, has launched instant international payment services using Ripple's enterprise blockchain technology solution. The bank has launched a service for its retail customers in India to receive payments from RakBank in UAE and for its corporate customers in India to receive payments from Standard Chartered Bank in Singapore. Ripple makes international remittances faster and transparent for customers while ensuring security and improving efficiencies. The transactions reach their destination account in minutes, with certainty of settlement, and with end-to end visibility over the journey of the payment.

HDFC

➢ AI Enabled Chatbot EVA

Conversational experience on any digital platform like website, mobile, dedicated portal

Customers can get quick access abt products, fee , charges, application processes,etc

Bot can handle transactions on like bill payments, ticket booking, etc

Used for improving the efficiency of the credit decision process.

For processes such as underwriting, credit score and for credit card payment checking.

Benefits:

✓ Interacted with over 530000 uniques users, 1.2 mn conversations, 2.7 mn queries

✓ The bank is using machine learning for signature verification with almost 80% accuracy to process more than 2.5 lakh cheques a day.

Highlights of RBI's White Paper on Exponential Technologies

BLOCKCHAIN

A suggested roadmap for the adoption of BCT to Indian banking is as follows:

➢ Intra-bank

Banks may setup a private blockchain for their internal purposes. This not only helps them to train human resources in the technology, but also benefits by enabling efficient asset management, opportunities for cross-selling, etc.

➢ Interbank

Proof-of-Concept implementation and testing may be carried out in the following order of increasing application complexity – mainly because of the number of stakeholders involved in the transaction.

Centralized KYC: Secure, distributed databases of client information shared between institutions helps reduce duplicative efforts in customer onboarding. Secure codification of account details could enable greater transparency, efficiency in transaction surveillance and simplifies audit procedures.

Cross-Border Payments: BCT enables real-time settlement while reducing liquidity and operational costs. Transparent and immutable data on BCT reduces fraudulent

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transactions. Smart contracts eliminate operational errors by capturing obligations among FIs to ensure that appropriate funds are exchanged. BCT allows direct interaction between sender and beneficiary banks, and enables low value transactions due to reduction in overall costs.

Syndication of Loans: Underwriting activities can be automated, leveraging financial details stored on the distributed ledger. KYC requirements can also be automatically enforced in real-time. BCT can provide a global cost reduction opportunity within the process execution and settlement sub-processes of syndicated loans.

Trade Finance: BCT usage for trade finance enables automation of LC creation, development of real-time tools for enforcing AML and customs activities, and associated cost savings.

The more disruptive application of blockchain technology is likely to be its use by the RBI to digitise the Indian currency

Today, digital transactions are just placeholder transactions that trigger a series of activities across multiple organisations to record, clear, settle and reconcile the transactions. But, when currency is digitised using blockchain, it is likely to be treated truly on par with physical cash — money changing hands means instantaneous settlement. If the RBI uses BCT to digitise the currency, it could effectively mint digital money into circulation just like physical cash today.

Artificial Intelligence

AI is the collection of data, algorithms, and computing power to enable machines to emulate human capabilities and act with higher levels of intelligence. The ability to learn from patterns in text, speech, images, videos and any other data to provide recommendations has made AI ubiquitous in research and industry, including financial services.

Some of the use cases leveraging capabilities of AI in financial services are

(i)   Anomaly detection to flag abnormal data patterns

(ii)   Recommendations for relevant alternatives based on future predictions,

(iii)   Translation across languages

(iv)   (iv) optimization (e.g., tuning the cooling temperature based on power consumption in a data centre)

(v)   Fraud detection and risk management and

(vi)   Digitization and automation of services

Banks can mine the financial transaction data generated by the proliferation of digital payments and banking to better monitor, predict and respond to consumer behaviour. The rising demand for online banking and financial information offerings has created opportunities for AI implementation in India's retail banking, financial, and investment services sector

Use of AI in banking: AI is demonstrating a huge impact on the banking sector, impacting the working of organizations at three fundamental levels: (i) the processes they adopt (ii) the products and services they sell and (iii) the user experiences they offer to their customers and employees.

Globally, banks are already starting to adopt AI at a massive scale. According to a UBS Evidence Lab report23, 75% of respondents at banks with over USD 100 billion in assets say they are currently implementing AI strategies compared to 46% at banks with less than USD 100 billion in assets.

The aggregate potential cost savings for banks from the application of AI in front, middle, and back offices is estimated at USD 447 billion by 2023.25 Of this, middle office operations will account for close to 50% of the cost savings opportunity, and front and back offices will account for 45% and 7%, respectively.

Key use cases across these three offices in banks include:

Front office: Customer interface; personalized insights; authentication and identification of customers using biometrics; and wealth management.

Middle office: Payment fraud detection and risk management; Know Your Customer (KYC) and Anti Money Laundering (AML); and credit rating services and loan decisions.

Back office: Business and strategy insights; simplifying backend processes; and regulatory compliance.

Findings

- The various Primary activities identified were Inbound logistics, Products, Operations and Marketing/Sales. The various support activities are Bank Infrastructure, Risk Management, Human Resources, and Technology

- Artificial Intelligence has application in various usage areas of value chain activities of Operations, Products, Marketing, Risk Management, and Regulatory & Compliance

- Blockchain has applications in various usage areas of value chain activities of Products, Operations and Inbound Logistics

- The various benefits of Artificial Intelligence are faster approval of applications, bring down servicing costs, creation of credit profile thereby bring more borrowers and digitization of routine processes

- The various benefits of BlockChain are exchange for NPAs to obtain data discovery of stressed assets, deliver real time payment securely in cross border payments, helps monitor movement of borrowed funds and improve efficiency of supply chain finance

- State Bank of India uses Artificial Intelligence enabled Chabot, conversational flow, pre-approved credit card issuance, pre-approved digital personal loan and lead generation for agri-gold loans, to identify high traffic branches and optimization of proper channel mix and SAFAL

- State Bank of India uses Blockchain for SAFAL, remittances, reconciliation, trade finance and smart Contract

- Bank of Baroda uses Artificial Intelligence for chatbots, self-service within organization, predictive models in wealth management, hi-tech digital branch, self-service NPA and delinquency dashboard, predictive models in collection department

- Punjab National Bank uses AI for Reconciliation of Accounts, Analytics for improving audit systems , Credit Card Default Prediction, Slippages in MUDRA loans, Targeted selling of third party of products and Review of various rating tools

- Allahabad Bank uses AI enabled chatbot EmPower.

- ICICI bank uses AI enabled chatbot, Robotic process Automation for routine tasks, Portability of accounts, treasury operations, organization functions; AI led engine in international remittance operations, blockchain for domestic and international trade finance , voice enabled remittance, instant PPF account opening.

- In YES Bank,AI enabled Yes Bot Gives quick, personalized responses and real-time insights on transactions ; AI YES ROBOT through which one can apply for over 65 banking products, books FDs, comprehensive management of credit cards and blockchain enabled vendor financing

- Axis Bank uses AI powered multilingual Bot which enables conversational banking IVR and blockchain enabled international payments

- HDFC bank uses AI Enabled Chatbot EVA which does Conversational experience on any digital platform like website, mobile, dedicated portal and Customers can get quick access about products, fee , charges, application processes, etc

- RBI whitepaper on Artificial intelligence recommends use of technology in front , middle and Back Office

- RBI White paper on Blockchain recommends usage of technology in areas of Centralized KYC, Cross – Border payments, Syndication of Loans, Trade Finance.

Conclusion

The mobile technology had changed the way banking is done. The next wave of disruption in the industry is the adoption of exponential technologies to meet the growing demands of ease, personalization and speed of transactions, securely by the customers. Artificial Intelligence and Blockchain are revolutionizing the way value chain activities of banking industry can be carried out. The study identifies the various activities of banking Value chain and studies the adoption of exponential technologies in these activities. The study highlighted the efforts of select 8 banks in adoption of technologies to deliver best customer experience and improve operational efficiency also driving down the costs involved. The technologies have been adopted in almost all the value chain activities and the benefits have been tremendous. The public and private sector banks have been on the path of adoption of exponential technologies . Many of the use cases mentioned by RBI in its research papers on Artificial Intelligence and Blockchain have been already adopted by banks and proved to be extremely beneficial in terms of cost reduction, time savings and improved customer experience. The most disruptive application of blockchain technology is likely to be its use by the RBI to digitise the Indian currency which is awaited. Banking industry is all set to evolve, transform and revolutionize with the adoption of exponential technologies. Indian Banking

industry had already transformed with internet and mobile banking. The impact of Exponential Banking, next big wave of revolution is yet to unfold.

Suggestions and Recommendations

It is suggested that the banks go ahead on the path of adopting exponential technologies and reap the benefits. Many of the banks have adopted Artificial Intelligence to a large extent. It is recommended to harness the benefits of Blockchain which has the potential to revolutionize the sector.

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CHAPTER 11

ANALYTICAL STUDY OF TECHNOLOGY –WISE EFFECTS OF FOREIGN DIRECT INVESTMENT IN MANUFACTURING INDUSTRIES ON INDIAN ECONOMY

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Abstract

The Manufacturing Sector is one of the most important sector in the Present Day Technological world. Its contribution to the Indian Economy is vital role with regard to National income, GDP, Employment opportunities and per capita income and so on. It is included with other sectors like Retail Trade and Service Sectors. In order to develop the Manufacturing Industries, Foreign Direct Investment plays an important role in the development of the on Indian Economy is essential part one. So, the key Manufacturing industries like Metallurgical Industries, Chemical Industries, pharmaceutical Industries and Textile Industries have attracted FDI largely and showed considerable growth in the post-liberalisation period. Besides, due to the flexible Policies of the Government, availability of low cost of raw materials and skilled labourers are the main factors to the development of the economy by way of Manufacturing industries. So, a study on Technology-wise effectives of FDI of Manufacturing Sector is essential one at the present scenario. At this juncture, according to the development modernized world the adoption of new types of Technology is inevitable. For the purpose of the study, Manufacturing Industries have been segregated into four views. Hi-Tech Manufacturing Industries, Medium-Tech Manufacturing Industries, Medium-Low- Tech Manufacturing Industries and Low-Techonology Manufacturing Industries. Therefore, to find out the impacts of the FDI in Technology-wise in Manufacturing Industries, useful statistical tools like Growth rate and ANOVA table analysis have been utilized.

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Introduction

It means, any industry engage in the transformation of goods, materials or substances change into finished products, the process of these industries can be physical, chemical or mechanical work in order to consume the goods to the public, is called Manufacturing Industries. There are three types of Manufacturing Industries, 1. Make to stock 2. Make to assemble 3. Make to order.

Routes of few industries 100 per cent foreign direct investment is permitted under the automatic route are:

Auto-components, Automobiles, Biotechnology (Greenfield), Capital Goods, , Chemicals, Coal & Lignite, , Construction of Hospitals, Electronic Systems, Food Processing, Gems & Jewellery, Healthcare, Industrial Parks, IT & BPM, Leather, Manufacturing, Mining & Exploration of metals & non-metal ores, Petroleum & Natural gas, Pharmaceuticals, Railway Infrastructure, Renewable Energy, Textiles & Garments, Thermal Power,

Importance of the Study

Manufacturing industries have involved in a vital role at the present day technological world. India is one of the biggest Agricultural based professional country in the world. It helps in modernising the Agricultural Tools and Machineries and reduce the employment pressure on agriculture. On the other hand, it is the basic sector to bring much needed foreign exchange and expansion of trade and commerce. It also helps to eradicate the unemployment and Poverty in the country. So, the development in the role of Technology in this Sector through FDI is needed largely. Therefore, the study about the importance of Technology-wise impacts of FDI in Manufacturing sector is essential at the present scenario.

Scope of the Study

The period of study only from 2015-2016 to 2019-2020 and the Manufacturing Sector is divided into four angles. Let us discuss in four divisions. 1. Hi-tech Manufacturing Industries 2. Medium Technology Manufacturing Industries 3. Medium-Low Technology Manufacturing Industries 4. Low-Technology Manufacturing Industries

Objectives of the Study

1. To analyse the trends and patterns of FDI in Manufacturing Sector in India.
2. To analyse the Manufacturing Industries in different technologies

3. To make findings, suggestions and conclusion.

Methods of Collection Data

The data is collected from RBI reports and fact sheets of Ministry of Commerce and Industry and other statistical method books

Statistical Tools Used

Growth rate, and ANOVA table   analysis have been used in order to find out the progress of Technological Impacts through Foreign Direct Investment.

Hi- Technology Manufacturing Industries

Table 7.1: Analysis Of FDI in Drugs and Pharmaceutical Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	3,926.61	--
2016-2017	5,722.69	46%
2017-2018	6,502.29	14%
2018-2019	1,842.16	-72%
2019-2020	3,649.81	98%
Total	21,648.56	

Sources: Secondary data

The Table 1.1 shows that the position of progress of FDI in Drugs and Pharmaceutical Industries. During the year 2016-2017 FDI has progressed considerably but it has been reduced in the next year due to high skilled workforce and marketing and distribution system are available in India. Then, the Greenfield industries 100 per cent and Brownfield Industries have permitted 100 per cent in automatic as well as Government route permission in FDI, are the reasons it has been increased in the next year,

Table7. 2. Analysis of FDI in Hospital And Diagnostic Machineries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	4,058.74	--
2016-2017	5,013.05	24%
2017-2018	4,566.24	-9%
2018-2019	7,309.87	60%
2019-2020	4,482.33	-38%
Total	25,430.23	

Sources: Secondary data

The Table 7.2 shows that the FDI in Hospital and Diagnostic industries have increased during the year 2018-2019 because of the urban population of India and contributes up to 65% of the total revenues of the diagnostics industry. Rapid health insurance and Government initiatives like e-health, together with tax benefits and incentives are the reasons decreasing the FDI in the year 2019-2020.

Table 7.3: Analysis of FDI in Industrial Machineries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	2,730.84	--
2016-2017	2,208.74	-19%
2017-2018	3,004.11	36%
2018-2019	2,370.07	-21%
2019-2020	2,992.80	26%
Total	13,306.56	

Sources: Secondary data

The Table 1.3 shows that the FDI in Industrial Machineries, during the year 2017-2018 and also during the year 2019-2020   FDI has been showed in a positive growth 36% and 26% respectively because of Mahindra and Mahindra Limited is the leading player occupying the highest share in the   Indian agricultural tractors market, followed by Tractor and Farm Equipment Ltd., companies have indulged in joint ventures and agreements and to create a production capacity of manufacturing tractors in India.

Table 7.4: Analysis of FDI in Electronic Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	1,036.54	--
2016-2017	565.81	-45%
2017-2018	1,267.64	124%
2018-2019	3,199.78	152%
2019-2020	2,988.37	-7%
Total	9,058.14	

Sources: Secondary data

The Table 7.4 shows that the flow of FDI in India, during the year 2017-2018 FDI has increased 124 per cent and in the next year it has shown 152 per cent, due to Digital Media programme and National knowledge Network programme have initiated by the Government, are the factors for progressive situations have prevailed in the Electronic Industries.

Table 7.5: Analysis of FDI in Medical And Surgical Appliances

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	1,069.89	--
2016-2017	3,212.28	200%
2017-2018	560.99	-82%
2018-2019	1,107.65	97%
2019-2020	2,196.62	98%
Total	8,147.43	

Sources: Secondary data

The table 7.5 shows that the inflows of FDI in Medical and surgical appliances have shown in highest position 200 per cent during the year 2016-2017 due to create not only wealth and technology but also co-create an ecosystem for manufacturing of medical devices in India.

Table 7.6: Analysis of FDI in Machine Tools Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	795.69	--
2016-2017	160.00	-80%
2017-2018	291.24	82%
2018-2019	314.26	8%
2019-2020	204.34	-35%
Total	1,765.59	

Sources: Secondary data

The table 7.6 showed that the position of Machine Tools Industries, during the year 2017-2018 FDI has increased to 82%, but it has been reduced to 8 per cent in the next year, in the next year it has gone to negative stage of FDI.

Table 7. 7: Analysis of FDI in Agricultural Machinery Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	103.21	--
2016-2017	102.21	-1%
2017-2018	110.87	8%
2018-2019	40.21	-64%
2019-2020	717.17	2%
Total	1,073.67	

Sources: Secondary data

The table 7.7 shows that the inflow of FDI in Agricultural Machinery Industries in a single digit way because of under the Make-in-India programme , Government of India has initiated

different plans to produce modern agricultural machineries by using Technological Advancements. Therefore, the necessity of FDI was in a lowest stage.

Table 7.8: Analysis of FDI in Earth-Moving Machinery Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	108.09	--
2016-2017	351.16	225%
2017-2018	187.98	-46%
2018-2019	242.55	29%
2019-2020	101.00	-58%
Total	990.78	

Sources: Secondary data

The table 1.8 shows that the FDI in Earth-moving machinery industries have increased during the year 2016-2017 225%. Due to increased mining activities and greater demand for the equipments; reduced import duties are another reason for increasing demand for the machineries.

Table 7.9: Analysis of FDI in Maths Surveying & Drawing Instruments & Scientific Equipment's Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	76.13	--
2016-2017	515.34	577%
2017-2018	35.82	-93%
2018-2019	22.06	-38%
2019-2020	162.88	638%
Total	812.23	

Sources: Secondary data

The table 7.9 depicts that the situation of FDI in Maths Surveying Instruments in the year 2016-2017 & 2019-2020 has been in 577 per cent and 638 per cent respectively, when compare with the other terms, because of new techniques of production and the use of advanced technological instrumentation, low cost of production and labour force are the factors determined the inflown of FDI in above type of industries.

Table 7.10: Analysis of FDI in Mining Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	3,559.16	--
2016-2017	375.73	-89%
2017-2018	234.29	-38%
2018-2019	157.37	-33%
2019-2020	1,403.32	792%

Total	7,148.87	

Sources: Secondary data

The table 7.10 shows that the situation of inflows of FDI in Mining industries, In the beginning of the study area there was no effective to the FDI , few years later, it has been increased particularly in the year 2019-2020 due to large number of thermal coal was imported by the government of India was economically substituted by domestically produced coal, creates significant employment opportunities particularly remote areas.

7.2 Analysis of Medium Technology Industries

Table 7.2.1: Analysis of FDI in Automobile Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	14,154.75	--
2016-2017	10,824.21	-24%
2017-2018	13,460.79	24%
2018-2019	18,309.37	36%
2019-2020	19,753.10	8%
Total	77,502.22	

Sources: Secondary data

The table 2.1 shows that the inflows of FDI in Automobile sector, during 2016-2017 it has been decreased to -24 per cent of FDI, because of Government Policy of "Make-in-India plan", particularly manufacturing of automobiles and components are permitted 100 per cent under automatic route the Government has insisted that the policy of production in India only, due to the technological advancements it has been increased during the year 2018-2019. The opportunities of Indian policy and competition among these companies in the country, FDI has been reduced in the next year to 8 per cent only. Import of components is allowed without any restrictions and also encouraged.

Table 7. 2. 2: Analysis of FDI in Power Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	5,679.96	--
2016-2017	7,473.40	32%
2017-2018	10,472.74	40%
2018-2019	7,329.88	-30%
2019-2020	4,761.22	-35%
Total	35,717.20	

Sources: Secondary data

The Table 2.2 shows that the position of FDI in power industries, During the year 2017-2018 has shown increased the necessity of power industries, but in the coming years it has been reduced considerably because of expansion of the Industrial activities to boost the demand for electricity and various new projects for further requirements of power fulfilled by the domestic efforts .

Table 7.2.3: Analysis of FDI in Electrical Equipment's Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	2,732.48	--
2016-2017	14,896.61	445%
2017-2018	3,147.89	79%
2018-2019	6,775.40	115%
2019-2020	4,035.54	-40%
Total	31,587.92	

Sources: Secondary data

The table 7.2.3 shows that the FDI in Electrical Equipments, in the year 2016-2017 it has shown 445 per cent, in the next year it has been reduced to 79 per cent due to Government initiatives like the strong implementation of "Make in India" programme. In the year it has shown in -40 per cent in a negative position in this field.

Table 7.2.4: Analysis of FDI in Chemical (Other Than Fertilizers) Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	9,613.07	--
2016-2017	9,396.59	-2%
2017-2018	8,425.34	-10%
2018-2019	13,684.89	62%
2019-2020	7,492.16	-45%
Total	48,612.05	

Sources: Secondary data

The table 7.2.4 shows that the FDI Inflows to Chemicals industry in India has registered significant growth in the last few years. In the year 2018-2019 that the inflows of FDI during the year 2018-2019 increased up to 62 per cent due to availability of infrastructure, Government initiatives, the following Chemical Industries have entered in India: - Dow Chemical, Due pont and Bayer. The inflows of FDI not only given boost to the industry but also led to improvement of the quality of the products from the industry.

Table 7.2.5: Analysis of FDI in Cement and Gypsum Products

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	128.08	--
2016-2017	1,426.27	1013%
2017-2018	125.09	-99%
2018-2019	126.35	1%
2019-2020	36.33	-71%
Total	1,842.12	

Sources: Secondary data

The government of India has allowed foreign direct investment up to 100% in the cement and gypsum products industry of the country. This has led to the increase in FDI Inflows to Cement and Gypsum Products industry in India. During the year 2016-2017 that the position of FDI has shown 1013 per cent, because of India is the second biggest manufacturer of high-grade cement in the whole world and International companies Lafarge, Italcementi, Holcim having presence in cement and gypsum products industry in India are the reasons have increased the FDI.

Due to the increased FDI Inflows to Cement and Gypsum Products industry in India has led to the growth, expansion of the industry. As a result of this the quality of the cement and gypsum products has improved a great deal.

Table 7.2.6: Analysis of FDI in Miscellaneous Mechanical & Engineering Industries

YEAR	AMOUNT (Rupees in Crores)	Growth rate
2015-2016	6,154.52	--
2016-2017	1,645.69	-73%
2017-2018	684.67	-58%
2018-2019	1,133.29	66%
2019-2020	385.31	-66%
Total	10,003.48	

Sources: Secondary data

The table 7.2.6 shows that the inflows of FDI, during the year 2018-2019 it has been increased to 66 per cent when compared with the previous year, because of Government initiated to enjoy 100 per cent FDI allowed automatic route and also relaxed excise duties on factory gate tax, capital goods etc.

Table 7.2.7: Consolidation Of Inflow Of Foreign Direct Investment In Different Technology Manufacturing Industries (Converted Into Per Centage)

Year	High- Technology Industries	Medium Technology Industries	Medium –Low Technology Industries	Low Technology Industries
2015-2016	19	18	8	9
2016-2017	21	26	26	13
2017-2018	19	17	8	35
2018-2019	21	22	12	18
2019-2020	20	17	46	25
Total	100	100	100	100

Chart 1
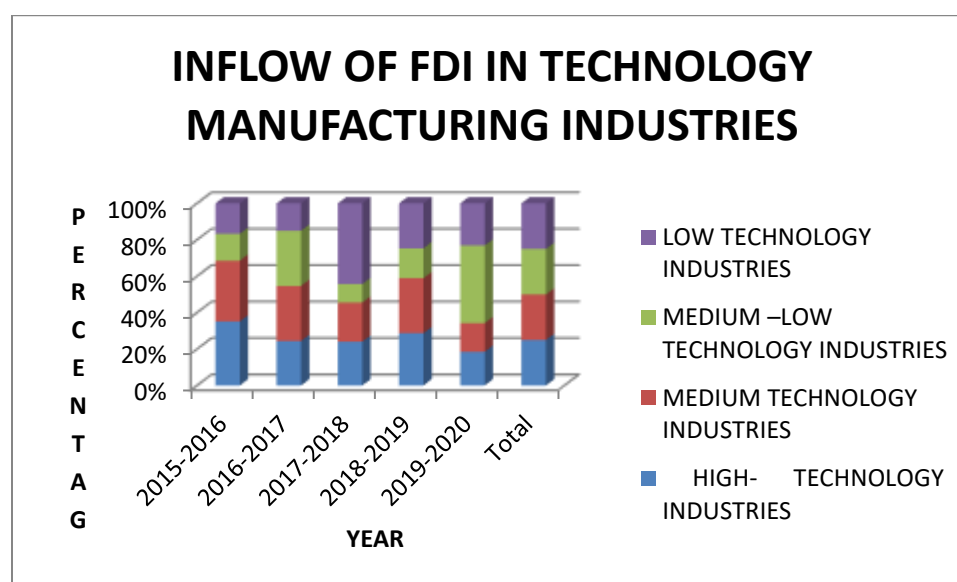
The above chart shows that the Different technology Manufacturing Industries through Foreign Direct Investment in India from 2015-2016 to 2019-2020.

Table 7.3: Analysis of Consolidation of Technology-Wise Inflow of FDI in Manufacturing Industries (Rupees in Crores)

Year	High- Technology Industries	Medium Technology Industries	Medium –Low Technology Industries	Low Technology Industries
2015-2016	18,416.17 (19%)	40,118.01 (18%)	3,497.81 (8%)	10,777.67 (9%)
2016-2017	20,145.63 (21%)	59,099.88 (26%)	11,550.24 (26%)	14,482.85 (13%)
2017-2018	17,788.45 (19%)	37,139.31 (17%)	3,458.55 (8%)	13,950.43 (35%)
2018-2019	19,735.50	48481.98	5,328.58	11,363.82

	(21%)	(22%)	(12%)	(18%)
2019-2020	19,515.13 (20 %)	37553.58 (17%)	21,103.35 (46%)	14,249.02 (25%)
Total	95,600.88	2,22,392.76	44,938.53	64,821.79

Sources: Secondary data Note: inflow of FDI changed into percentage

Table 7.3.1: ANOVA Table Results

Sources of Variations	Sum of Square	Differences	Mean Square	F Ratio	5% From F Table
Between The Column-Wise	0	(4-1) = 3	0/3 = 0	0/1 = 1	F(0,12) = 3.88
Within The Row-Wise	1148	(5- 1) = 12	12/12	12/1 = 12	F(4,12) = 5.91
Residual Error	12	(4-1) X (5-1) = 12	12/12 = 1		
Total	1160	20-1 = 19			

H1= There is no significant effects between the INFLOW of FDI in Technology-Wise in Manufacturing Industries Calculated value is less than the Table value that the hypothesis is accepted otherwise it is rejected.

Here: Calculated value is less than the Table value, Hence, the Hypothesis is Accepted.

 The Inflow of FDI has inflow into India according to the various types of technologies, if it is essential high technology type industries, it is necessary to collaborate with foreign countries are essential part, otherwise, it could not be expected from the overseas, it is enough to fulfil domestically.

 H2= There is no significant effects between the Inflow of FDI Year -Wise in Manufacturing Industries

Calculated value is Less than the Table Value that the Hypothesis is accepted otherwise it is rejected.

Here: Calculated value is Higher than the Table value, Hence, the Hypothesis is Rejected. Because, according to the needs and wants of the people, changing advancement of Technology, it may be decreased or increased. Hence, year-wise FDI may be changed at any situation.

Findings

1. The Role of Hi-technology Manufacturing Industries are limited in the Indian Economy. `
2. Because of the invasion of the Technology from foreign countries that the Labour force and low cost of production in the Host countries.

Proceedings of 12th International Conference on the theme "Digitalization as a Vehicle for Innovation, Organizational Growth and Effectiveness"

3. Employment opportunities particularly skilled labourers have increased by increasing the Greenfield and Brownfield industries in India.

4. Joint Ventures have been increased through FDI in the Government Route

5. Due to Digitalization policy of the Government FDI has increased

6. Because of the Government initiatives in flows of FDI, the domestic economic development have considerably increased in Production in Heavy Industrial Machineries, Electrical and Electronic Items.

Suggestions

1. The routes of FDI must be scrutinized in various levels of Technologies otherwise , the hosting countries affected and also creation of Unemployment situations in all levels Technology Industries.

2. The Government should construct the Hi-Tech Educational Institutes in India to learn advanced Technology to the Indian students.

3. It is better to encourage the FDI in Health care Industries to eradicate diseases in the country..

4. The period of extension of mining industries must be restricted to avoid unnecessary exploitation of the natural resources by the tenants.

5. Encouraging the Non-conventional Energy is essential

Conclusion

Manufacturing sector is the backbone of any economy. Most of the activities of a country depending upon Manufacturing Industries. So, it constitutes a significant part of the employment opportunities, due to Foreign Direct Investment has enrolled crucially in the economic development of a country when compares with other sectors. Therefore, in India is concerned, by increasing the share of young working population in the total population, India can achieve the full manufacturing infrastructure in the Globalised Economy. This also way to enhance the FDI in India in this sector both internal and external trade. However, due to this factor not only development of advanced technology but also securing high standard of living conditions which stimulates of Imports and Exports and increase the Foreign Exchange in the competitive Globalized Economy.

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CHAPTER 12

DIGITAL TRANSFORMATION IN BANKING INDUSTRY-AN ERA OF MODERNIZATION

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Abstract

Digital Transformation has not only opened opportunities for the IT Industry in the country but also diversified avenues for Banking Sectors. The major Banking activities which were limited and restricted to the premises of the bank, could now reach the mobile handsets of the customers. It is very important to find that this digitalization has helped the banking industry to diversify and provide services to the customers apart from the Core Banking services. Banks have now entered into the field of Insurance & Consumer Durable sectors which are not its Core Product. The objectives of the study are-

- Role of Digitalization in Indian Banking services.
- Recent trends of digital banking.
- Impact of Digitalization on Core Banking products.
- Impact on NPA's due to digitalization

The research paper is an exploratory study to acquire in-depth knowledge and information on Digital transformation in banking system for the collection of secondary data through systematic review technique Digitalization serves both as a boon and bane for the Banking industry. Where the transformation has provided a pathway for the consumers to enjoy the services sitting at home. But the darker side of the story is that it has given rise to so many digital frauds. The banking sector is also drifting away from the core banking services.

The Study therefore aims to understand the role of digitalization and how the recent trends in banking has impacted the same. Impact of digitalization on Core Banking Products and a serious rise of NPA's due to limited digital knowledge and excessive information in the hands of the consumers.

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1. Introduction

During the past few years digital transformations have become one of the major characteristics for survival (Ashurst & Hodges, 2010; Berghaus, 2018). Transformation in industries such as Artificial Intelligence, Cloud Computing and other transformational changes have contributed to the new era revolution-Industrial Revolution 4.0 (Pflaum & Golzer, 2018). This transformation has swayed by every industry and sector that one can come across. Banking industry started to see the early phases of Digital Revolution in the year 1988. Traditionally Banking system was used for the purpose for Deposit & Lending, but post the Digitalization in banking system has forced a paradigm shift of the banking system. Transformation of banking systems has seen an increase in the demand of Debit Cards, Credit Cards and Net banking facilities.

These transformational facilities have reduced the burden on the physical environment and on the employees of the banks. But the adverse effect of the same is that bankers have lost their personal connect with the customers. Fulfilling targets have become more tiresome for the the bankers. Apart from the above mentioned problems this digital transformation has also opened the arena for Digital Frauds. Online money transfers have opened avenues to hacking. People lose their money in the greed of earning more. Clicking on incorrect links, transfer of small amount of money in lieu of certain tangible assets are the few kinds of frauds that take place. On the other hand this Digitalization has also proved as a bane to a consumer, someone who is staying in one corner of the world can easily transfer money or purchase any commodity available across the world. This has been possible only because of the process of digitalization.

Owing to different kind of frauds definitely the burden of NPA's has decreased on banks. As per the study conducted by implementation of risk management processes through information technology, have hereby ensured that these banks have a thorough process in place in the context of issuance of loans and advances. Internet Banking, Mobile Payments, Easier norms to issue credit/debit cards and many other approaches used by the banks have a huge positive response from the consumers end. Promotion of online Digital payment applications like GPay, Paytm, BHIM, Amazon Pay etc has been one of the major steps in ensuring fast payments to the consumers. These alternatives provide a fast, perfect and a qualitative solution to the problems faced by the consumers.

2. Objectives

The objectives of the study are-

- Role of Digitalization in Indian Banking services.

- Recent trends of digital banking.

- Impact of Digitalization on Core Banking products.

- Impact on NPA's due to digitalization

3. Research Methodology

The study is a descriptive research which is analytical in nature. It aims to explore the prospects and threats exposed by Digitalization of Banking services.

4. Review of Literature

- (Rathee, 2017) featured that the digital revolution includes the feature that a consumer can use the banking system anywhere and give a fast response .These channels have also led to decrease in usage of paper based transactions, this has definitely transformed the look of banking industry.

- (K. Hema Divya and K. Suma Vally (2018) in their article which focused on the responses of 183 respondents , propounded that the banking sector had achieved the target of cash less economy through the process of Digitalization.

- Muhammad Shaukat -shifted the focus on how IT transformation has impacted the financial industry.

- Dr. Rajeshwari M.Shettar (2019) in his article shed light on the angle as to how lower digitalization had led to increase in the cost of operations in the banking industry .Lower Cost of operation meant that Banks have to forego a share of profit in order to run their activities, thereby reducing their profits.

- Raghavendra Nayak, "A Conceptual Study on Digitalization of Banking - Issues and Challenges in Rural India" (2018): Focused on the problems and challenges faced by Rural Banking system due to digitalization.

5. Analysis & Interpretation.

5.1 Role of Digitalization in Banking Sector

Digitalization of banking services has made life of consumers easy, as they can access the banking services easily from their home. Now a consumer is not required to visit banks in order to withdraw money or transfer money, he/she may easily do the same by using the facility of Mobile banking; Internet Banking etc .Investments made by the Indian government in this sector has borne its results. Post digitalization and demonetarization, when the economy is moving towards the phase of becoming cashless. Cashless economy -will be a boon or a bane this can be decided only in the due course of time but it does pose certain advantages & disadvantages.

Going cashless means that now a large part of the population can access the funds from any part of the country. To access the banking services, one does not have to visit their home branch. On top of this government is promoting digital payment platforms to make and transfer payments. During the pandemic situation, these payment apps & cashless economy proved to be a great help to the consumers.

Cashback offers given by the banking institutions also are of great help to the consumers. But the major drawback of this transformation is faced by people who are uneducated & senior citizens. These are the people who fall prey to digital frauds that take place. It is said that by 2021-this usage will be increased 4 times and hence it will also give rise to the rise in frauds.

5.2 Recent trends of digital banking

Our country had gone through a historical change on 8th November,2016, Demonetization. This epic change forced the consumers to opt for a better transaction options. Since then, platforms such as Mobile banking, Internet banking, Digital wallets and platforms have gained speed. Digital Transformations in Financial Services Industry

1. Mobile banking – This has become the need of the hour, Mobile banking offers the consumers an easier and a more accessible platform to transact their money. One can easily access his or her account from any nook or corner.

2. Automatic Capital Manager- It is a system through which your capital is fully automated. That is, by using algorithms through Artificial Intelligence techniques, the best options and opportunities are calculated and the investment and capital are managed on the basis.

3. Big Data- In today's time, Big Data has become very important for all industries. It is also being given importance in the financial service industry. Through this, it is easy to expand services and industries.

5.3 Impact of Digitalization on Core Banking Products.

Digitalization of services has been a win-win situation for both bankers and customers. Where customers can access their accounts from any part of the world. Bankers can exercise the flexibility of diversifying and expanding their operations. Through this process it has become easier for the bankers to open accounts, offer loans and provide credit facilities to finance consumer durable products. The bankers have also taken a step forward and have started providing insurance facilities to the general public.

Now consumers may also access the credit facility through their Debit and credit cards. All this is only possible because of the process of digitalization. This transformation has also led to faster process of credit approval, easier access to open accounts. This process also means manual intervention is almost negligible and human connect is lost. Hence due to this where a consumer had a chance of getting his credit approved stands nullified in the digital scenario in case of alternatives. This transformation has also given rise to various digital frauds as well-Forging of documents is one of the most common frauds arising.

5.4 Impact on NPA's due to Digitalization

In the above mentioned points we had discussed majorly on the benefits of Digitalization. But this process has a very dire impact on the already rising NPA's of the banks. Digital Frauds have been in the radar ever since the process of digitalization has taken place. Frauds in the nature of Forging of documents, Third Party financing & Intentional fraud has gained its momentum.

These kinds of frauds are being faced by every bank irrespective of their sector. Private Banks are a bit safe because of their stringent rules and regulations. Whereas Public

sector banks have loopholes in their mechanism systems. Hence it is very important for the banking system to come up with a strong coping mechanism to curb the rising NPA's.

6. Conclusion

The following points can be concluded-

- Digitalization gives a freedom to the consumers to access their account from anywhere

- This process is easy to learn and cost effective

- Gives customers value for their money by saving extra time.

- The customers get multiple offers in case they opt for digital payments.

- Poses a difficulty for elderly

- In the situations such as Pandemic & Demonetarization, these digital options provide to serve the consumers.

- When the economy is moving towards a cashless system, these digital platforms will become the new normal for the consumers.

- Bankers use this option to diversify their operations and reach a bigger consumer base.

- Bankers also get an option of investing in newer products which can be easily observed due to large digital consumer base.

- Frauds have always been a part of the Banking Industry-but this transformation has led to a rise in the frauds that take place.

- Forging of documents, Third party funding and Intentional frauds have increased by 10 folds.

- Irrespective of the sector these banks belong to every bank does face this risk of NPA.

- Digitalization has also led to loss of employment opportunities.

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CHAPTER 13
INDIAN ECONOMY AND EDUCATION– A POST GRADUATION STUDENT'S PERSPECTIVE

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Abstract

The perilous pandemic, which brought the whole world into its control and played high and low points persistently, pulled down the Indian economy like it did every other nations. The Covid-19 pandemic affected our economy very serious as never before. Human lives went into the round of 'snakes and ladders' game; each business visionary, manager, worker and every individual faced a downturn in their life during the pandemic. The downturn in the economy had a tremendous negative impact on every aspect of one's life –via: professional, financial, social, domestic, educational etc. Many people lost their jobs while several others were forced to work from the safety of their homes. All this resulted in the economy going downhill.   Apart from large corporate ventures, hundreds of MSMEs as well as those engaged in real estate, hospitality, transport, event management and sports, personal grooming, educationalists and kirana shop owners were amongst the worst hit.

Before the pandemic covid19, the economy was at a long term low of 4.2% in 2019-20. With the onslaught of the pandemic, the central/state governments as well as the RBI are confronted with a major challenge of reviving the economy which is expected to fall in the negative zone. Here I would like to mention that one of the sectors hardest hit is that of EDUCATION – and education at all levels, school and collegiate education.   The government (central/state), the concerned ministries/ boards, universities, institutions and even parents and children were caught completely unawares. All institutions were closed and examinations were kept in abeyance. Adhoc decisions were taken as to conducting classes "ONLINE" for which the teaching staff were ill-equipped. To complicate matters facilities to attend classes from home were restricted due to poor internet connectivity, lack of infrastructure and computing systems/computers/laptops etc. On the question of qualifying exams there was and still is absolutely no clarity as to how to proceed. On the financial side, educational institutions seem to have formulated their own rules for collection of fees from the students being insensitive to the hardship parents are undergoing on the job front. Students, especially those passing out from high school, PUC and final year UG and PG

courses are at a loss as to how to proceed. For collegiate students their careers are at stake while for those moving to the collegiate level there is no clarity as to how to proceed in their desired course of studies.

It is the duty of the respective governments and the governing bodies in the field of education to identify economic and learning models which will facilitate a smooth transition to the "new normal" of education. Educators should be provided with incentives to develop skills in online teaching; subsidies should be provided to both teaching fraternity as well as students to assist them in getting broadband internet connectivity as well as the ability to procure laptops, computers, printers and essential computer peripherals as well as basic original software to make learning enjoyable. All this requires detailed financial and economic planning on the part of all stakeholders without exception. This paper is an attempt to provide a broad outline on how this can be achieved.

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1. Introduction

1.1 Preamble of Indian Economy:

Not every country will be having the same system of economy. Each country's economy differs from its principles and policies. For example: America prides itself for being a capitalist economy but our Indian economic system is mixed economy and always had a more measured outlook. The Indian economic system is called as underdeveloped economy or mixed economy. An economy refers to the way a nation makes the choices about how they going to utilize the system of distributing the goods and services among the citizens. The decisions of choices are totally dependent on our economic system. The main motive is to ensure that every citizens of our country should abide according to the decisions taken and choices to be made in favor of entities about the production and distribution of goods and services for consumption. The year 1947 to 1991 our Indian economic system had the basis of social democratic policy. According to market exchange rates the economy of India stands at world's 12th position and also 4th largest economy on the basis of purchasing power parity.

We knew that there are various types of economic system. Our Indian economic system lies under mixed economy. Mixed economy means, the individuals own most of the resources and it

is determined by them how and what to produce for consumption. Also, the government regulates the industries includes both market and command economies. For example: China. There are five sectors of economy. Namely,

a. Primary
b. Secondary
c. Tertiary
d. Quaternary and
e. Quinary

The activity of human which generates the income is called as economic activities. These activities are broadly grouped into primary, secondary, tertiary, quaternary and quinary sectors. Indian economy is mainly under two sectors organized and unorganized this is in terms of operations and in terms of ownership, it has public sector and private sector. The backbone of Indian economy is MSME sector. It employs 40% of the country's workforce and churns over 6000 products for highly sought of consumption across the global marketplaces. On the other end the sector of education is also lies under the system. The India's economic system is still under developing only because of illiteracy reason. Most of the citizens were still facing the issues to get education both in rural and urban regions but the high percentages involve under rural region. Poor people or backward classes couldn't offer the proper education to their children. Even today they were suffering from illiteracy and this could be the big hit on our economic system. During independence, India's literacy was only 17%, with life expectancy of 32.5 years. Therefore the major challenges appeared to the government on the time when India got independent. The real challenge is to make the systematic organization. Many decisions and active move have been taken by the government at the time period of 1956 to shape the economic system in favor of meeting the demand of growth and development under the hand of political leadership.

1.2. **Indian Education System:**

Earlier in ancient times, India had the system of gurukula education where students likely to move to teacher's (guru) house to study the stuffs. Teachers like to teach their students not only the subjects but they taught about leading the life and running the house. They taught everything

to the students what they wanted to learn. In those days students were likely to learn Sanskrit as it was only ancient language. They also taught mathematics and metaphysics. There was no any restriction in timings and no any formal dress was there and students stayed at home as long as they wished. All teachings were related to environment, life and nature and teachers taught them from their heart. Here both teachers and students were bound to teach and learn together.

Later the modern school education system bought into India, including the British language (English). In 1830's Lord Thomas Babington Macaulay bought the system of modern education. The curriculum included all the modern subjects like mathematics, science, philosophy and also psychology. This teaching bought in confined structure of classroom and developed the close relationship between the teachers and students. In the year 1921 in India, the board of high school and intermediate education set upped in Uttar Pradesh with jurisdictions. In 1929, the board of high school and intermediate education, Rajputana, was established. Later in some of the states in India boards were existed. But in 1952 the constitution of the board amended and renamed as central board of secondary education (CBSE). Many affiliated schools and colleges came under the board and decided the curriculum with textbooks and examinations to all the students.

The Republic of India made the compulsory universal education to the children who were under the age six to fourteen and cherished dream to the government of India. This was the evident made as a directive policy in article 45 of the constitution. Education was the fundamental rights to every citizen of the country. Every person has right to get education. The government took the major steps to provide education from the primary to graduation level, this pressures the economic growth. We need manpower with trained and skilled personality. Having certificates is not just enough but need a proper skills and highly knowledge in practical works. In recent years we can observe that GDP rate around 3% had came down in government of India on school education. This going to be very low and big hit to our economy development. We read that past education system was based on gurukula but who is father of education? Question arises, Horace Mann who was born on May 4th, 1796 in US. He was a lawyer as well as educator. He was elected as secretary in 1837 to Massachusetts Board Of Education and began to work for American educators. Mann targeted the public school and its problems and in 1838 he founded & edited the 'common school journal'. In his journal he had mentioned the six principles:

- Avoid ignoring the public schools

- The interests of public should pay attention towards the sustainability

- From variety of backgrounds children should get the best education

- This type of education should be non-sectarian

- This education must be free and teach by tenets of society and

- Education should provide by professionals and well trained teachers.

2. Research Methodology:

This paper includes descriptive research method and both secondary data & primary data will be taken into consideration. In case of secondary data we look into the journals, newspaper, magazines, articles, blogs and social media updates. Where as in the case of primary data we prepare the set of questionnaires relating to our paper and that will be circulated to targeted persons through social media platforms or through their mail ID. Here targeted person will be the post graduation students from different colleges in Bangalore.

3. Circumstances Of Indian Economy Before Covid-19:

The various data shows that even before the pandemic Indian economy was slowdown. Before the lockdown it has been recorded that fall down in GDP growth rate, fall in tax revenues, industrial output and reduction in demand. This made decrease in human consumption and massive decrease in economic growth. Let us look into the GDP growth rate –

We knew that GDP as of now is in downward slope. This was since quarterly 4 FY17, and in FY20 the growth rate was low of 3.1%. This slowed was marked as 11- year low. The worldwide was lockdown in first Q4 due to Covid-19 and this gave a massive hit on industries. MSME's and many other small scale industries and also factories shut down for about 6 to 8 months. There was low in production and manufacturing materials are not available in the market. Logistics was stopped due to the spread of pandemic and this was the major issue we faced to get the materials. This is in case of manufacturing the products and trading activities but how about our education system?

4. Circumstances Of Indian Education System Before The Pandemic:

Previously our education system was based on traditional methodology; there was an infrastructure and subtle environment to study. Students of different universities and colleges likely to study and discuss in prompt territory. This kind of education gives the students and scholars to build their career and can have all kind of practical knowledge of working. This helps them to learn and apply their knowledge in their interested subjects.

When we observe the present aspects of life, this method of education have turned into modernism, digitalism and with latest technologies. Covid-19 pandemic gave us time to learn in different parameters. Now the earlier method of education was not followed, we have started adapting the new methods which is totally digitalized way of education. The classroom structure turned into mobile application, written notes turned into scanned PDF format, signature of red ink turned into e-signature and hard copy of textbooks turned into e-books. These changes bought the experiences of learning and exploring the ideas in our future career development. The eight months of lockdown gave us various changes in education life. Even though students faced various challenges in adapting the technology but later they were adjusted to the changes. Rural sided students faced the bandwidth connectivity issues and network while attending the e-classes. This made them to get frustrated and disappointed towards the change. Even now students like to go to the colleges and schools to study. They felt that classroom education is much better than e-classroom where the students and professors face to face interaction bring them to understand in better way.

The situation of education in post pandemic will be very unique and in different way. The central/state government should framework the policies and it has to be adapted in a structured model. When we observe the pre pandemic the illiteracy rate was down in India. 77.7% of literacy rate in India while Kerala has highest rate of literacy followed by Delhi and Andhra Pradesh has recorded the lowest literacy rate in India. Every year 4% of rate increases in both rural and urban area.

5. **Consequences Of Covid-19 On Indian Economy:**

The impact of economic 2020 on covid-19 pandemic in India has been largely affected. According to the ministry of statistics, India's growth in the 4th quarter of the fiscal year 2020 went low to 3.1%. This drop on growth rate was mainly due to the corona virus pandemic effect

on the Indian economy, said by the chief economic adviser to the government of India. India will be witnessing for the slowdown in economy in a pre-pandemic period and according to the World Bank, the current pandemic has 'magnified pre-existing risks to India's economic outlook'. The present situation of pandemic going to be big hit on post pandemic. In India the unemployment rate had increased nearly 19% within a month of virus attacked to the country. But now according to the Centre of monitoring Indian economy, it reaches to 26% of unemployment rate. Governments have mentioned that around 14 crores had lost their job during the pandemic lockdown. When we compared to the previous year most of household income dropped down. Various businesses such as IT companies, hotels, theaters and airlines cut down salaries and terminated many employees. Tourism industry loses its income around Rs.15000 crore (US Dollar2.1 billion) and transport companies like Ola cabs, Uber went down nearly 95% in march-may resulting in 45% of layoff.

Many young starts-ups have been fallen and impacted in funded economy. When compared to quarter 4 in 2019 the total growth stage in funding had decreased to 45% and as per **KPMG** report venture capital in Indian startups has fallen 50% in quarter 1 in 2020 from quarter 4 2019. Electricity consumption also declined strongly during the lockdown. Lower consumption of electricity implies lower in economic activities. It was nearly 30% below normal levels. Earlier a unit of additional economic activity has been associated with 1.3units additional electric consumption. The economic impact has already been between 5.6% of gross domestic product and 6.0% of GDP.

During the period of lockdown tax collection also went down and resulted in government to bare its own costs. Some states don't have enough salaries to pay the tax in future days and they were going face many loopholes and difficulties in future. The former RBI governor Raghuram Rajan said that this pandemic will going to have a greatest emergency since independence and India should be prepared for a negative growth rate in fiscal year 2021.

When we look into the pre pandemic, India was in slowdown since 2018-19; the growth was falling up to 8% in quarter4 fiscal year 2018 to 4.5% in quarter2 fiscal year 2020. The international monetary fund reduced India's GDP estimates for 2019 and also reduced the forecast of 2020's GDP. The back to back severe disruptions in the economy during the time of 2017, the demonetization and GST bought the drop in India. Along with this many back crisis

such as Lakshmi villas bank, PNB scam and infrastructure leasing and financial services crisis and government scheme failures such as that of Make in India scheme gave a huge income crunch for both rural and urban sectors in the year prior to the lockdown.

Due to pandemic the major changes bought in export and import duties. India raised the voice on boycotting the China products such as toys, mobile applications, automobiles and electronics. The central government gave initiated to 'Make in India' project and this gave boom to the small scale industries to manufacture and produce the products. Through this initiative middle class families started their own businesses, started manufacturing the basic needs of consumers.

The other impacts of this pandemic likely to be severe for India are as follow:

- Pushing more people in poverty line and leads to increase in poverty rate.
- Worsening in socio-economic inequalities.
- Affecting the health and nutrition indices.
- Compromise in health related precautions such as wearing masks, face shield, social distancing and seeking medical advices regularly.

6. Covid-19 Impact on Educational Sector:

Prior to the pandemic situation there was offline methodology of teaching. The teaching and learning environment created in such a manner that, there was a face to face interaction between the teachers and students. The existence of lecturer makes students to understand the concepts betterely. There was bond between them; there was a learning relationship between them. But now, this was too difficult to find in the same environment. The situation has change; the learning environment has got change. The situation is that, Students and teachers should stay in safe place (at home) and meet each other through an electronic media. Learning and listening to the lecturing through various mobile applications. Now, the revolution took apart of hand books and pen to laptops and keyboards. This pandemic changed the system of learning the stuffs and teaching methods. Going digital have geared up faster and better than ever before. The environment of schools and colleges has been bought under the digital platform. Without any physical movement the whole system was bought under virtual presents.

As per the data from UNESCO institute for statistics, this pandemic has led the closure of schools and colleges in more than 188 countries, affected more than 1.5 billion students and 63 million more primary and secondary teachers worldwide. The condition was created from thinking digital to being digital. The sudden shift of digital learning was troublesome because before the covid-19 no one was ready with the new system of digitalization. Most of us believed that traditional way of learning anywhere and anytime adds value. The sudden development in education takes time to adapt the dynamics and need time to adjust to it. The dynamics is that, use of video broadcasting tool, use of asynchronous learning programs and use of real-time social media channels. Initially we found it very difficult and we need to face many issues. The innovation of education sector helping us to explore new methods of teaching and learning. According to Mckinsey "existing technology helps teachers relocate 20 to 40% of their time to activities that supports student learning".

7. **Economic and Logistic Challenges Faced By Families:**

The covid-19 pandemic existed in India in a brutal way. Due to lock down many Indian families resulted to loss of life and fired out from job. It further results in decreasing the rate of unemployment and drastic fall in GDP rate. The projection from Indian monetary fund had projected that 4.5% of GDP rate in India in 2020 and it would be 6% in 2021. For further moving to economy, the government of India and reserve bank of India had announced variety of measures which included policy changes, reforms, relief packages, bank loans and infrastructure building plans and so on. These measures are taken with necessary decisions in favor of citizen's lifestyle and it was timely measures provided to citizens to recover from the erratic crisis. These measures are needy and help people to boost the consumption demand which has been slumped by the lockdown.

During the pandemic the socio-economic stratum affected people greatly and highly hitted on their lifestyle. During the lockdown many distressed migrant laborers moved back to their native places and struggled to live life without any job. The way of reduction in poverty depending on remittance of money to the home country, which many Indian workers popularly do. This leads to economic development and increase in GDP. About 1042500 crores were remitted to low and middle income countries of work say for example: Gulf countries, in the year 2019. The fall of

remittance in India about 23% in 2020. In 2019 we can see the striking contrast of growth of 480000 crores to 5.5% and receipts of 620000 crores.

In the case of classroom attendance the professionals and students not much bothered about conducting the classes in pre pandemic. But currently they were facing lot of burden in handling the classes. Now all the professionals and scholars were plunged in safest place via home where they lived in. making arrangements from the place where they are is bit challenging and adaption of technological devices, use of gadgets and through this new systematic bringing the scholars under one roof is really very challenging tasks.

On account of covid-19 discarded the supply chains around the world. It lay down to the logistics everywhere. But we have solutions t overcome with this lay off. The essential nature of Covid crisis highlighted of getting PPE to health care workers, to replenishing sticks in marketplace. E-commerce, a part of economic activity saw the distress in delivering the home products to their customers. They found the gradual reduce in inventories and supplies that had never had so many businesses and consumers to adjust to the innovation and improvised technologies. This leads to the 'bullwhip effect' on e-commerce.

In normal days the 90% of global trade volume involve in ocean freightage but the pandemic initially break through the supply of manufactured goods out of Asia, then ridged across the world and sent demand for goods shipped by ocean freight plummeting. It finds difficult in carriage of goods and shipping of it through the sea ports. The duty imposed on it is heavily affected the manufacturers and buyers. The sudden shift in cargo leaded to air despite scramble of space. Even we founded the fluctuations in demand of goods and services. In Italy, e-commerce sales of consumer products rose to 82% in a week. According to McKinsey forecast report 55 percent of consumers in China continued inline shopping as the crisis eases.

8. Methodology And Practices Followed During The Pandemic In Lieu Of Physical Classes:

In previous paragraphs we studied about the conduction of online classes. There two ways of online class, conducting live classes as webinars using mobile applications such as zoom, Google meet, teams etc., and one more type is recording the classes and shared to students. This pandemic made universities forcibly to suspend physical classes and shift to online classes. In India, many private universities and the public were still adapting to the transition. There have

debates going among the people, whether the examination and exam evaluation can be conducted through online or not. The nature of physical classes doesn't exist in online.

The sudden transition in online education made faculties and students to clutch on their mobiles and laptops. They were combating to manage the sudden change in education. If lockdown continues in future days then it would greater difficult to stick on to the new methodology and students who were in rural place need to face various loopholes. This would also affect to higher education.

a. Going digital: as soon as the pandemic broke out in India many larger universities like Delhi University, Jawaharlal Nehru University and Mysore University announced the suspension of physical classes and notice issued regarding online classes. The faculties began the academic activities through online and students were much excited to attend the live online classes. The assignments and test were conducted through online this made the flexible time between the students and faculties.

b. Transition to digital: online education can conducted classes in two ways; the first is recording the classes, when the public referred to as Massive open online courses (MOOC's). The second one is live sessions like webinars. Universities and students need to have high speed in internet connection and faculties should feel comfortable while conducting the online classes. We need the education platform with IT infrastructure and learning management tools. There are many platforms opened by the central and state government to support the online classes in relation to this they introduced the e-PG, Patashala, **SWAYAM** (online courses for teachers) and **NEAT** (enhancing employability). These are supported by **MHRD** (Ministry of human resource development), the national council of educational research and training and the department of technical education.

9. **Online Education for Teachers:**

Advantages:

- With the latest technology and online tools allowed teachers to teach with innovative methods and helped to think creatively.

- The main advantage of this is to reach the large number of students at a time across geographies.

- This is useful in distance learning.

Disadvantages:

- Online teaching consumes time and need practice.

- The consciousness of students cannot be found out as like in physical classroom.

- Difficult to evaluate their presence.

- Due to inability of face to face interaction discussions and monitoring cannot be connected with both faculties and students.

- Difficult to reach out the students at a time due to technological limitations.

10. Online Education for students:

Advantages:

- The biggest advantage is that students adapted the online tools and unique methodology of learning.

- Flexible time to listen the recorded class and easy to make points as they can re listen the class.

- Live conversation and working at their own speed.

- The ability to learn through e platforms such as access to e-library, online materials, e-books etc.

- Improvising knowledge in usage of technologies.

- Many opportunities opened to learn certificate courses related to the subjects and interest.

Disadvantages:

- The biggest disadvantage in free flow of conversation, debates and discussions.

- Technological issues are like low internet connectivity, bandwidth problem, weak devices and other difficulties.

- Practice of learning and being evaluated online.

- Studying at home with family members and with other distractions.

- Increase in stress level and mental health diseases.

Other than these pros and cons we have many others. We explored new techniques and practices during this pandemic. Research scholars or PG students got time to study and traverse with their interested subject and went through lot of opportunities to showcase their skills. Numerous gates of chances opened to do certification courses in different fields. This would make students profile or resume even more attractive. The Add on courses gives scholars to learn and apply their knowledge in a suitable field.

This is in case of education but we should remember that education system and economy are interdependent. Indian economy is in recession even before the pandemic we can observe that in previous paragraphs. When the pandemic attacked to India, the economy cycle went into fluctuations. We met with different types of recession period and this situation remembers the previous recession period which was took in 2006. Then what are the pros and cons of this pandemic majorly influenced on Indian economy. Markets, stocks, industries, money, US stocks every field of economy got detached from working to uphold the economy due to Covid-19. This pandemic gave us benefits as well as loss in economy, cultural, social and technological.

Number of Children affected by school closures globally				
Total % of learners affect	Column Labels			
Row Labels	175	525	825	Grand Total
Lower and low-middle income	0.8			0.8
Total number of learners affected by national closures		0.6		0.6
Upper-middle & high income			0.4	0.4
Grand Total	**0.8**	**0.6**	**0.4**	**1.8**

Source: UNESCO released data
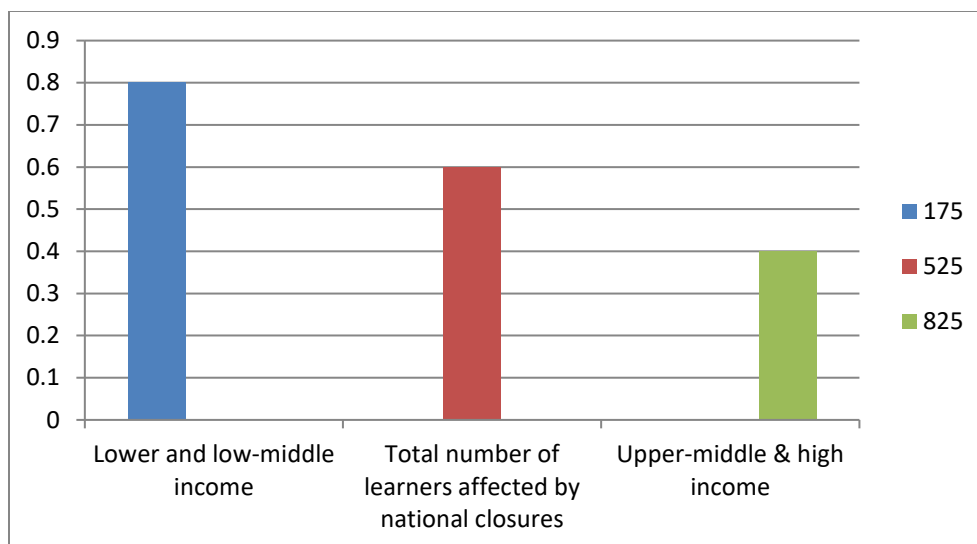
Source: Authors data

11. Economy Benefits:

To overcome from the evil of covid-19 government of India took major decisions and announced various measures to safeguard the nation from the spread of virus. Now the economy is facing very hard times to recover from the period of recession but in future days for sure it will recover from the crisis and goes on smooth. This is because of various reasons:

- The continuous fall down in crude oil price helping India to save fifty billion dollars from oil imports in the next financial year, this would beneficial to the country.

- As we know that covid-19 evil began in Wuhan in China and so that many other countries like EU, US, Japan, Australia and other were affected very badly. So they pressurized China to answer about their irresponsible towards the move regarding the pandemic. So, for this reason many countries were existed from China companies and shifting to India Vietnam, Indonesia, and Thailand etc. This move was like punishing China from their ignorant act.

- To grab the opportunities, India stood up with strategic move to build the infrastructure to attract the foreign direct investments and for this the finance minister announced an economic package of Rs. 20 lakh crore to boost the domestic production with consumption also to increase capabilities of medium and small scale enterprises.

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- Initially we were importing PPE kit from China due less productivity and manufacturing capabilities. But the ministry of textile of India took the supports from various private manufacturers and therefore India just in two months became 2nd largest country to produce the PPE kit and as well as world's first reusable PPE suits.

- The positive mind brings positive vibes and positive vibes brings positive life. And for this reason India developed its manufacturing units and became an export driven economy which will provide job opportunities for Indian citizens.

Table showing the impact of Covid-19 on India's manufacturing:

Index of Industrial Production (2015=100); seasonal adjusted	July (companies compared 2020 to previous months	Previous year
Food products	114.60.1%	7.2%
Beverages	66.13.06%	6.1%
Tobacco	nil	nil
Textiles	83.85.8%	4.4%
Wearing apparel	nil	nil
Leather and related products	82.57.1%	7.5%
Wood products (excluding furniture)	93.63.4%	6.8%
Paper products	50.32.7%	7.6%
Printing and reproduction of recorded media	63.85.2%	7.4%
Petroleum products and Coke	99.03.5%	3.2%
Pharmaceuticals, medical etc	nil	nil
Other non-metallic mineral products	100.32.0%	3.9%

Fabricated metal products	83.44.8%	2.7%
Electrical equipment	51.25.8%	7%
Machinery equipments	71.23.5%	3.3%
Motor vehicles, trailers and semi-trailers	56.45.6%	2.8%
Mining and querying	101.27.6%	2.8%
Electricity, gas, steam and air conditioning	121.25.4%	2.5%
Furniture	97.57.2%	6.9%
Transport equipment	95.48.4%	3.6%
Total manufacturing	102.80.8%	1.4%

Source: UNIDO statistics data
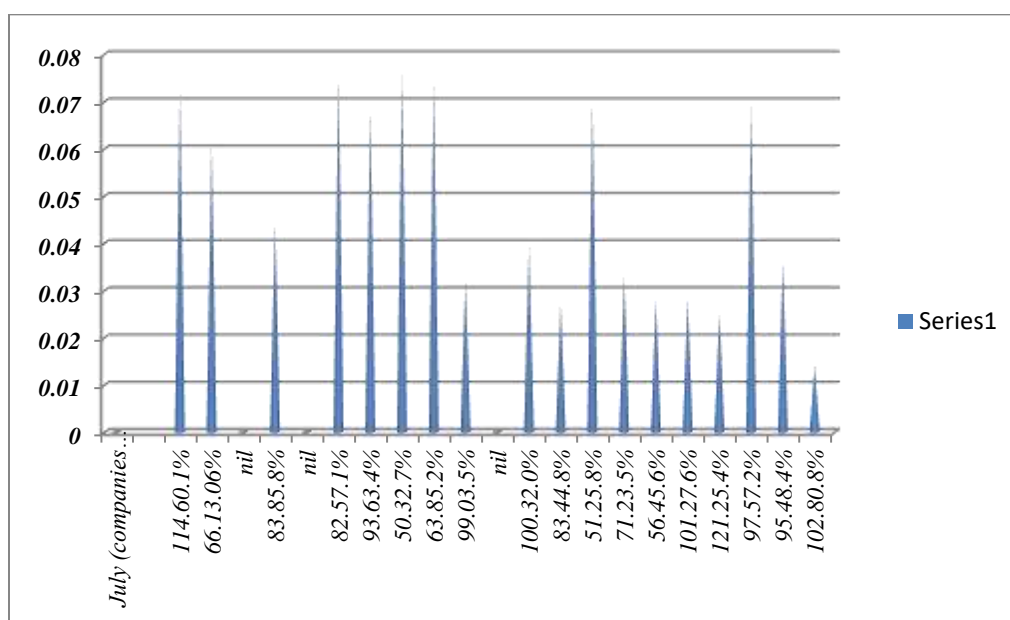
The above table shows the manufacturing units in India during the pandemic. The overall total manufacturing is 1.4% and it seems to be very low when compared to pre-pandemic period. Here we can observe the overall fall down percentages in every industrial units. This table is showing the comparative of previous months and previous years.

12. **Detriments on Economic Growth:**

Proceedings of 12th International Conference on the theme "Digitalization as a Vehicle for Innovation, Organizational Growth and Effectiveness"

The biggest impact of covid-19 on economy is fall down in Gross Domestic Products. The countries GDP growth had shrink in 2020 up to 4.5% but it can be grow to the rate of 6.3% in fiscal year 2021. The report from Dun & Bradstreet had witnessed the country's growth and global outlook. During this covid-19 period, different countries had adapted various strategies to improve the customer satisfaction and to manage the cost fluctuations. As per the report none of the countries like India, Japan, China or Singapore had seen the rate upgrade. The containment zones faced anticipated depressed by lockdown and low demand rate in India. This raises the uncertainty in manufacturers and suppliers, who paused their operations as the government opened the economy in three phases. Dr. Arun Singh, Global Chief Economist said that the high inflation rate and high unemployment rate and also extreme fall of demand rate bought the challenges to the state/central government and Reserve bank of India. The report determines the growth rate of different countries in fiscal year 2021 and predicts the rate of GDP of the countries.

- The curb of spreading the corona virus, authorities of different countries had implemented the measure of lockdown and this bought the economic activities to halt.
- Many businesses and firms were forced to shut down their operations and increases in firing out the employees from the job.
- The biggest hit on companies of service industries, which influences the major growth of Indian economic growth.
- The world trade and manufacturers faced major difficulties during the year 2020.
- Due to this pandemic the rise in unemployment growth accelerate the huge losses in job. And also seen the slump in manufacturing activities of the country.
- There were fluctuations in the prices of crude oil such as petrol and diesel, gold and silver prices went up the hill and the major changes found in stock markets, trading of commodities and changes in SENSEX rates.

Table showing the India's actual growth rate in different sources of economy:

Source	From	Until	Actual
India worker population ratio	2012	2018	46.80

(Ministry of statistics and program implementation)			
India GDP Annual Growth Rate (MOSPI)	1951	2020	-23.90
India Balance of Trade (ministry of commerce and industry, India)	1957	2020	-2900.00
Crude oil imports (U.S. Energy information administration)	2001	2020	1463.00
India Crude oil production (U.S. Energy information administration)	1994	2020	710.00
India export prices (Reserve bank of India)	2000	2019	402.00
India Foreign direct investment (RBI)	1995	2020	3269.00
India central government spending to GDP (RBI)	1970	2019	13.21
India Inflation rate (MOSPI)	2012	2020	6.69
India industrial production (MOSPI)	1994	2020	-10.40
India youth unemployment rate	2018	2018	23.70

(MOSPI)			
India unemployment rate (centre for monitoring Indian economy)	2018	2020	6.70
India SENSEX stock market index (OTC/CFD)	1979	2020	40489.68

Source: Trading economics data

GDP growth rate compared to PY

Source: Internet

Proceedings of 12th International Conference on the theme "Digitalization as a Vehicle for Innovation, Organizational Growth and Effectiveness"

Quarterly growth rate in GDP %
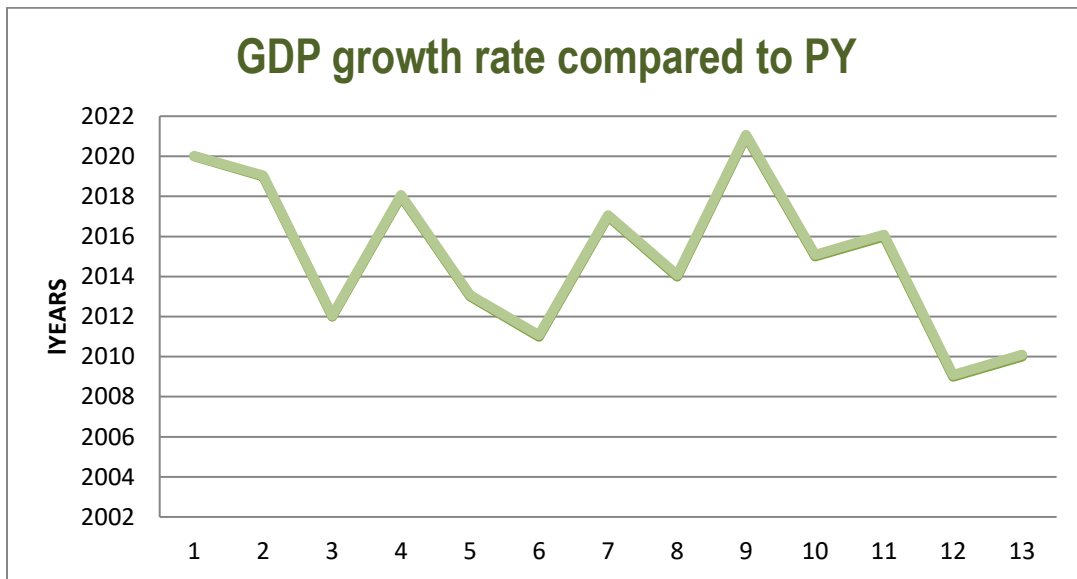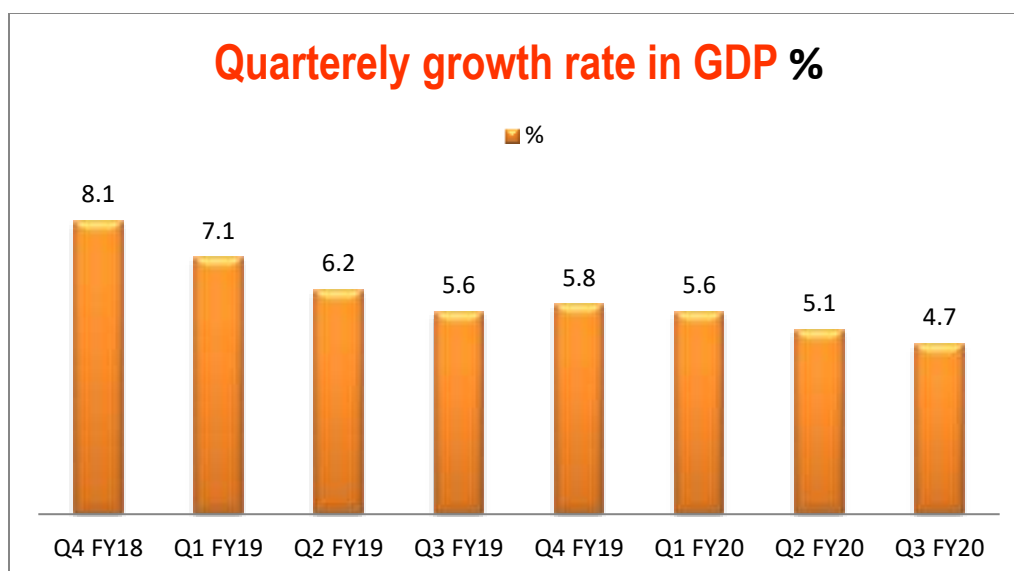
Source: MOSPI data on Feb28, 2020 & may 2019

13. Contributions To GDP In Certain Activities Of Indian Economy:

In the case of real estate the size of the sector is ₹ 8.8 lakh crore, number of employed is 52 million (it's both direct and indirect) and the contribution of GDP is 4.3%. when we say about the education, the size of the sector is ₹ 6.7 lakh crore in 2018 and the number of employed is N.A. and finally the GDP contribution is 3.3%. the one more major sector is E-commerce, the size of it is ₹ 2.2 lakh crore, number of employed is 1.2 million and the contribution of GDP is 1%. During the monsoon season 2020 the 'Landmark Bills passed by Parliament' regarding the historic new initiatives in higher education. According to the national forensic sciences university bill, 2020 establishes the national forensic sciences university as an institution of national importance, to achieve excellence in the field of science and technology. According to the Rashtriya Raksha university bill, 2020 proposed to establish this university as an institution of national importance. To create new knowledge in research and to fulfill the needs of the trained professionals in various wings of policing with a multi-disciplinary university.

14. Economic recovery and its types:

Recession period is usually used by the economists to determine the economic conditions and its recessions. There is no specific theory or classifications for recession shapes, rather the terminology is used to showcase the recession period through informal shorthand. Recession

shapes shows us the figure of downfall or salvation of businesses of various other economic activities. We have different types of recession shapes. The most common one are:

V-shaped recession, U-shaped recession, W-shaped recession, L-shaped recession, K-shaped recession and other shapes. When we observe that economy is going to touch the recession line then the recovery is most mandatory where we need to start functioning and prepared the start-ups to gear up its job/businesses. When we made the significant change to recover the system from the shake-out during the recession then the unsuccessful businesses, falter, redundant jobs are lost, shifts in investment and everyone will reflects on what and where went wrong. If we go with proper planning then the same mistakes won't be repeating again.

Now we look into the types of recession and economic recovery:

Basically this has been classified into five distinct types of shapes.

- L-shape – this shape exhibits the sharp decline in the economy and followed by the slow recovery growth period. This remains for several years as it is a level of growth is slow.
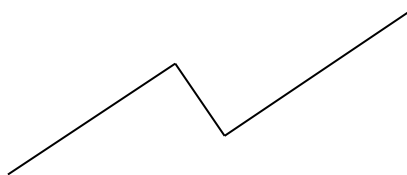
- U-shape – the most commonly seen in Indian economic cycle is U-shape recession. A gradual drop in the economy stagnating for a few quarters and up to two years, before a relatively healthy rise. The duration of this recession period is up to 1-2 years.
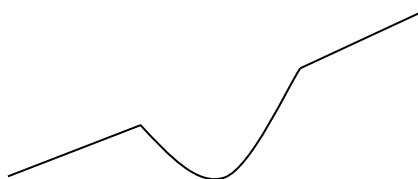
- W-shape – this scenario offers a tempting promise of recovery, dips back into a sharp decline, and then finally enters the full recovery period. This period can also be called as double-dip recessions. The duration of this recession is for 2 years.

- V-shape – this is one of the best scenario, the sharp decline in the economy is quickly and immediately followed by a rapid recovery back to its previous peak. The duration is <1 year.
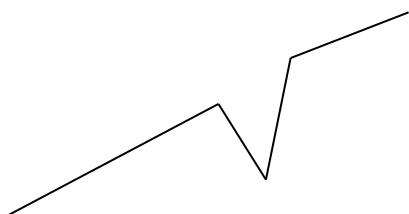
- K-shape – this was the new type of recovery found during the time of pandemic. In this scenario the quick gear up like V-shaped recession for the social advantages, but slow and L-shaped for the socially disadvantages. Therefore we can say that it's a mix of V & L shapes of recovery.
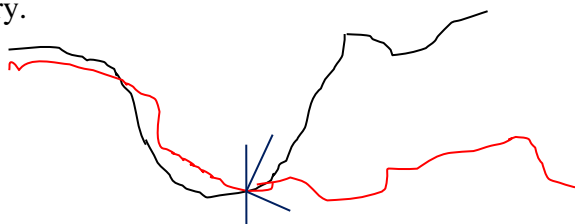
- Other shapes – according to Mike Shedlock describes a WW-shaped recession with the country. It's a flip of up and down recessions and which stays for prolonged period of time say for 3-4 years or more. The recession of 2009 is determined as inverted square root sign shaped recession. This was said by the financier George Soros. During the 2001 recession a trader Thierry Martin proposed the J-shaped recovery. This was a strictly for optimists and could be cause by a high tech recession.

Normally, during the economic recovery, gross domestic product grows, incomes rise and unemployment falls and as the economy rebounds.

15. **Proposed New Education Policies:**

We study on new education policy 2020 which was proposed by Ministry of Human Resource Development by government of India. The policy was revised in four stages. School education, higher education other key area of focus and making it happen. Education is fundamental rights for achieving an equitable and just society, and promoting national development. The main agenda of global education development was reflected in four goals (SDG4) of the 2030 agenda for sustainable development, adopted by India in 2015 – seeks to 'ensure inclusive and equitable

quality education and promote lifelong learning opportunities for all' by 2030. To achieve such a goal the entire education system needs support and to be recognized through its responsibilities and foster learning. So that all the critical agenda and tasks of a goal of 2030 for sustainable development can be achieved. National education policy had proposed the key principles stating that,

- In all curriculum activities, pedagogy, synopsis and policies should have respect for diversity and local context.

- Having equity and inclusion in all corner stone of educational decisions.

- Highly using of technology in the case of teaching and learning, removing language barriers and in management and educational planning.

a. Ensuring Universal Access to educational at all levels:

To ensure the opportunity and access to all children from all different backgrounds or sectors or from all regions, national education policy bought the major changes in multiple pathways to ensuring the education access universally. Multiple pathways such as in learning and involving in both formal and informal education modes. One of main motive to bring back the drop outs children and give them quality education. It is necessary to create the innovative and alternative educational centers. To make it comfortable and suitable to both children and teachers for better business or personal presentation peer tutoring came into the picture. Philanthropies should take the initiative to build both government and non-government schools. Need to focus on learning outcomes to achieve the desired learning in all the levels of education.

b. Some learning outcomes are mentioned below:

- From ECCE (early children care and education) to secondary need to provide the universalisation of access to learn.

- To ensure equality and inclusion to study for children.

- Bringing back the 2 crores of children who were out of schools.

- Until the completion of secondary education children should be retain and need to achieve the goal of education.

- Focusing on latest technologies and need to improve the quality learning and achieving the assessment.

- Introducing the effective governance to separate the powers and common norms.

- For public and private school education needs to give common standards.

- To overcome the language barriers in higher learning.

c. Early children care and education framework:

- **NCERT** will draft the **NCPFECE** (national curricular and pedagogical framework foe early childhood education).

- **NCPFECE** will be aligning the best practices of research and with latest research on **ECCE** and also practice the best framework in national and international.

- Framework will be done majorly on multi-faceted like, comprising of alphabets, languages, numbers, colors, counting, shapes, indoor play, and outdoor plays. Drawing, logical thinking. Problem solving, visual arts, drama, painting and music and many other activities.

- **NCERT** will develop the school preparation module for all grade 1 students in A-3 month play-based.

16. Key Focused Areas In The New Policy:

The first focused on the area of socio-economic groups who were been disadvantaged from getting education. This has been categorized broadly in the following:

- In socio-economic groups we need to identify the genders. Particularly the transgender and females who left behind with their education.

- We need to identify the socio-cultural groups such as, scheduled castes, scheduled tribes, OBC's and minorities.

- Students from different villages, small towns and from aspiration districts. Need to identify students from these places and bring them back to schools. This comes under geographical groups.

- Next we need to identify the disabilities, even disabilities from learning. Motive to give them quality education.

- Finally from the groups of socio-economic conditions are like, migrant communities, low income households, children in vulnerable situations, victims of children, orphanages including child beggars in rural, urban cities and urban poor.

For the above consequences separate strategies will be inherited and special attention will be given to reduce the gaps of incompletion of education.

17. **New Features Of The Policy:**

    a. Preparation of schooling and elementary schooling level:

- **ECCE** for all by 2030: need to do framework for **ECCE** for national curriculum.
- By 2030 in school education need to achieve 100 percent gross enrollment ratio.
- For 5-6 year old children in anganavadis/pre-schools conduction of preparatory classes/Balvatika.
- Requirement of school preparation module for class 1 entrants.
- National Foundational Literacy and Numeracy Mission.
- The main feature is to setup the BalBhavans.

    b. School infrastructure and resources:

- Creation of special education zones.
- Utilization of unused school buildings as samajik chethan Kendras.
- Utilization of school complex or clusters for resource sharing.

    c. Holistic development of the student:

- For curricular, extra and co-curricular, arts and science, sports and vocational crafts, curricular to integrate Indian culture and ethos.
- Need to explore innovative pedagogies such as experimental teaching and learning methods.
- Need to explore the book promotion policy and digital libraries.
- To identify the specific aptitude child need to use the AI for holistic report card.
- Lok vidya represents the local artistic as master instructions in schools.
- Creation of internship with local trades or craftsperson for grades 6-8 as vocational education integration from primary grades and no bag days.

    d. Inclusivity:

- KGBV's up to class 12 nee to include the gender inclusion fund.

- Need to offer special provisions for gifted children (disabled children).

- For the development of adult education need to focus on technology based solutions.

- Courses for grades 3, 5 and 8 and vocational courses need to expand for better learning.

- Till grade 5 the medium of learning will be in local languages or will be in mother tongue.

e. Assessments:

- Setting up of PARAKH for national assessment center for performance assessment, review and analysis of knowledge for holistic development.

- Board exams in grades 10 and 12 in addition to exams in grades 3, 5 and 8.

- Based on conceptual knowledge and its application need to develop the board exams like modular and low stakes.

f. Teachers recruitments or teacher education:

- Requirement of minimum qualification of degree for teaching will be a 4-year integrated B.Ed. degree by 2030.

- TET exam is mandatory for teaching. For teacher recruitment need to qualify the exams of TET, NTA test and teaching demonstration.

- Every teacher should spend 50 hours in training service per year.

- By 2022 introduction of **NPST** (national professional standards for teachers).

- It's mandatory for every PhD students to do a module on teacher education.

g. Role of government departments or bodies or institutions:

- To look after the policy making state department will be appointed, to look after the operations directorate of education is appointed, **SCERT** to look after the academics and state school standards authority to set minimum common standards for online self-disclosure by all private and public schools.

- For continuous online feedback on self-disclosure by schools random sampling of students to be taken.

- Engagement of social workers, alumni, retired teachers and volunteers with schools.

- With the collaboration of **MHRD** and corresponding apex bodies of states strengthening the **CABE** (central advisory board of education) for development, articulate evaluation and revising the vision of education.

- To bring the focus on education and learning ministry of education as been re-designated with ministry of human resource development.

17. **Conclusion:**

The overall outbreak of the covid-19 pandemic bought huge differences in educational area and biggest hit to job market. As the growth of economy is going low and low, students from post graduation stream were facing crowd movement to attend the examinations, viva and also finding difficulties in getting the job. Many scholars who have completed their graduation were moving to became an entrepreneurs, found that this would be the better method to earn and grow in the market. The time we were now in, where we couldn't reach out our dream job rather than getting into that we were finding the alternate job which provides a better work experience and learning about latest technologies. The terminated employees were finding the trend jobs in market which helps in gearing up the economic growth. The economic cycle keeps on fluctuating and according to that even people go into adjusting the situations and act accordingly. Most employees who got terminated from their companies/firms began their start-ups and to encourage this act of working RBI announced about the loan and its exciting interest rates. The central/state government released interesting packages to attract the entrepreneurs and also during the period of pandemic E-commerce platforms upholds the trading activity and increased its number of customers.

At the time of covid-19 it was the big challenges made in conduction of final years post graduation exams. The board of examination center and the ministry of education system took precautionary measures and as per government rules and regulations they commenced the exams. Finally they completed all the exams with the suitable measures and students felt relief from the tensions. After completion of exams they need to face the complications in search of jobs. The data of LinkedIn shows the growth rate of job search. Many job aspirants got registered themselves into various websites like, indeed, yuva jobs, internshaala, shine.com etc.

Even though they found the vacancies in the job market due to their poor resume, HR of the firm were thinking twice to recruit the candidate. The post graduation students who are in 1st years got the sublime opportunities to improve their resume and make it attractable. Many online courses provided discounted fee structure to pursue the course relevant to their stream of education. Universities and various college institutions conducted the webinars, e- conferences and e-certification courses to attract the students to attend these programs and assuring that students are not alone, academic support will always be there with them. But the students from rural places found it to be very strange and difficult to attend the online sessions due to low connectivity or network issues. So they were struggling to attend the online classes hence they started working and started to search for the jobs. This was the biggest drawback to them to achieve their dreams in studies.

Later, when lockdown unwrapped slowly, economic activities started one after the other as per the order by state government. Commodities market, logistics, small scale industries, construction works and MSME's were unlocked slowly from the loss of businesses. They started to stock up the materials/items and gave a slow drive in trading. By the time the graph of Indian economy growth started recovering from decline stage to growth stage but we need still time to touch the peak level of economy. Even now the daily wages workers finding the difficulties to look after their family. The government came up with packages to help those people who were still facing loopholes to lead their life. The packages related to people such as, women workers, auto and cab drivers and to the social workers as well as corona warriors.

18 Results of survey:

Q1. How Covid-19 pandemic effected on your studies?

Answers: since all learning methodology have taken the turn towards the latest technology and online process. Students can learn better but not much better as offline classes.

The decision of lockdown made students to stay behind with the textbooks and made them very difficult to copy out the notes because public library were closed and also they found difficulty to access the online e-books due to network issues.

Many students complained that online classes would not be effective and lecturers struggle to complete the syllabus on time.

Students found to be less attentive in listening to online classes and this made them difficult to understand the subject virtually due to their lack of listening skill and lack of concentration.

Q2. Have you (students) adapted yourself with latest technologies?

Answer: yes. Most of the students have been adapted with latest technologies and have gained knowledge to carry on the latest applications.

Q3. Benefits you (students) found during the pandemic?

Answers: students have enhanced their knowledge in different kinds of subject/topics by attending the online webinars.

Most of the students have got time to explore their talents and to improve their skills.

Most of them read the novels of their choice.

Students found its time saving in attending the classes within the safe place and this made them to learn more about time management and technologies.

Most of them had a new experience of online/virtual exams.

Q4. Disadvantages you (students) found during the pandemic on economy?

Answers: before the pandemic some PG students were going to part-time jobs but now this was missed due to covid-19.

Most of them found disturbances or distractions while attending the online classes.

Most of the families faced the financial problems and got fired from their present job.

Students were strained and suffered from eye sight because of long hours usage of cell phones and laptops.

Q5. Students view point on Indian economy during Covid-19.

Answers: 41.7% of students said that it was a worst case during the pandemic and 58.3% of said that it was in moderate stage of recovery of Indian economy.

Q6. Do you (students) think economy will effect on education to the extreme level?

Answers: yes. 100% of students agree this. It was been a massive hit on our education.

Q7. Overall viewpoint of students on education system and recovery of economy.

Answers: students were hoping that new education policy would bring lots of improvement and changes in quality education.

They say that need changes accordingly to the present situation.

Practical way of teaching should be improve and positive thinking would bring the solutions for the problems.

Some students said that due to covid-19 education system had not become worst because many institutions and online e-learning platforms are opened to provide good quality education through virtual mode and trying to connect with each students and giving them individual attention.

Education and economy should go hand in hand and need to improve or develop even better. Only conducting of exams should not be main motive but need to understand the subject in depth and encourage & support to be given for researches. Said by scholars from different institutions.

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CHAPTER 14

THE NEED TO REEVALUATE OR REVIEW SEXUAL HARASSMENT POLICY IN A CORPORATE COMPANY

[1]Meghna Bandi

Abstract

In view of the number of cases of abuse and sexual harassment there is no doubt that people in various organisations and society in general need to know a bit more about ethics, morals in work atmosphere. Where do people who face such abuses in work life go, do they complain to their peers, higher authority or seek legal advice? The companies should motivate their employees to raise an alarm in case they find any violation of rules and procedures and do inform about any possible harm to the interest of the organization and the society. The misconduct could be very small but may harm the dignity of a female employee and make her uncomfortable in the work sphere. The whistle blowing is done to safeguard the interest of the employees and the general public for whom the organization is functioning. This paper tries to bring to light the awareness about these policies among employees of various organisations like educational institutions and corporate. Do companies have a specific policy in this regard? Are the employees aware of their rights and impact of the violation of basic ethics and behavior? This study uses basic questionnaire circulated among employees working in different IT companies and educational institutions to understand their rights and their ability to report such instances in work life. A structured questionnaire would be circulated to get responses from women folk as well as the male employees to get a clearer picture. This study would enable the respondents and other employees to understand of their rights under the whistle blowing policy or the Anti harassment policy of the company.

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1. Introduction

Harassment is any improper behavior or conduct towards ladies in the workplace making it uncomfortable for them to work along with their male counterparts. Harassment may be in the form of words, gestures improper and humiliating behavior and the like thereby creating an improper work environment. The study comprises educated men and women from IT and

educational institutions, where considerable womenfolk work. The paper tries to bring to light the level of awareness among employees about this Anti-Harassment Policy in organizations, and protecting the women folk from suppressing the need to report such instances and to understand weather there is any gender bias shown at the time of recruitment and promotions in different companies.

The Act of Anti- sexual harassment was laid down by the Supreme Court of India in Vishaka v. State of Rajasthan (1997).

- The Bill was first introduced by women and child development minister Krishna Tirath in 2007 and approved by the Union Cabinet in January 2010.

- The committee's report was published on 30 November 2011. In May 2012, the Union Cabinet approved an amendment to include domestic workers.

- The amended Bill was finally passed by the Lok Sabha on 3 September 2012.The Bill was passed by the Rajya Sabha (the upper house of the Indian Parliament) on 26 February 2013.

- The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, in India came into force from 9 December 2013

- This Act is to provide protection against sexual harassment of women at workplace and for the prevention and redressal of complaints of sexual harassment and for matters connected therewith or incidental

- The government has threatened to take stern action against employers who fail to comply with this law

- While this act by the name may seem very specific to Women Employees, it also covers male employees at workplace

Onus for protection against sexual harassment at the workplace was placed on the employer. It was clearly stated that it was the duty of the employer to take all the necessary steps to prevent and deter sexual harassment at the workplace and, in the event that the harassment occurs, to make provisions to resolve, settle or prosecute the violation. It is important to note that by entrusting employers with the responsibility of protecting against sexual harassment, Vishakha emphasised the importance of prevention in addressing issues of sexual harassment. Rather than

creating the provisions to prosecute a crime that has already been committed, Vishakha sought to stop that crime before it happened, by insisting on a safe working environment and promoting awareness on the issue of sexual harassment.

Most working women at some time or the other may face this kind of violence from their colleagues, bosses or subordinates. Sexual harassment is any unwanted attention imposed upon a woman. By categorizing this intrusive and objectionable behaviour as ‚light flirtation‟ or ‚harmless jokes‟, the seriousness of the offence is masked. The fact that sexual harassment at the workplace can leave a deep and adverse impact on the psyche is totally overlooked. A woman's sense of security is shaken by such humiliating acts. Any woman objecting to sexual harassment is looked upon as ‚hypersensitive,‟ a spoilsport and lacking in a sense of humour. Raising objections against such behaviour often results in a hostile work environment for the woman, delay in promotion, or even loss of the job. Such implications have discouraged many women from taking action. Moreover, the victim has to suffer emotionally, psychologically and socially. Sexual harassment has positive relationship to sleep disorder, depression, alcohol usage, and negatively associated with job satisfaction.

What Constitutes Sexual Harassment

- **Sexual Harassment is unwelcome sexual advances, requests for sexual favors and/or other verbal, on verbal and physical conduct of a sexual nature.**

Verbal

- Telling sexual jokes/stories.
- Repeatedly asking about a person who is not interested.
- Whistling at someone and making sexual comments.

Non verbal

- Looking at a person from top to down or staring.
- Blocking a person's path or following a person.
- Giving personal gifts.

Physical

▪ Touching, hugging or pornography.

▪ Touching or rubbing oneself sexually around another person.

▪ Giving a massage around the neck or shoulders.

Note: The list is exhaustive.

2. Definition of Sexual Harassment:

Sexual harassment may be one or a series of incidents involving unsolicited and unwelcome sexual advances, requests for sexual favours, or any other verbal or physical conduct of sexual nature.

Sexual Harassment at the workplace includes:

1. unwelcome sexual advances (verbal, written or physical),

2. demand or request for sexual favours,

3. any other type of sexually-oriented conduct,

4. verbal abuse or 'joking' that is sex-oriented,

5. any conduct that has the purpose or the effect of interfering with an individual's work performance or creating an intimidating, hostile or offensive work environment and/or submission to such conduct is either an explicit or implicit term or condition of employment and /or submission or rejection of the conduct is used as a basis for making employment decisions.

Inappropriate conduct could also be a joke, a prank or even a compliment. These gestures also lead to harassment although the intention of the individual might not be to offend the other person.

International Labour Organization (2001) defines,"Sexual Harassment as a violation of fundamental rights of workers, declaring that it constitutes a problem of safe and health, a problem of discrimination; an unacceptable working condition and a form of violence, usually against women workers".

3. Objectives of the Study

The paper attempts to study the policy of Anti harassment specifically sexual harassment in workplace and to understand the level of seriousness with which it is taken and implemented in organisations

- To study about the awareness among employees with regard to the anti harassment/sexual harassment policy and the procedure in case needed.
- To understand if the Women employees are comfortable to report such instances and ensure that their self respect is intact at the workplace.
- To know if there is any gender bias in recruitment and promotion in various organisations.

4. Literature Review

(Kishore, 2011) women are subject to sexual harassment at workplace due to their gender variance. The case of sexual harassment of women is on rise because of number factors such as poor status of women in the society, more number of working women, lack of knowledge of Human Resource Departments, which majority of multi-national companies have, poor law and order in the society and no proper provisions in the law to deal with the problem of sexual harassment of women at workplace. Though the constitution of India ensures and guarantees every individual certain rights but still such acts take place and such sexual harassment violates the basic motive of the framers of the constitution. Any act of violence in the workplace is emerging as a national issue. This shows that a job does not exist in a vacuum but rather show a larger social context. It is infact the women, who will have to break the glass ceiling. An awareness of the current situation and the desire to overcome the obstacles posed by the society and their own selves alone would be an answer to the social evil of harassment and violence at workplace.

(Kumar, 2012) in gender based harassment, women are the victim of harassment i.e. sexual harassment at workplaces. Many a times such kind of harassment remains unreported because of the fear of being imputed by a social circle and above all ignorance of legal remedies play a pivotal role in worsening this situation. In case of sexual harassment, the harasser is in a position of power or authority. It is necessary in present day situation to protect women and provide speedy redressal. (Lockwood & Marda, 2014) the various causes of stress such as social

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isolation, silent treatment, false accusations, threats, commenting on victims personal life, excessive criticism, monitoring of work, withholding information, physical or verbal aggression etc leads to stress caused at workplace and thus leading to psychological and work related harm, which can adversely affect the work performance. Maximum harassment cases are related to uncomfortable work environment or misuse of power or abuse of power. It is imperative for the employers that they must deal with claims of harassment more effectively so as to guard against litigation. The Human Resource Departments must adopt a more constructive and effective system for responding to workplace harassment related complaints. The impact of workplace harassment is very severe as it results in victims going into depression. The reporting mechanism should be clear and proper. Whistle-blowing mechanism is one of the best systems. It is necessary for the employers to deal with claims of harassment more efficiently so as to avoid such litigations.

(Sharma & Sharma, 2013) co-ordinated efforts, staff commitment, proper understandings, commitments, loyalty towards work are key factors of success and growth of every organization. As a part of "Corporate Social Responsibility" (CSR) the best competitive organization is one which believes in the overall benefit of its stake holders. Human resource is no doubt one of the most crucial resources for organizational survival. Thus, it is imperative for the organizations to consider their benefits and welfare for their long term survival and existence. Still there are number of organizations dealing in unethical and exploitation of employees, creating an environment of stress. It is necessary for the employees to maintain a cordial working environment and take certain preventive and constructive steps so as to make the workplace environment bully free and harassment free. (Swarnalatha, 2013) harassment in the workplace, in every walk of life affects both men and women in every level of employment. It is necessary to reduce the risk of harassment and provide legal remedies in case of such harassment. Also prevention of employees from suicidal tendencies is very important so as to stop the daily harm being done to the employees through workplace harassment. In every organization, the workplace environment matters a lot and is a contributing factor resulting in a harassment atmosphere. Workplace harassment adversely affects the organizations thereby affecting the job satisfaction and turnover of the organization.

(Unnikrishnan et al., 2010) anything that causes humiliation to another person is harassment, which is improper and unwelcome conduct. Women face harassment since childhood especially where there is a preference for the male child. Harassment in the workplace is increasingly due to a growing number of negative consequences. Sexual harassment, is deceptive and subtle in nature. Like other types of harassment, sexual harassment reflects abuse of administrative power and it exemplifies gender inequality or gender discrimination (Akthar & Métraux, 2013)

5. Research Methodology

The present paper "The need to reevaluate Sexual Harassment Policy in organisations is based on primary as well as secondary data. For primary data, a survey was conducted for 120 IT employees and faculty from the educational institutions and secondary data from various research articles on related topics was undertaken. Sample Size: 120 Women respondents(Age Group 20-35=40% ,36-50 age group -60 %) Data Collection Tool: Questionnaire (10 closed and 1 open ended question, Likert 5 point rating scale)

Statistical tools used:

Chi Square

Simple Average and Weighted Average

6. Limitations

The paper is restricted to a small sample of IT employees and a few faculty from the educational institutions. The attempt is to understand the process to be followed for complaints against harassment. The questions are of personal in nature so there is a possibility of women to shy away from giving the right reasons

7. Data Analysis

1. Awareness among the employees about a policy of Sexual Harassment

    92.2% employees are aware of the existing Policy

    7.8% people do not know that such a policy is in place

Fig1.1 Awareness on the existence of Anti-Harassment Policy

1. Are you aware of the existence of an Anti-Harassment policy in you Company?
129 responses
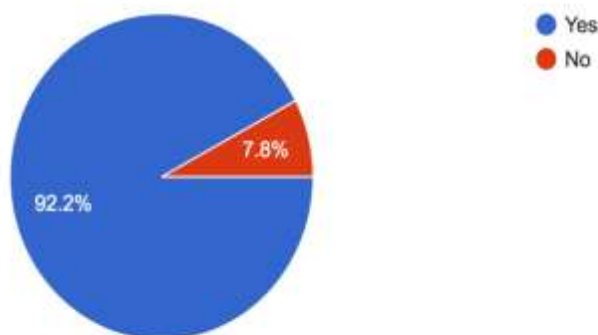
2. Knowledge of the procedure to be followed for complaints

Table 2.1

Options	20-25	36-50	Total	
Yes	65	18	83	
No	17	20	37	
Total	82	38	120	
Observed value	Expected value	(O - E)	(O - E)²	(O - E)² / E
65	56.7	8.3	68.89	1.21
18	26.2	8.2	67.24	2.56
17	56.7	39.7	1576.09	27.79
20	11.7	8.3	68.9	5.88
				37.44

Significance levels= 0.05

Null hypothesis: There is a no significant association between the observed values and expected values

Alternative hypothesis: There is a significant association between the observed values and expected values.

Degree of freedom = (columns -1)(rows-1)

χ2Tabular value -21.026

χ2Calculated Value-37.44

Tab< Cal

Interpretation : We reject Null Hypothesis and Accept alternative Hypothesis as there is a significant association between the observed values and expected values

3.Committee for redressal at workplace

Fig   3.1

3. Is there a specific 'Committee' to address such issues of your workplace?
129 responses
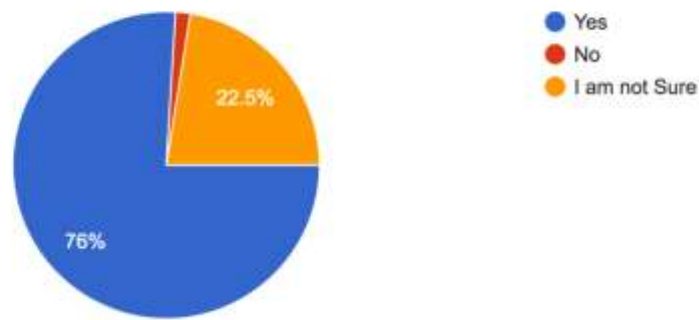
4. If the employees have come across any such incidents

39%- Yes

69%-No

Question 5(a) Did the employees experience sexual harassment

Table no 5.1

Options	20-25	36-50	Total	
Often	45	15	60	
Rare	25	25	50	
Never	5	5	10	
Total	75	45	120	
Observed value	Expected value	(O - E)	(O - E)²	(O - E)² / E
45	37.5	7.5	56.25	1.5

15	22.5	7.5	56.25	33.75
25	31.25	6.25	39.06	1.24
25	18.75	6.25	39.06	2.08
5	6.25	1.25	1.56	0.24
5	3.75	1.25	1.56	0.41
				39.22

Significance levels= 0.05

Null hypothesis: There is a no significant association between the observed values and expected values

Alternative hypothesis: There is a significant association between the observed values and expected values.

Degree of freedom = (columns -1)(rows-1)

$\chi 2$Tabular value= 31.41

$\chi 2$Caluclated Value = 39.22

Tab < Cal

Interpretation : we accept Null Hypothesis and reject Alternative Hypothesis as there is no significant association between the observed values and expected values

5b) Satisfaction with reference to committees enquiry process

Table 5.2

Options	No of respondents
Very Satisfactory	24
Satisfactory	43
Not Satisfactory nor dissatisfactory	45
Dissatisfactory	7

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Very Dissatisfactory	1

Weighted average= 3.6

Majority of the responses show that the committee enquiry processes are neither satisfied nor dissatisfied.

5c) Action taken by the Committee

Table 5.3

Options	No of respondents
No Tolerance	19
Severe	16
Only Warning	27
I did not come across such a thing	58

Most of the respondents feel they have not come across such incidents

22.5 % respondents feel that only a warning is given to the individual committing the crime.

6. Opinion on Gender Bias during recruitment

Table 6.1

Options	No of respondents
Yes	26
No	63
May be	31

52.5% people feel that there is no gender bias in recruitment process

 7. Opinion on gender bias in promotion in organisations

   Table 7.1

Options	20-25	36-50	Total	
Yes	41	24	65	
No	13	10	23	
Maybe	19	13	32	
Total	73	47	120	
Observed value	Expected value	(O - E)	(O - E)²	(O - E)² / E
41	39.5	1.5	2.25	0.05
24	25.4	1.4	1.96	0.07
13	13.9	0.9	0.81	0.05
10	9.00	1	1	0.11
19	19.4	0.4	0.16	0.008
13	12.5	0.5	0.25	0.02
				0.308

Significance levels= 0.05

Null hypothesis: There is a no significant association between the observed values and expected values

Alternative hypothesis: There is a significant association between the observed values and expected values.

Degree of freedom = (columns -1)(rows-1)

$\chi2$ tab value=31.41

$\chi2$ Cal value =0.38

Tab> Cal

Interpretation : we accept null Hypothesis and reject alternative hypothesis as there is no significant association between the observed values and expected values

8. Under what kind of circumstances is the reporting of 'Sexual Harassment' case uncomfortable?

Table 8.1

Options	No of Respondents
Among peers	9
With superiors	37

With Subordinates	1
Managers	26
None of the above	47

31% respondents feel it is difficult to report about your superiors

21.6% feel that it is difficult to report about your managers

9. Would you recommend an 'Open Forum' for workplace ethics in your organization?

Table 9.1

Options	20-25	36-50	Total	
Yes	40	20	60	
No	10	10	20	
Maybe	25	15	40	
Total	75	45	120	
Observed value	Expected value	(O - E)	(O - E)²	(O - E)² / E
40	37.5	2.5	6.25	0.16
20	22.5	2.5	6.25	0.27
10	12.5	2.5	6.25	0.5
10	7.5	7.5	56.25	7.5
25	25	0	0	0
15	15	0	0	0
				8.43

Significance levels= 0.05

Null hypothesis: There is a no significant association between the observed values and expected values

Alternative hypothesis: There is a significant association between the observed values and expected values.

Degree of freedom = (columns -1)(rows-1)

$\chi2$ tabluar = 31.41

$\chi2$ cal =8.43

Tab> Cal

Interpretation : We accept null hypothesis and reject alternative hypothesis as there is no significant association between the observed values and expected values

10. Based on your Company's Workplace Safety, would you recommend it with your friends

Table 10.1

Options	No of respondents
Yes	75
No	6
Maybe	39

62.5% respondents feel that they would recommend their current organisation based on workplace safety.

11. Based on your Company's Workplace Safety, would you recommend it with your friends?

● Many respondents feel that the company has a prescribed policy but the women employees still shy away from reporting the crime as most often it is your superior or manager who is responsible.

● Many respondents feel that sexual harassment if proved results in termination of the person responsible

● Employees in IT companies are fully aware of the policy and the committee to redress the issues.

8. Findings

1. Majority of the employees are aware that there is an Anti Harassment Policy in the organisation and this has been told to them during the induction or orientation program.

2. Majority of the respondents have agreed to know the procedure to be followed in case they personally experience any such incident.

3. Many of them agree that there is a special committee to take up such issues.

4. Around 67% have not come across such incidents and 34% have faced or come across such cases. Only around 15% of employees have gone ahead and reported such an incident. 28% of people do not want to discuss it further.

5. With respect to the presence of gender bias at the time of recruitment majority of the respondents feel there is no gender bias

6. With regard to the promotion also the respondents feel that it is not existing in the IT sector

7. Most of the respondents feel it is not easy to report incidents when it involves their superior or manager.

8. Majority of respondents want an open forum for workplace ethics in organisations.

9. When asked what was missing in the Anti harassment policy most of the respondents feel that there is a policy in place but the women workforce are still not very open about reporting such incidents and they also fear for their position. It can be said that there is a no tolerance policy if found guilty so such cases do not come to light most of the time.

9. Conclusion

Based on the findings, it can be concluded that there is harassment prevalent in the workplace and the female employees either shy away from reporting or leave the organisation. There is gender bias in recruitment and promotions in companies to some extent. The salary determined for male and female employees also varies. Most of the employees fear the consequences and do not report such instances. This paper intends to sensitize about healthy workplace ethics and culture. It also intends to create awareness about the existence of such policy and the procedure to be followed in case they face any such situation. Employees must prevent themselves from facing any traumatic incidents and work with dignity. It is the responsibility of the organisation to ensure that the workplace is free from such evils and prompt action will definitely create a healthy work environment.

1. All the organizations should train their employees about sexual harassment and its legal implications where it is suitable.

2. Seminars, workshops and mock drills should be organized by the competent authority about the evil practice of sexual harassment

3. Internal complaints committee and grievance cells should be established in every organization.

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DOES TECHNOLOGY CAN BE REALLY USEFUL IN MAINTAINING EMPLOYEES JOB SATISFACTION LEVEL AT ORGANIZATION? PRE AND POST EFFECT OF COVID 19

[1]Anjum Ara

[2] Kavita Singh

Abstract

During COVID-19 crisis, most of the organizations are compelled to allow their employees to work from home (as a preventive method), which creates a necessity for supervisors to manage their employees and motivate them digitally to achieve the organizational goal during this pandemic (stressful environment). Here our study is focusing on the supervisor's role in motivating the employees with the help of technology rather than physical presence. Our study is examining the pre and post effect of COVID-19 on employee's job satisfaction level in private organizations, located in North India and how their managers, supervisors are helping them to tackle this crisis and maintaining their quality of work life. The study has investigated the role of mentor's personality in maintaining employee's job satisfaction level. Data has been collected in two phases: pre and post COVID-19. Total 150 respondents have participated in the survey. Regressed results show that mentor's personality was more effective (without any digital platform) in managing employees job satisfaction level before coronavirus pandemic, on the contrary, after COVID-19 crisis, when employees were engaged in WFH (work from home), mentor's and supervisors were using digital platform for providing guidance and mentoring to them, which proves to be less effective. Providing mentoring and Guidance needs a personal environment, which can be provided through face to face interaction rather than over digital platform. Our study is unique because we are covering both scenarios- pre and post COVID-19 effect on organizational productivity, which was less explored side in the corporate world during this pandemic. Further, it also enhances the existing literature on mentor's personality by adding the effect of COVID-19 on it.

Keywords: COVID-19, Job satisfaction level, Technology, Digitalisation, Proactive personality, Mentoring relation

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1. Introduction

World has been shocked with the outbreak of novel corona-virus in Dec 2019 (A pandemic announced by WHO). This pandemic showing its impact, not only on individual's life but also on nations (in the form of economic depression). The director of the National institute of allergy and infectious diseases has quoted that COVID-19 will be "imprinted on the personality of our nation for a very long time" (Antony, 2020). Similarly, international organizations are also worried about the COVID-19 long- term and short-term impact on societies (WHO, 2020; ILO,2020; Remuzzi & Remuzzi, 2020). All over the world wide, media has covered the disastrous impact of COVID-19 on working arrangement of the employees (i.e, financial consequences, cut in pay, no scope for promotions and increments, long working hours etc).COVID-19 compelled some occupations to temporal shut-down and also leads to change the working environment for regular employment. Jobs have been shifted to WFH (work from home) criteria. These environmental conditions are impacting employees financially as well as mentally. Organizations are trying to improve the work environment for the existing employees. In this era of globalization, any growing organization needs to retain its knowledgeable and good employees, particularly with high competencies to face the global competition even at this pandemic period. What is it, which can make employees stay in a particular organization for a longer time duration? What factors can influence them to be satisfied with the current organizations? In a study by Gallup Organisation at 700 companies over two million employees, it was found that the employees' productivity and the duration of stay in the current organization are depending upon his relationship with his immediate supervisor (Zipkin, 2000). In another study, in a consulting firm in Florida, it was found that 40 percent of employees ranked their immediate boss as poor and do not want to work in the current organization, however, 11 percent employees, rated their supervisor as an excellent and want to stay in the current organization (Spherion). In other words, a mentor's personality influences the organization's employee.

Personality is explained as the relatively constant trait of a person, which consistently helps him in his thoughts, emotions, and behaviour (Funder, 2006; Leary, 1999). Previous studies have talked about the personality traits, which are related to the entrepreneur's intentions (Baum & Locke, 2004; Brandstatter, 2011; Miller, 2015). Previous research suggest that individual personality influences his thinking, goals and actions (Zhao, Seibert & Lumpkin, 2010; Rauch & Frese, 2007).

In this article, we are examining the supervisor's / mentor's proactiveness in managing job satisfaction level of employee during this pandemic. Researchers are majorly focusing on the impact of COVID-19 on employees, but less attention has been laid, to find out those factors, which can influence the employee's morale and motivate them to increase the productivity even if they are working from their home at this time. A panel of 150 employees have been represented by their gender, age and marital status and surveyed on the basis of two hypothesis:

Hypothesis1: Mentor's proactiveness is significantly and positively related to the employee's job satisfaction level.

Hypothesis 2: Mentor's or supervisor's proactive behaviour will be more effective in maintaining employee's satisfaction level with the help of technology at the time of COVID-19.

Hypothesis 3: Mentoring relation will be positively related to the employee's job satisfaction level.

Hypothesis 4: Mentoring relationship be more effective and significant to the employee's job satisfaction level with the help of technology during COVID-19.

This study seeks answers of these questions, by examining employee's satisfaction level prior COVID-19 crisis and investigating the same group of employees during COVID-19 crisis (Pre and post COVID-19 effect). In this way, our study is aiming to contribute to the theory of employee's satisfaction level during COVID-19 crisis.

2.Review of Literature

2.1 Proactive Personality

The proactivity of an individual is the ability to "select, create and influence work situations that increase the likelihood of career success" (Seibert, Kraimer and Crant, 2001). Taking initiative or proactive behaviour has become a necessary part of life for achieving success in personal as well as in an organizational career (Grant, Parker and Collins, 2009; Crant, 2000).

Bateman and Crant (1993) are the pioneer in examining the concept of proactive personality. They propose that the person with a proactive personality is not restricted by the situational changes and their proactive behaviour effects environmental situations. According to Bateman and Crant's perspective, a person, who shows proactiveness, can easily identify the prevailing opportunities, takes initiative and bring positive change. They analyse the organizational goal, find the solution to the problems and bring fruitful change in the organization. The people who are less proactive

are passive in nature and reactive to the environmental changes; they feel comfortable with the existing environmental situations rather than change them.

In previous research, it was found that proactivity leads to many behavioural outcomes. In a study by Crant (1995) on 131 real estate agents it was found that proactive personality is the predictor of the job performance of the participants. Additionally, Seibert, Crant, and Kraimer (1999) found a positive relationship of proactive personality with the objective career success of alumni of the private mid-western university. People who are proactive at the workplace tend to interact and establish a positive relationship with their supervisors, to get more knowledge and information about the job problems and job opportunities to perform better job work (Li, Liang, and Crant, 2008). Similarly, proactive people understand the value to maintain social relationships with people who control resources and advances their careers (Thompson, 2005). In terms of career success, proactive people show a positive relationship with the adaptation of environmental changes, subsequently leads to career development by an increase in salary, promotions, and bonuses (Greenhaus, Wormley and Parasuraman, 1990; Spurk, Volmer and Abele, 2011).

2.2 Job Satisfaction

Job satisfaction, a concept that has been gaining attention since Hawthrone experiments 1920 (Dickson and Roethlisberger, 1939) is explained as "a pleasurable or positive emotional state resulting from the appraisal of one's job and job experiences" (Locke, 1976). A person's attitude explains his willingness to do the job, which will impact his job performance. In the era of human relations, many researchers have concluded that job satisfaction leads to the performance of the employee (Mc Gregor, 1960). According to Porter and Lawler (1974), an individual is committed to the organization if he shows these three factors:

• Strong acceptance of organizational values and mission.

• Readiness to perform the duties of the organization.

 • Desire to maintain the organizational belongingness.

Whereas, job dissatisfaction is negative and stressful to the employee. An employee tries to reduce this stress level by reducing his physical and mental efforts in organizational work, which leads to less organizational commitment (Lovett, Coyle & Adams, 2004). Previous studies demonstrated that there are many measurements for improving job satisfaction like a reward, promotions,

remunerations (Smith, Kendall & Hulin, 1969). Hence, it is very important to provide proper mentoring to the employees at the time of COVID-19 because organizations are focusing in cost cutting during this crisis and motivational factors like rewards, promotions and remunerations are not there to motivate employees. This scenario creates the necessity to motivate employees, when they are working from their home that too without any organizational benefits.

2.3 Mentoring Relation

Globalization has opened the doors for the organizations for strengthening the business relations with one another. As globalization provided the opportunities for establishing the bond with other organizations, it also contributed to increasing the competition among them. In order to maintain their position and for their survival, organizations need to retain their knowledgeable human resources. For the purpose of retaining and maintaining the existing employees, organizations are focusing on the mentoring process vitally. According to the Forbes study, a total of 71% of fortune 500 companies are engaged in offering a mentoring program to their employees. This process essentially aids in the development of the work environment as well as in organizational growth. As evidenced in the meta-analysis, mentoring is beneficial for both mentee and mentor (Ghosh & Reio, 2013). The researcher has examined the importance of mentoring style (Kram, 1988) and the characteristics of protégé (Olian, Giannantonio & Carroll, 1993) in mentoring success. Yet the attributes of the mentor directly affect the mentor's effectiveness in the mentoring process.

In some of the previous studies, researchers show that the effectiveness of the mentoring process depends upon the mentor's personality. Like, the mentor's personality helps in enhancing task performance (Eby et al., 2008), self-monitoring behavior of mentor affects his commitment and his effectiveness (Rogers, Luksyte & Spitzmueller., 2016). Thus, in our study, we are trying to find out that how the mentor's proactiveness will leads to employee's job satisfaction at the time of Corona- Virus.

3. Significance of the technology

In the era of globalisation, technological development has been seen in most of the sectors of the world economies. Technology not only brings the advancement in work but also supports in facing any kind of changes in organizational structure. Uncertainty of COVID-19 has pushed our world economies in the situation of depression. Technology is basically known for its benefits like creating flexible working environment, innovative approach, reducing job complexity etc. We are

talking about these technological aspects in the present study because most of the organizations are introducing work from home approach during this COVID -19 crisis and employees are bound to work from their home, their supervisors are not there to support them physically but through electronic mails, over phone, conferences meeting calls etc. We will examine the effect of this office automation on the managerial productivity and its impact on employees. Does managers are capable of motivating their employees, in this era of digitalisation or not? Although, there are previous studies claiming that digitalisation helps in increasing managerial productivity (J.H. Carlisle, 1976; Poppell, H, 1981). Managers are using technology in different ways to facilitate good productivity level:

- Electronic mailing facility
- Teleconferencing
- Electronic scheduling
- Video conferencing

In organization, managers prefer to supervise face to face, which gives a sense of personal touch with the employees and make supervision more effective (Mintzberg, H, 1973; Sproull, L). Manager's daily schedule consist of 77% in oral contact and 68% in face to face contact. At the time of COVID-19, managers are spending their most of the time in scheduling meetings, tele and video conferencing. At the time of this pandemic coronavirus COVID -19, managers are using technology as a mean to provide guidance and to supervise their employees, in the present study we will be covering the impact of technology on the job satisfaction level of employees, by measuring the impact in two phases:

- Phase 1: Pre- COVID-19 (without technological support)
- Phase 2: Post COVID-19 (with technological assistance)

Figure 1: Hypothesised model

Phase:1　　　　　　　　　　　　　　　　　　　　　　　**Phase:2**
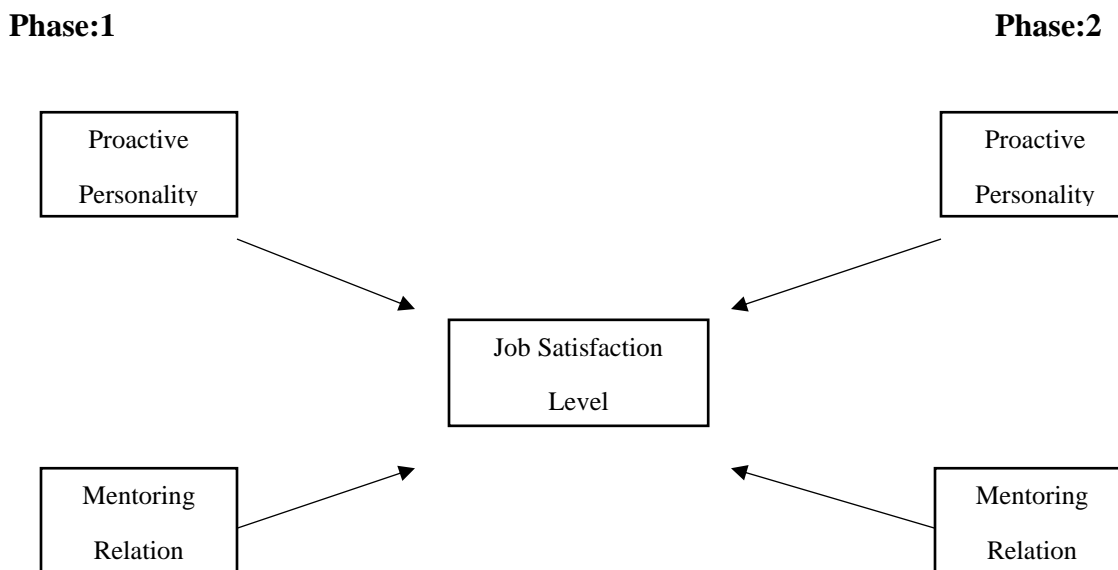
Source: The author prepared this model

4. Research Methodology

4.1 Data collection technique and Sample size

The present study consists of 150 employees, working in private organizations in Delhi, NCR (INDIA). Targeted population were 250, against which, we have collected 60% correctly filled response sheets. Data were collected through self-administered questionnaire in two-time phase: Pre and Post COVID -19. Full time employees have been approached before Corona crisis, to find out the relationship between mentor's personality and employee's satisfaction level, but the uncertainty of COVID-19 leads to the situation where the concept of face to face mentoring or supervision have been diminished and we got the opportunity to examine both scenario (Pre and Post COVID-19) effect of mentor's and supervisor's personality on employee's job satisfaction level by using technology.

4.1.1 Pre COVID-19 (First Phase)

Data has been collected through "Convenience-sampling" method. This method provides us with the ease of access to the large sample size and also helps in maintain the validity of the collected data (Nassar-Mc Millan & Niles, 2010). Prior HR permission has been received for the data

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collection. After getting the prior consent from the higher authorities of the organization survey has been conducted through field study, where respondents were contacted face to face and some of the participants were contacted over phone before sending them the questionnaire. Survey was conducted in November 2019 to February 2019.

4.1.2 Post COVID-19 (Second Phase)

Same batch of the respondents have been approached with the help of their HR manager. All the respondents were again contacted over phone and followed by the reminding mails. This survey has been taken place from march 2020 to July 2020.

Control variables

Previously researchers showed the importance of demographics in mentoring functions (Fagenson-Eland, Marks, & Amendola, 1997). In the present study we are incorporating the control variable, to get the accurate results of the study. Demographics of the participants has been coded followingly:

- Gender: 1 as male, 2 as female
- Age: 1 for below 20 years, 2 for 20-35 years, 3 for above 35 years
- Marital status: 1 as married, 2 as Unmarried
- Work tenure in current organization: 1 for less than 1 year, 2 for 1-2 years, 3 for more than 2 years

Table 1: Demographics of the respondents

Characteristics		Private Sector
Gender	Male Female	66% 34%
Age	20 – 35 Years Above 35 Years	68% 32%
Marital Status	Married Unmarried	75% 25%
Work Experience	Less than 1 year 1 to 2 years More than 2 years	2% 5% 93%

Procedure

Self-administrative survey has been conducted in private sector organizations in Delhi NCR, North India. These organizations are engaged in formal mentoring process. Respondents were asked about their participation in mentoring programme and after confirming about the presence of mentoring process in the concern organization, we have started our survey.

5. Instruments used in the study

Self-administered questionnaire has been used for the collection of data. Responses were measured on 5-point Likert scale ranging from 1(Strongly Disagree) to 5 (Strongly Agree).

Study has been conducted in two phases. First phase of the study was organised before COVID-19 crisis and second phase of the study were take place during COVID-19 pandemic on the same targeted population. For measuring COVID-19 impact on the mentors and supervisor's personality as well as on employee's job satisfaction level, we have used the same questionnaire (used in phase 1).

5.1 Mentoring function

For measuring the mentoring function, we have utilised 13-items scale of Dreher and Ash (1990). The scale was used for measuring the impact of mentor's effectiveness on employees. The scale has good Cronbach alpha value of 0.93 and 0.85 Sample items were:

Phase1: (a) My mentor has demonstrated good listening skills in our conversations.

(b) My mentor has encouraged me to talk openly about anxiety and fears that detract me from my work.

Phase2: (a) My mentor has demonstrated good listening skills in our conversations over call or chat during COVID-19.

(b) My mentor has encouraged me to talk openly about anxiety and fears that detract me from my work during COVID-19.

5.2 Proactive Personality

For measuring supervisors proactiveness, Bateman and Crant (1993) scale has been utilised. The reliability of the scale was calculated to be 0.86 and 0.71 Cronbach alpha. Sample items are:

Phase1: (a) My mentor/supervisor excels at identifying opportunities.

(b) My mentor/supervisor use his /her power for constructive change.

Phase2: (a) During COVID-19 crisis, my mentor/supervisor excels at identifying opportunities.

(b) During COVID-19 crisis my mentor/supervisor use his /her power for constructive change.

5.3 Job satisfaction

Job satisfaction level of the employees were measured on 9-items combined scale of Spector, (1985), Mueller and Mc Closky (1990). The reliability of the scale was measured at 0.72 and 0.68 Cronbach alpha. Sample items are:

Phase1: (a) People are strongly encouraged to develop their skills.

(b) I am satisfied with the recognition for my work from superior.

Phase2: (a) During COVID-19 pandemic, people are strongly encouraged to develop their skills with the help of technological support.

(b) I am satisfied with the recognition for my work from superior, during COVID-19 crisis.

6 Results and Analysis

6.1 Descriptive statistics

Table 2: Descriptive statistics and correlations among variables Pre and Post COVID-19.

Variables	Mean	SD	1	2	3	4	5	6	7	8
1.Proactive personality	3.75	.76	1							
2.Mentoring Relation	3.61	.69	.737**	1						
3. Job satisfaction	3.35	.54	.566**	.679**	1					
4. Type of org.	1.32	.58	.047	.04	-.06	1				
5. Age	2.32	.47	-.08	-.11	-.16*	.08	1			
6. Gender	.66	.47	.09	.037	.13	-.04	.07	1		
7. Marital Status	1.24	.43	.008	-.04	-.05	.19*	-.10	-.05	1	
8. No. of year in org.	2.90	.36	.08	.05	.12	-.35**	-.004	-.03	-.14	1

N = 150

*Significance at 0.05 level (2-tailed)

**Significance at 0.01 level (2-tailed)

Before testing hypotheses, we have examined the descriptive statistics of the studied variables. Mentor's / supervisor's proactive personality is significantly and positively correlated with mentoring relation (r = .73, p < 0.01) and employee's job satisfaction level (r = .56, p < 0.01). These results of correlations provide initial support to our research questions.

6.2 Results and Discussions

"Social-cognitive theory" explains that environmental factors play an important role in influencing individual's behaviour through his perception (Bandura, 1986). All people have different reactions to the same situation. To understand the effect of adverse situation (like COVID-19) on individual, it is important to analyse his perception. Here we have measured the impact of COVID-19 on individual's job satisfaction level. We have also examined the role of technology in maintaining employee's job satisfaction level, while they are working from their home.

Understanding the factors, which are supportive and useful at organization for the development and growth of employees during this crisis, when they are facing adverse effect of this pandemic. Specifically, we have examined the relationship of mentor's proactiveness with his employees before COVID-19 and effect of mentor's proactiveness on employees during COVID-19. Our results support our both research hypothesis and suggest that mentor's / supervisor's proactive behaviour have a positive and significant relationship with employee's job satisfaction level. Furthermore, we have found that the technological support is not proved to be more effective in providing mentorship to the employees working from their home during COVID-19 pandemic. Digital platform for providing guidance and support to the employee proved as a hindrance to the supervisors.

Our hypothesised model has been evaluated in two phases. In phase 1: Pre- COVID 19 H1and H3 has been evaluated through hierarchical regression, where control variables were entered in block 1 in first step. In second step, main effect variables were entered in block 2 in alignment with dependent variable: employee job satisfaction level. The main effect of the mentor's proactiveness (β = .091, p < 0.01) and mentoring relation (β = .447, p < 0.001) are found to be significant in relation with employee's job satisfaction level. This result provide support to both the hypothesis H1 and H3.

Similarly, while calculating post COVID-19 effect, control variables were placed in block 1 and the main effect variables were placed in block 2 in alignment with dependent variable: employee job satisfaction level. Hierarchical regression results show that mentor's and supervisor's proactive behaviour is insignificantly related to employee's job satisfaction level (β = .146, p = Ns) and mentoring relation proved to be significant during this pandemic COVID-19 (β = .212, p < 0.05). The given result is not supporting H2 and proved that technological support will not help in mentor's proactiveness to provide job satisfaction to the employees. On the contrary, during COVID-19, when employees are working from their home and connected with their mentor's and supervisors with the technological support, shows a significant and positive relationship. Hence, the given result support H4.

The present study provides useful insights to the supervisors of the organizations. This study proves a strong effect of mentoring relation on job satisfaction level of employees in both the phases: pre and post COVID-19, which mean that if manager will maintain their mentoring relation with employee with or without technological support, it will prove to be significant relation. During this pandemic, when most of the organization are providing work from home approach to their employees with high pressure of productivity, employees need to balance their stress level and maintain their productivity level. Supervisors and mentors are engaged in motivating their employees in such a manner that they can maintain their work life balance. Individual personality and mentoring ration work as catalysts for maintain career related outcomes (Underhill,2006).

Whereas, it was found that supervisors show more proactiveness in the organization for maintaining satisfaction level of employees without any technological support. It was proven that providing mentoring and guidance through face to face interaction is more fruitful than using digital plat form to mentor them.

In India, employees believe that "effective leaders are those who know the pulse of the people, have intuitive understanding and care like a parent" (Chhokr,2007). Organizations need to maintain their relation with their employees in any situation (like COVID-19), digital platform can be a good source in providing mentoring to them but in certain aspects this platform may not be as useful as personal environment. It does not mean that using digital platform or technological support will not make any difference in organizational working culture. This issue might interest

other researchers for further analysing the relationship of digitalisation and personality of the supervisors.

7. Limitations and scope for future research

We are acknowledging the limitations of the present study to provide directions to the future research. First limitation is in the approach of the selection of the survey method. We have used cross-sectional research method, but not examines the causal inferences. For example, it may be argued that the employees with high level of job satisfaction level probably look for more mentoring or support from their mentor or supervisor at the time of COVID-19, when they are indulging in WFH (Work from home) approach. To overcome this limitation, we are suggesting to carried out this study with longitudinal research design.

Second limitation, is that the present study is examining pre and post effect of COVID-19 in connection with mentoring and personality from the only perspective of employees. More generalization can be provided to this study's results, if the future research will be conducted in keeping the view of both party's perspective- mentor's as well as employees.

Third limitation of this study is that, our study is conducted in private sector only. It would be useful to all the organizations if the future research will cover other sectors like public, health-care, power etc.

Fourth concern of this study is that, in our study we are only covering single personality attribute in connection with mentoring and employee's job satisfaction level. Similarly, this study is focusing on single employee's output variable. Future research could extend this study by adding more personality factor's as well as more employee's output variable in connection with mentoring during COVID-19.

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REVISITING THE CONCEPTUAL STRUCTURE OF JOB SATISFACTION USING EXPLORATORY FACTOR ANALYSIS WITH REFERENCE TO BPO INDUSTRY

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Abstract

Job Satisfaction is at center of employee productivity. Losing a good employee can have serious long-term ramifications. BPO industry is not different and has its share of a poor record of attrition rates. The study discusses the difference and similarities of the results with other prevalent theories and models given by various researchers. In this study the theoretical conceptual were revisited using an Exploratory Factor Analysis (EFA). A 34-item scale based on literature was developed to measure job satisfaction. Pilot test confirmed that the scale has acceptable validity. Data from a survey of 220 samples was used to conduct EFA. The analysis gave 6 components which form the digital based hypothetical model of Job Satisfaction for a service based BPO industry.

Keywords: Job Satisfaction, Exploratory Factor Analysis (EFA)

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1. Introduction

The European Social Observatory (OSE) reported that employees work structure got influenced by new technologies as digitalization process often results in the escalation of work accomplishment (Peña-Casas et al, 2018) enabling higher organizational productivity and efficiency (Vuori, Helander & Okkonen, 2018) thereby contributing to enhanced performance of employees in terms of situational even decision-making abilities and lowering associated risks figures (Umans et al., 2018). The European Commission found that information and communication technologies allow staff the opportunity to be more autonomous and agile (ECORYS and Danish Technological Institute, 2016). As connoted by European Network of

Public Employment Services, digitization intensified the adequacy of the various employment services sectors (Ejler and Sidelman, 2016).

During the last decades, the adoption of digital assets by the organizations (Kuusisto, 2015) in responding to market changes under new digital circumstances where the diversification in organizational strategy, structure, behaviour and culture via entire model (Csedo et al., 2017; Schmidt et al., 2017) administers their cost-effectively and productivity outcome (Dixit, 2017) hence researchers acknowledges that by adopting the transformation, the business performance, workers productivity (Heikkilä, 2013) and organizational work-procedures (Castells, 2010) digitalization boost up the productivity, networking and data-use.

2. Literature Review

Ratna & Kaur (2016) undertook the research proposal with the objective to investigate the effect of digitalization on employee's performance and Job Satisfaction hence concluded that 23 percent of employees are more satisfied after the implementation of new technologies, 20 percent reckons their work as more acknowledgeable and 20 percent are more raised to multi-tasking skills and 19 percent took them as opportunities for advancement and remaining 18 percent believed that all are now equipped with the complete set of resources. Therefore asserted that digitalization strongly impacts the job-related factors including Job Satisfaction and recommended the construction of HR based High performance based work-systems where utility of new technologies should be embedded in order to create smart intellectual based organizational working system that would involve the rearrangement of work and reward policies, training and programs and more use of latest technologies.

Salvatori, Menon & Zwysen (2018) in the empirical investigation of determining the effect of computers on Job Quality in the past couple of decade within European countries documented that between 1995 and 2015, the sizeable discrete effect of technologies within country-occupation oriented unit exists and to some extent Job Satisfaction of employees is observed to be increased and continually will show the positive response with reference to the introduction of more new technologies that would further encounter into mainstream business activities and moreover discretion strongly drives Job Satisfaction accordingly with the multiple measures of employees psychological well-being.

Valenduc and Vendramin (2016) debated on the conflicts that arises out the impact of digitalization on the economic productivity and challenges that without adapting suitable organizational turnover management strategies or removing the organizational constraints, the digitalization would not lead to maximization of organizational productivity as the robust effect of digitalization had not observed and came into immediate effect despite being encompassing countless years yet the existing technologies and past attempts regarding innovation and technologies does not sufficiently demonstrated the frequent intensification of productivity. European Network of Public Employment Services, too warned the complexity about happening of unemployment that causes due to digitalization where employee hiring for short-term projects increases the workload of PES (Pieterson, 2016).

The quality of work is impaired in an atmosphere of erratic working time, strict deadlines contributing to health and safety threats for workers (Eurofound, 2016b; EU-OSHA 2015). Analyzing the current existing literature enquires mainly about the organizational challenges to support apprenticeship providing opportunity to train employees. Black and Spitz-Oener (2007) debated that Digitalization will polarize the low and high skill jobs of workers (Autor, 2015; De Groen et al., 2017) hence causes systematic inequality due to which multiple researcher agreed to the literature that Job losses happens due to Digitalization as low skilled workers demand turns lessens (Berger and Frey, 2016).

European Commission analyzed the strong impact of ICT on Job Qualities involving Job tasks and skills requirements by evaluating 12 Job Profiles based on employees interviews and trade-union organizations (ECORYS and Danish Technological Institute, 2016). However, the research study conducted by Randstad (2019) confined that approx 75 percent employees rated technologies above than their physical needs like AC, official restroom or office chair etc and in seek of occupying more digital tools hence founded that technologies actually increases the employee Job Satisfaction levels. The impact of formal and informal telework preparations on work-family results such as career satisfaction, time spent on childcare and satisfaction with the circulation of childcare duties in Queensland, Australia was investigated by (Troup & Rose, 2012). They established that the structured telework arrangement had a greater positive impact on the happiness of women at work.

Proliferation of existing literature acknowledges the existence of positive correlation between digitalization and gain in organizational productivity outcomes (Keister and Lewandowski, 2016) however, in the light of lack of sufficient research credentials the extent of this, often stands out questionable among researchers (Stacey et al., 2017). Digital transformation (Bounfour, 2016) via adapting business model backed by digital technologies (Kohli & Melvilli, 2019) generates new insight for value producing opportunities providing the characteristics of highly digitalized workplaces (De Waal et al., 2016) visualizing fundamentally software-based future organizations (Kettunen & Laanti, 2017) where requisite transformation of organizational environments exists (Schmidt et al., 2017) this study aims to reconstruct the conceptual framework of Job Satisfaction components while undermining the influences of Digitalization.

3. Research Objective and Data Analysis

The main purpose of this study is to explore the important areas of Job Satisfaction components considered appropriate for revisiting conceptual structure by integrating Digitalization and investigating its impact particularly in BPO Industries and discussed the proposed connection in Indian working environment.

The following two are the objectives of the study

1. To study the framework of Job Satisfaction.

2. To identify the components of Job Satisfaction.

In order to determine the number of factors influencing Job Satisfaction variables and to evaluate the mutual correlation of extracted components utilizing EFA, the study will also sort out the items of Job Satisfaction by exploring and summarizing the underlying correlational structure for data collected employing reduction method conducted on self-administered 34-item structured questionnaire (Quantitative instrument) using IBM-SPSS version 27. In this study, the sample size of 220 respondents working in BPO companies in Noida was considered. In all, random Quota sampling was conducted on the population of 1000 respondents.

4. Findings

To define a structural relationship between the variables or, in other words, a series of factors containing the general variance or communality of the variables, the values of the Pearson simple correlation coefficients must be statistically different from 0,000. The independence of the

variables (orthogonal variables) indicates a lack of general variance, so the matrix of correlation is an identity matrix from which it is difficult to derive factors.

The analysis begins with computing the Bartlett's test of Sphericity and Kaiser- Olkin test.

Table 1: KMO and Bartlett's Test (Table 1)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**0.849**
Bartlett's Test of Sphericity	Approx. Chi-Square	9370.753
	Df	561
	Sig.	**.000**

Accompanying this threshold value, the computed value of Bartlett's test of Sphericity (9370.753) is critical at 0.000, showing that the findings obtained were significant (Table 1) and clearly indicates their exist no statistical degree of difference between correlation matrix and identity matrix signifies the appropriate measure of sampling adequacy for each variable. For the objective of estimating the significant amount of common variance existing in the sphere of considered data set as (Kaiser, 1974) test value above 0,5 is settled proper for determining the measure of sampling adequacy. KMO's threshold value is > 0.5 and Bartlett's measure is less than 0.05 when significant; if KMO is < 0.5, it is not perceived (Hair et al, 2006). The KMO value of 0.849 computed for the considered data set indicates the adequacy of sampling As it met the threshold value of factor analysis validity of 0.5. Principal components extraction method had been used for clustering initial data set i.e. Correlation matrix into a particular factor subset into particular factors correlating with the initial variables (items). The measure of communality is tested through Kaiser-Mayer-Olkin test and Bartlett's sphericity test.

Aimed towards clustering and correlating the initial data-set into a particular set of factors, the factor exaction using principal component method had been employed. A total of 34 items have been extracted and 6 items have been retained after conducting principle component method.

Total Variance Explained (Table 2)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	17.385	51.132	51.132	17.385	51.132	51.132	14.867
2	2.601	7.649	58.781	2.601	7.649	58.781	9.289
3	2.207	6.491	65.272	2.207	6.491	65.272	11.284
4	1.648	4.846	70.118	1.648	4.846	70.118	10.168

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5	1.450	4.266	74.383	1.450	4.266	74.383	7.634
6	1.208	3.554	77.937	1.208	3.554	77.937	4.096
7	0.962	2.830	80.766				
8	0.822	2.417	83.183				
9	0.750	2.205	85.388				
10	0.621	1.828	87.216				
11	0.584	1.718	88.933				
12	0.440	1.294	90.227				
13	0.396	1.165	91.393				
14	0.348	1.025	92.417				
15	0.316	0.928	93.346				
16	0.283	0.833	94.178				
17	0.230	0.676	94.854				
18	0.214	0.629	95.484				
19	0.204	0.600	96.084				
20	0.197	0.580	96.664				
21	0.177	0.520	97.184				
22	0.144	0.424	97.608				
23	0.131	0.384	97.992				
24	0.116	0.340	98.332				
25	0.102	0.300	98.632				
26	0.093	0.273	98.906				
27	0.085	0.250	99.156				
28	0.071	0.208	99.364				
29	0.058	0.171	99.535				
30	0.049	0.145	99.680				
31	0.035	0.103	99.783				
32	0.028	0.083	99.866				
33	0.026	0.076	99.942				
34	0.020	0.058	100.000				

Extraction Method: Principal Component Analysis.

The above table 2 clearly indicates that first six components contains accumulative 77.937 % of the total variation of the extracted factors and among them JS4, JS5 and, JS6 occupies the maximum amount of correlated items with the initial data-set measures. The variation confirms the hypothesis of reducing the initial variables or items to a limited of total 6 factors without significant data loss (100% - 77.937% = 22.063%).

Continuing with further analysis, as shown in Table 3, the communalities of the initial items with these 6 factors have changed as after the retention, in case of first item, if the variation of the first

component could have been explained through thirty four different elements of the extracted factors, the communality of the first item (with the six factors) decreases with 1-0.798= 0.202 i.e. this much amount of specific information is lost due to the retention of these six factors.

Communalities (Table 3)

	Initial	Extraction
JS1	1.000	0.798
JS2	1.000	0.656
JS3	1.000	0.775
JS4	1.000	0.701
JS5	1.000	0.739
JS6	1.000	0.761
JS7	1.000	0.821
JS8	1.000	0.706
JS9	1.000	0.769
JS10	1.000	0.760
JS11	1.000	0.744
JS12	1.000	0.778
JS13	1.000	0.838
JS14	1.000	0.849
JS15	1.000	0.861
JS16	1.000	0.783
JS17	1.000	0.849
JS18	1.000	0.836
JS19	1.000	0.769
JS20	1.000	0.807
JS21	1.000	0.811
JS22	1.000	0.830
JS23	1.000	0.740

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JS24	1.000	0.760
JS25	1.000	0.584
JS26	1.000	0.840
JS27	1.000	0.842
JS28	1.000	0.787
JS29	1.000	0.816
JS30	1.000	0.788
JS31	1.000	0.743
JS32	1.000	0.724
JS33	1.000	0.839
JS34	1.000	0.793

Extraction Method: Principal Component Analysis.

Component Matrix   (Table 4)

	Component					
	1	2	3	4	5	6
JS1	0.685		-0.398			
JS2	0.554			0.480		0.303
JS3	0.613			0.498		
JS4	0.810					
JS5	0.777					
JS6	0.850					
JS7	0.558		-0.415	0.463	0.323	
JS8	0.735		-0.390			
JS9	0.774					
JS10	0.745		-0.435			
JS11	0.687				-0.440	

JS12	0.476		0.341		-0.435	0.456
JS13	0.866					
JS14	0.807	-0.337				
JS15	0.880					
JS16	0.782			-0.311		
JS17	0.780			-0.410		
JS18	0.857					
JS19	0.649	-0.495			0.317	
JS20	0.773				0.306	
JS21	0.676		0.337		0.324	
JS22	0.657	-0.380			0.347	
JS23	0.786					
JS24	0.800					
JS25	0.663		0.319			
JS26	0.785		0.361			
JS27	0.658				-0.309	-0.405
JS28	0.696		0.469			

	1	2	3	4	5	6
8						
JS29	0.764		0.386			
JS30	0.659	0.553				
JS31	0.646	0.466				-0.314
JS32	0.569	0.585				
JS33	0.602	0.499			0.403	
JS34	0.396	0.648				0.380

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

There are component loadings in this table 4, which shows the correlations between the variable and the component. Possible values vary from -1 to +1 and show the correlations. We used the blank option (.30) on the /format subcommand, which tells SPSS would not consider any of the correlations are .3 or less. By eliminating the clutter of low similarities that are obviously not significant anyway, this makes the output easier to interpret.

Pattern Matrix[a]

Component (Table 5)

	1	2	3	4	5	6
JS1	0.372			0.698		
JS2				0.826	0.327	
JS3				0.876		
JS4						
JS5	0.601					
JS6				0.373		
JS7				0.712		0.494
JS8	0.61			0.35		

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Item					
	2			9	
JS9	0.556	0.369			
JS10	0.627			0.375	
JS11		-0.310	0.436	0.422	
JS12					0.819
JS13	0.785				
JS14	0.858				
JS15	0.823				
JS16	0.916				
JS17	0.949		-0.335		
JS18	0.826				
JS19	0.542			0.610	
JS20	0.809			0.389	
JS21				0.773	
JS22				0.796	
JS22	0.438		0.441		
JS24	0.429		0.403		
JS25				0.417	
JS26			0.742		
JS27			0.995		
JS28			0.728	0.332	
JS29		0.384	0.413		
JS30		0.790			
JS31		0.659	0.415		
JS32		0.754		-0.300	
JS33		0.858			-0.336
JS34		0.888	-0.419		0.308

The orthogonal (where, the angle of rotation is 90°, so factor independence is preserved after rotation) method of factor rotation i.e. varimax has been used with the goal of optimizing the

variance of the loading of the coefficients for each component (Iacobucci, 2013), the association between the original variables and the factors derived and retained is then calculated.

From table 5, finally, let's finish by interpreting the loading variables more closely. First we highlighted the absolute loadings that are higher than 0.4 from factor 1 to 6. Looking at the Pattern Matrix, Items JS5, JS8, JS9, JS10, JS13, JS14, JS15, JS16, JS17, JS18, JS19, JS20, JS22, JS24 load highly on Factor 1, and Items JS30,JS31,JS32,JS33,JS34 load highly on Factor 2 and so on. It's clear that component 1 contributes uniquely to most items in the JS-34 and component 3 and 5 contributes with common variance among JS11,JS26,JS27,JS28,JS29,JS31 and JS19,JS21,JS22,JS25 items respectively while component 4 and 6 contributes only with JS1,JS2,JS3,JS7 and JS7,JS12. There is an assertion here that it might be possible to exclude Item JS4 from our survey and combine the variables into one factor. We are referring to the Principal Investigator and agree that it might be possible to recognize the only factor that describes the widespread variation in all items, but we prefer to exclude Item JS4, so that the JS-34 is now the JS-33.

VII.   DISSCUSSION

For each of the six variables, composite scores were generated based on the average of the items that had their primary loadings on each component. Therefore the exploratory factor analysis with varimax rotation out of employing 34 items retained in 6 components after deleting one item JS4, labelling factors as HRM Policies and Practices (13 items), Knowledge Management (5 items), and Organizational Culture (6 items; Currie et al., 2004), Managerial intellectual skills (4 items), Employees Job Security (4 items), Social recognition approach to autonomy (2 items).
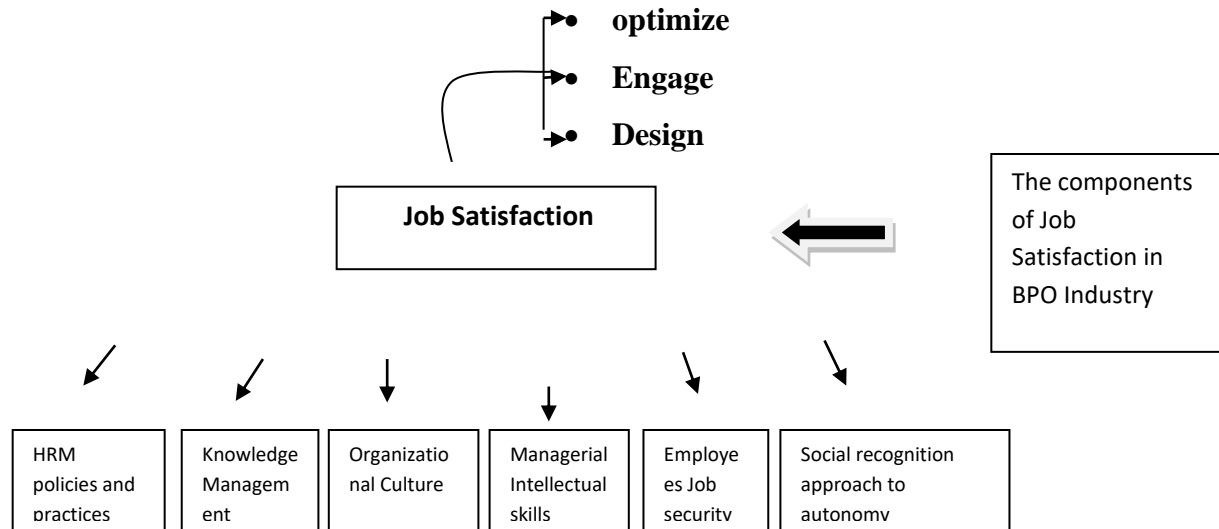
Fig. 1

The results are in line with the suggestions (Udovita, 2020) that modern ways of management, leadership, policies, service designs, and working processes are evolving modern business models and strategies in digitalized period, job roles are frequently reorganized that can lead to alteration of Job Satisfaction and autonomy of the worker. In the service industry, particularly in BPO, the digitalization has come into effect, being one of the influential forces shaping the workforce (Poruban, 2018). Organizations that are able to innovate and offer quality services are in a better place to attract the interest of consumers (Arshad & Su, 2015). The work environment of a person, i.e., the workplace, is a key component of one's life and job satisfaction unquestionably affects one's life satisfaction as a whole. Job satisfaction, thus, is a function of an employee's various convictions. Such views are related to the workplace and to different considerations such as pay, working conditions, equal care of the boss, control of the manager, timely grievance setting and social or human relationship with the workplace (Ratna & Kaur, 2016).

In addition, the findings also support the concept of organizations that would affiliate the related improvements in work-pattern, organisational structure, and communication management (Urbach & Röglinger, 2019). Also the findings support and agree to the fact that job autonomy and recognition are positively correlated with digitalization, that is consistent with Gerten, Beckmann, & Bellmann (2018) and Aral & Weill (2007) recommendation that digitalization enables the autonomy for jobs and represents a more flat organizational hierarchical structure

enabling greater and multitasking staff versatility and autonomy, and a decentralization structure of information and decision-making authority (Martin 2011; Lindbeck and Snower 2000; Osterman 2000). Innovative ICT proposes new beneficial arrangements in terms of job execution, working time and space for autonomy (Gibbs 2017). Intrinsic incentive and reciprocity are likely to interfere with management behaviours like self-managed working time or working from home (Beckmann et al. 2017; Rupietta and Beckmann 2018). A gain of control increases intrinsic motivation, when employees view it as a constructive reward in their own efforts to achieve success (Bader and Kaiser 2017; Gilbert and Sutherland 2013). When emerging innovations produce new work functions and new procedures, the first is shifts in tasks and professions. The second shift concerns working environments, since more physical, social, and environmental criteria have arisen since the advent of technologies (Eurofound 2015). In addition, there are major improvements in the terms of work (e.g. the contractual and social requirements of work). Research indicates that job satisfaction does not exist in isolation, as it relies on organisational factors such as composition, scale, salary, working conditions and leadership, which reflect the organisational environment. If job satisfaction is absent and other career opportunities emerge, turnover could increase if management wish to create a workplace atmosphere that allows individuals to remain with their respective employers, they need to review existing compensation policies with the intention of providing equal pay, providing demanding and fulfilling job assignments, and fostering productive interactions with co-workers (Lumley et al., 2011; Sempane, Rieger & Roodt, 2002).

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CHAPTER 17

ARM BASED INVENTION IN VEHICLE MOBILITY AND ATOMIZATION USING ARTIFICIAL INTELLIGENCE

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Abstract

AI is used to allow cars to navigate through traffic and deal with complex situations. In addition, combined AI software and other IoT sensors, such as cameras, make it easier to ensure proper and safe driving. This device configuration for small cars and medium cars "The restriction of the temperature of the car engine is up to 200 ° C and if the temperature reaches this the car needs coolant then there might be chances of burning the whole vehicle. However, due to a highly reliable temperature sensor such as thermocouple, it is used in a system that protects the car from burns or hazards. The thermonuclear temperature range is 0 to 1200 ° c and the global mobile device sends the alert immediately to the car owner i.e. your car has been stolen. The cleverest thing is that the car can be driven. Using the Global Positioning System, the location can be quickly identified if a car is being stolen. The "Arm Based Invention in Vehicle Mobility and Automation using Artificial Intelligence", Different sensors are used to measure different parameters of the vehicle system, such as Temperature sensor used to measure engine temperature, Light sensor is used to automatically turn headlights at night, The proximity sensor is used for driver and driver side seat belt with details on wearing, Figure print sensor is used both to open the door and to start the Vehicle. Micro serial data card reader is used here to work as a black box of the vehicle. Whenever an accident happens, it will provide the prosecutor with all the latest information contained in the memory card, which is readily identifiable as the cause of the accident. Ultrasonic sensor is used to detect front and back side obstacles particularly when parking the vehicle. The smartness of this vehicle is to audibly tell the vehicle owner or driver and driver side seat passenger all the information or sensor output data, and also by chance if stolen vehicle then submits car location information via GSM and GPS. It can regulate all things through one machine, which is ARM7 and the information is also shown on the LCD monitor

Index Terms: Electronic control units (ECU), Liquid Crystal Display (LCD), Light Dependant Resistor (LDR), Light Emitting Diode (LED), Universal Serial Bus (USB),(GSM) Global System of Mobile,(GPS) Global Positioning System.

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1. INTRODUCTION

1.1This system is based on ARM7,For engine temperature detection,a temperature sensor is u sed,The light sensor is used to automatically turn on headlights at night,For both driver and dr iver side seat belt wearing data, the proximity sensor is use,A figure print sensor is used to op en the vehicle and also power it.Ultrasonic sensor is used to detect both front and back obstac les, particularly while the vehicle is parking.The micro serial data card reader is used to functi on as a black vehicle box.It can give the investigator all the final information that is stored in the usb drive when an accident occurs.The reason of a collision is effective to spot.The smart ness of this vehicle is to report all information or sensor output data audibly to the owner or d river of the vehicle and the passenger on the driver's side seat.All things can be controlled by an ARM7 system and the information is also displayed on the LCD monitor.The main thing i n this system is the output sensor and the ARM7 controller.

2. BACKGROUND

2.1 *An integrated architecture for future car generations*.[1]

As per the paper published by Roman Obermaisser · Philipp Peti Fulvio Tagliabo Published online: 3 April 2007.

The DECOS architecture is an integrated architecture that builds upon the validated services of a time-triggered network, which serves as a shared resource for the communication activities of more than one application subsystem. In addition,

Encapsulated partitions are used to share the computational resources of Electronic Control Units (ECUs) among software modules of multiple application subsystems. This paper investigates the benefits of the DECOS architecture as an electronic infrastructure for future car generations. The shift to an integrated architecture will result in quantifiable cost reductions in the areas of system hardware cost and system development. In the paper we present a current federated Fiat car E/E architecture and discuss a possible mapping to an integrated solution

based on the DECOS architecture. The proposed architecture provides a foundation for mixed criticality integration with both safety-critical and non safety-critical subsystems. In particular, this architecture supports applications up to the highest criticality classes ($10-9$ failures per hour), thereby taking into account the emerging dependability requirements of by-wire functionality in the automotive industry.

2.1.1 Conclusion:- Future car generations require computer architectures to accommodate the need for mixed criticality applications, i.e., supporting applications with ultra-high dependability requirements as well as applications where flexibility and resource efficiency is of primary concern (e.g., comfort electronics). The proposed architecture establishes

such an infrastructure and also enables physical integration by combining multiple DASs and virtual networks within a single distributed real-time computer system. Thus, the architecture reduces the number of different networks and protocols. The proposed integrated architecture exhibits flexibility and supports reuse of application software across different car segments. The key element for this flexibility, as well as for complexity management and the independent development of subsystems, are small DASs. Instead of the typical domain oriented system structure, we show that we can subdivide the overall functionality of a car into smaller DASs, each equipped with dedicated architectural services. By transforming a today's automotive system onto the future E/E architecture, we have demonstrated the feasibility of the integrated architecture for a future automotive system.

2.2 Automated Vehicle Control System [2]

As per the paper published by M.Habibullah Pagarkar Kaushal Parekh Jogen Shah Jignasa Desai Prarthna Advani Siddhesh Sarvankar Nikhil Ghate Third Year Information Technology Engineering V.E.S.I.T. Chembur, Mumbai 71.

They use intelligent instruments in every part of our lives. It won't take much time that we realize that most of our tasks are being done by electronics. Very soon, as we shall see, they will perform one of the most complicated tasks that a person does in a day, that of driving a vehicle. This is for the better. As the days of manned driving are getting extremely numbered, so are those of traffic jams, bad, dangerous and rough drivers and more importantly, accidents. According to *Mr. Willie D. Jones* in the *IEEE SPECTRUM* magazine (September 2001), a person dies in a car crash every second.. Automation of the driving control of two-wheelers is one of the most vital need of the hour. This technology can very well implement what was

absent before, controlled lane driving. Considering the hazards of driving and their more pronounced effect on two-wheelers our OPTICALLY GUIDED VEHICLE CONTROL SYSTEM is exactly what is required. These systems have been implemented in France, Japan & U.S.A. by many companies, but only for cars and mass transport networks. In those systems, the acceleration and brake controls are left to the driver while the micro-processor simply handles the steering and the collision detection mechanism. Our system is superior in the sense that ALL the tasks related to driving are automated. The driver just has to sit back and enjoy the ride

2.2.1 Conclusion

Collision detection and avoidance systems should become more commonplace with the passage of time. People are living in a networked world and constantly feel that they have less time on their hands. It has been jokingly said, that "The more developed a country is, the more time it's citizens waste behind the steering wheel." To perfect this technique, it might take several years, but this project is surely a **step in the right direction**. Prevention is better than cure. So instead of treating patients after an accident, accidents should be prevented by incorporating this system.

Methods Based on Model Estimation

2.2 Implementation of Can Bus In An Autonomous All- Terrain Vehicle. [3]

As per the paper published by Sunil Kumar Gurram and James M. Conrad Electrical and Computer Engineering Department, University of North Carolina at Charlotte, NC, USA ©2011 IEEE

The recent technology trends in the automobile industry are bringing more comfort in a vehicle by incorporating automation techniques like collision avoidance (which uses lasers to detect the objects around the vehicle and when the vehicle gets closer to any object, the brakes will be applied automatically), advanced safety features, entertainment devices and lot more. As the technology is developing, the use of electronic control units (ECU) in vehicles is increasing rapidly, making the communication between them very complex. Multiplexed communication was eventually developed to decrease the interconnections (cables) and the complexity between the ECUs. But the multiplexed communication has not met the real time communication requirements. In 1980s, BOSCH, a technology based corporation designed a multi master serial communication protocol called Controller Area Network (CAN) which is robust, real time and also reduces the amount of cables to be used for the interconnections. The CAN protocol is an

asynchronous serial communication protocol which follows ISO 11898 standards and is widely accepted in automobiles due to its real time performance, reliability and compatibility with wide range of devices. The CAN protocol is a two wire, half duplex system which has data rates up to 1Mbps and offers a very high level of security. Its ease of use, robust, low cost and versatile technology made it applicable in other areas of applications where inter processor communication or elimination of excessive wiring is needed. Some of the areas it is widely used are industrial machinery, avionics, medical equipments, building automation etc.

2.2.1 Conclusion:- This paper describes about implementing the CAN bus on automated vehicles. The operation of the CAN protocol has been tested on RX62N microcontroller. As the CAN protocol is compatible with many of the devices it can be implemented in any of the embedded systems for real time transmission of data with less number of interconnections and large number of devices to communicate.

I. SYSTEM DEVELOPMENT

3.1 *MODEL DEVELOPMENT*
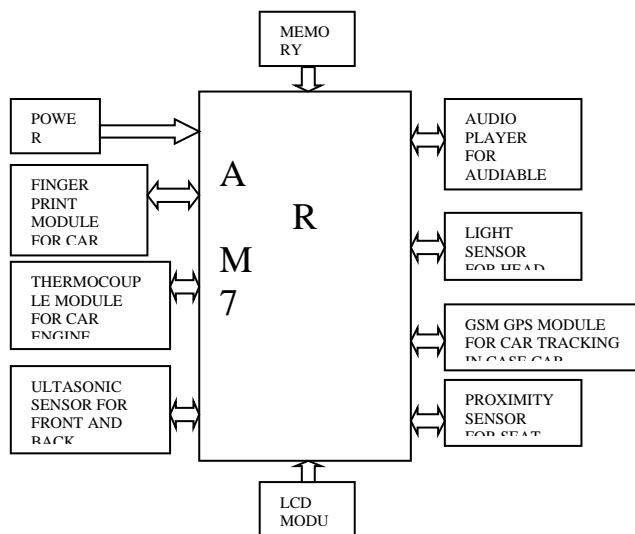#### 3.1.1 *Analytical Development*

Fig 3.1.1 Block Diagram of Vehicle Mobility and Automation

I. Fingerprint Sensor

The fingerprint sensor can read different fingerprints and store in its own flash memory. The sensor can perform three functions namely Add(Enroll) , Empty Database or Search Database and return the ID of stored fingerprint. Any of three functions can be called simply by making the pin low of the sensor or pressing onboard three switches. The response is either error or ok which is indicated by onboard LED. The response is also returned as single serial data byte.

The return byte is a valid ID or error code. The response byte is a single byte at 9600 bps thus making whole sensor very easy to use. We have provided indicating LEDs and function switch already so it's ready to use when you receive it. Just give power and start using the sensor using onboard switches. Then you can move on making external application using these functions.

3.1.2 Photo of Fingerprint sensor

3.1.1.1 Features

- · Easy to use
- · Status LEDs
- · Function Switches
- · Single byte response
- · Works at 5V
- · UART 9600bps response

3.1.1.2 Inputs and Outputs of Sensor

Information

The board is a sophisticated thermocouple-to-digital converter with a built-in 12-bit analog-to-digital converter (ADC). The board also contains cold-junction compensation sensing and correction, a digital controller, an SPI-compatible interface, and associated control logic. The board is designed to work in conjunction with an external microcontroller (μC) or other intelligence in thermostatic, process-control, or monitoring applications.

i.   Temperature Conversion

The board includes signal-conditioning hardware to convert the thermocouple's signal into a voltage compatible with the input channels of the ADC. The thermocouple probe leads connect

to internal circuitry that reduces the introduction of noise errors from the thermocouple wires. Before The growth of <u>cellular telephone</u> systems took off in the early 1980s, particularly in Europe. The lack of a technological <u>standardization</u> prompted the <u>European Conference of Postal and Telecommunications Administrations</u> (CEPT) to create the Grouped Special Mobile (GSM) in 1982 with the objective of developing a standard for a mobile telephone system that could be used across Europe. The first GSM network was launched in 1991 by <u>Radiolinja</u> in <u>Finland</u>. converting the thermoelectric voltages into equivalent temperature values, it is necessary to compensate for the difference between the thermocouple cold-junction side (ambient temperature) and a 0°C virtual reference. For a type-K thermocouple, the voltage changes by 41μV/°C, which approximates the thermocouple characteristic with the following linear equation: VOUT = (41μV / °C) $\times$ (TR - TAMB) Where: VOUT is the thermocouple output voltage (μV). TR is the temperature of the remote thermocouple junction (°C). TAMB is the ambient temperature (°C).

III *LDR SENSOR*

Two cadmium sulphide (cds) photoconductive cells with spectral responses similar to that of the human eye. The cell resistance falls with increasing light intensity.

i. **Light memory characteristics**

Light dependant resistors have a particular property in that they remember the lighting conditions in which they have been stored .This memory effect can be minimized by storing the LDR's in light prior to use. Light storage reduces equilibrium time to reach steady resistance values.

IV *MICRO SD CARD MODULE*

The Breakout Module product series is designed for R&D purpose where end user can choose variety of standalone interface modules and can interface them with any controller. The Micro SD card interface breakout Module for 3.3V & 5V Logic Level. Micro SD card interface breakout module for 3.3V & 5V level requires 5VDC power source.

V *POWER SUPPLY UNIT*

SIMPLE 5V POWER SUPPLY FOR DIGITAL CIRCUITS

Summary of circuit features

- Brief description of operation: Gives out well regulated +5V output, output current capability of 100 mA

- Circuit protection: Built-in overheating protection shuts down output when regulator IC gets too hot

- Circuit complexity: Very simple and easy to build

- Circuit performance: Very stable +5V output voltage, reliable operation

- Availability of components: Easy to get, uses only very common basic components

- Design testing: Based on datasheet example circuit, I have used this circuit successfully as part of many electronics projects

- Applications: Part of electronics devices, small laboratory power supply

- Power supply voltage: Unregulated DC 8-18V power supply

- Power supply current: Needed output current + 5 mA

- Component costs: Few dollars for the electronics components + the input transformer cost

3.2 MATHEMATICAL DEVELOPMENT

3.2.1 *Data acquisition*

The nodes in this network periodically switch on their sensors, detect the different condition for sensors and transmit the data of interest to the controller. Necessary software has been developed and written on the onboard microprocessor to digitize the sensed data by various sensors board on the MicaZ and to transmit the data to a audio player through controller. Applications have been written by using a NesC programming language on a desktop computer, machine codes produced by a compiler are then transferred to each node through gateways. When the sensor node is switched on, the program runs automatically. Because nodes consume a limited energy during sensing, processing and transferring, developed program ignores the values below specified value to increase the lifetime of the nodes. The flow chart of sensor node program is given in Flowchart 3.2.1 . Data collection and monitoring Software is written in keil in order to control the transmitted data from base station to computer

serial port connected to base station. The node through which the sensed data is coming from is detected and the raw value sensed by the node is converted to physical values. Thus, sensed values of different sensors by each node can be monitored in real time. The application permits both real time monitoring and identifying from the nodes where data is coming from. The application does not warn for the specified values since it is below danger levels. But the values above specified values, create the continuous flashes on the monitor and attract the attention of people in charge, so that, they can take necessary precautions. Another added property of the application is that, the data is stored in the database and can be monitored through a prepared web page from anywhere if desired. To collect and manage application server information and WSNs information, we use MySQL as a database management system.
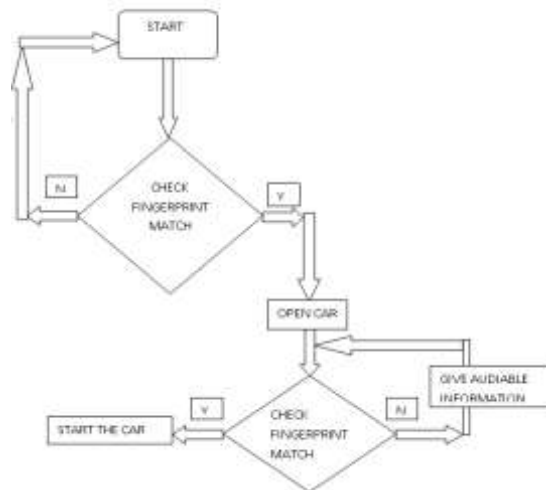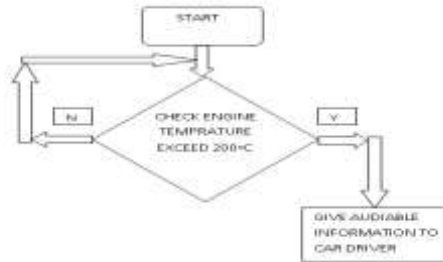

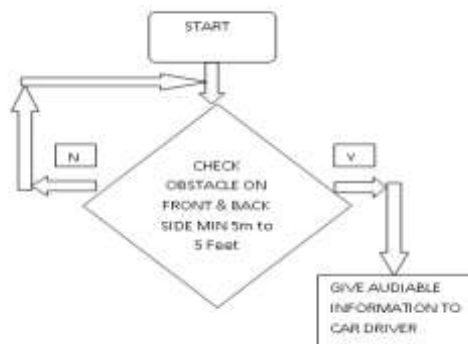Flowchart 3.2.2 for Fingerprint Module
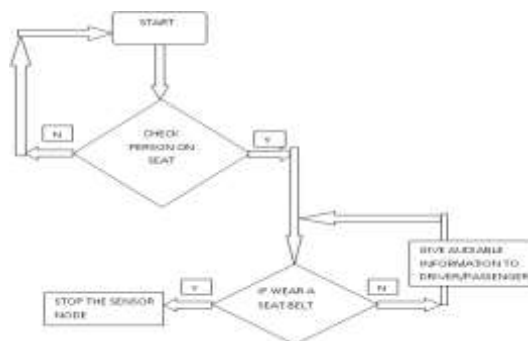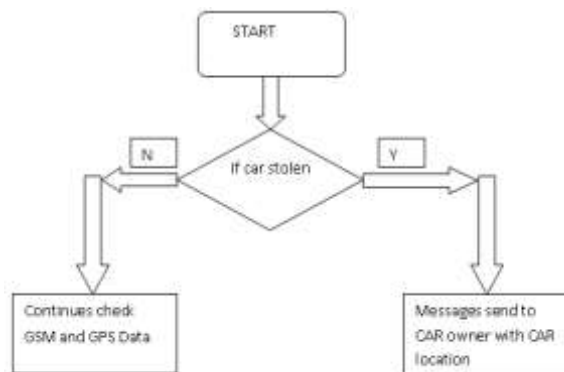

Flowchart 3.2.3 for Proximity sensor Module
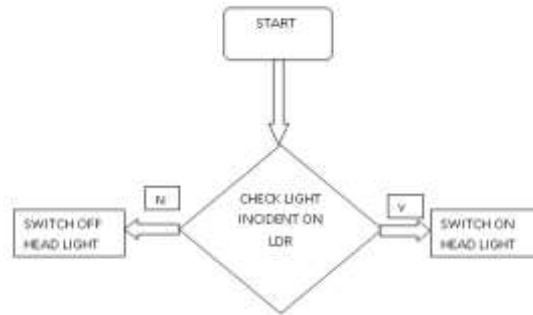
Flowchart 3.2.4 for LDR sensor Module

Flowchart 3.2.5 for Temperature sensor Module

Flowchart 3.2.5 for Ultrasonic sensor Module

Flowchart 3.2.6 GSM and GPS Module

4. PERFORMANCE ANALYSIS

4.1 Ultrasonic Sensor

The range of the ultrasonic sensor is up to 13 Inch in Front and Back side of the system.

4.1.1 Table of Ultrasonic Sensor Equivalent Output Voltage

DISTANCE	VOLTAGE
15 CM	0.06 mV
20 CM	0.08 mV
25 CM	0.10 mV
30 CM	0.12 mV
35 CM	0.14 mV

ULTRSONIC SENSOR OUTPUT VOLTAGE CHART

Distance in CM   Voltage in Milivolts

Voltage in Milivolts, 5, 140
Voltage in Milivolts, 4, 120
Voltage in Milivolts, 3, 100
Voltage in Milivolts, 2, 80
Voltage in Milivolts, 1, 60

Distance in CM, 5, 35
Distance in CM, 4, 30
Distance in CM, 3, 25
Distance in CM, 2, 20
Distance in CM, 1, 15
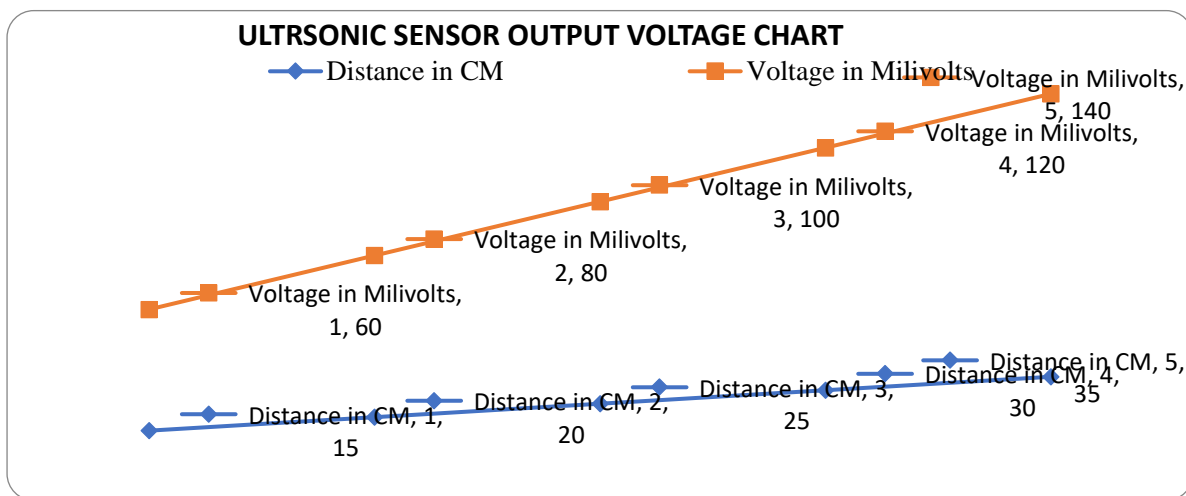
4.1.1 Ultrasonic Sensor Voltage Vs Distance Graph

With 2.5V - 5.5V power provides very short to long-range detection and ranging, in an incredibly small package. The LV-Max detects objects from 0-inches to 254-inches (6.45-meters) and provides sonar range information from 6-inches out to 254-inches with 1-inch resolution. Objects from 0-inches to 6-inches range as 6-inches. The interface output formats

4.2 Light Dependent Resistor

Two cadmium sulphide photoconductive cells with spectral response similar to that of human eye. The cell resistance falls with increasing light intensity.

Table 4.2.1 Guide to Source illuminations

LIGHT SOURCE	ILLUMINATION(Lux)
Moonlight	0.1
600W bulb at 1 m	50
Florescent Lamp	500
Bright Sunlight	30000

4.4 Thermocouple

The board includes signal-conditioning hardware to convert the thermocouple's signal into a voltage compatible with the input channels of the ADC. The thermocouple probe leads connect to internal circuitry that reduces the introduction of noise errors from the thermocouple wires. Before converting the thermoelectric voltages into equivalent temperature values, it is necessary to compensate for the difference between the thermocouple cold-junction side (ambient temperature) and a 0°C virtual reference. For a type-K thermocouple, the voltage changes by 41µV/°C, this approximates the thermocouple characteristic with the following linear equation:

VOUT = (41µV / °C) ✕ (TR - TAMB)

Where: VOUT is the thermocouple output voltage (µV).

TR is the temperature of the remote thermocouple junction (°C).

TAMB is the ambient temperature (°C).

Table 4.4.1 Output voltage of Thermocouple

Temperature (°C)	Output Voltage of Thermocouple (Volts)
25°C to 32°C	00.1
34	00.2
35	00.2
36	00.3
37	00.4
38	00.4
39	00.4
40	00.5
41	00.5
42	00.6
43	00.6
44	00.8
45	1
46	1.4
47	1.6
50	2
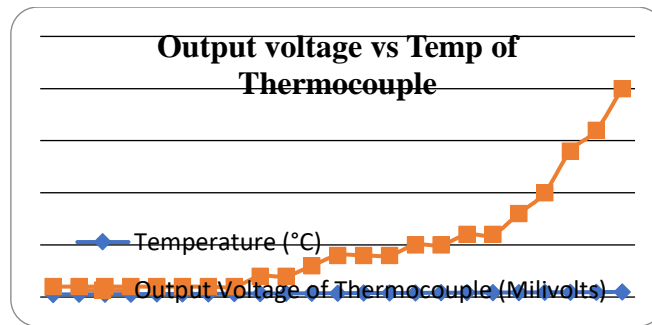
Graph 4.4.2 Output voltage vs Temperature of Thermocouple

4. Conclusion

This system is ARM based system. A Temperature sensor is used to detect engine temperature, Light sensor is used to switch on head light at night automatically, proximity sensor are used for driver as well as driver side seat belt wearing information, figure print sensor are used to open as well as start the vehicle. Ultrasonic sensor is used to detect front obstacle and back side especially at the time of vehicle parking. Micro serial data card reader is used to work as a black box of the vehicle, whenever accident happen it can give all the last information which is stored in to memory card to the investigator, which is easy to detect the cause of accident. The smartness of this vehicle is to tell all the information or sensor output data audibly to the vehicle owner or driver and driver side seat passenger.

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- IMPLEMENTATION OF CAN BUS IN AN AUTONOMOUS ALL- TERRAIN VEHICLE. As per the paper published by Sunil Kumar Gurram and James M. Conrad Electrical and Computer Engineering Department, University of North Carolina at Charlotte, NC, USA ©2011 IEEE

CHAPTER 18

COLLABORATIVE FILTERING BASED PERSONALIZED RECOMMENDER SYSTEM

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Abstract

The development of Internet technology has emerged as a useful part in the development of organizations. Almost every enterprise utilizes the internet for different purposes; one of them is business through e-commerce. Enterprises collect information about their users and business communications which are very beneficiary for their business growth. To utilize this information data mining techniques are used to extract unknown pieces of information from the large database management systems. Recommender systems help the customers to get personalized recommendations, help customers to take correct decisions in their online transactions, increase trades and define the user's web browsing experience.

Keywords: Internet technology, E-commerce, Recommender System, personalized recommendations, online transactions.

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1. Introduction

Nowadays the knowledge around us grows very rapidly over time [1]. Nowadays, users find and filter information from a variety of sources, such as the workplace, social networking sites, emails and online movies. These are the most popular sources of information [2]. A huge amount of services have come out that aim to afford customers with everything they need for a happy life [3]. In recent years, the vast majority of people have enjoyed Internet services that offer all kinds of

things (Internet shopping or sales), information concerning everything [4]. For customers, it is very difficult to take the helm the lists of any brands and movie lists. As it is difficult to do what you love, in such a huge amount of knowledge [5]. Nowadays, the network builds it easy to store information about the choices made by users of online resources [6]. The network uses a large amount of the search optimization approaches, movie ratings reviews, file transfer standards, etc. However such type of knowledge is growing very fast. Nowadays, a large amount of information is increasing rapidly because web servers produce and store a lot of information at large volumes [7]. An important function of the recommendation program is to provide support to its users to search for any specific information, for example go to the list of recommended movies, supported by most users. With these types of information the expert supports the decision-making process and eventually finds recommended products in movies, news, entertainment etc. [8]. The vast majority of online information in the last few years, especially in the current era, the internet is suffering from a problem of overcrowding. This expression is said as "the pressure caused by obtaining large amount of information than is necessary to make a choice, as well as efforts to transaction with its outdated procedures of time management". As ideas are suggested by many users, there are about 50% of visitors who usually use a search engine to search the web service. Therefore, obtaining personalized search results and its ongoing analysis using machine learning based on collaborative filtration and Learning Machines is necessary to the booming development of the e-business. With the advent of machine learning it is easy to develop user recommendations as potential visitors to the website. By using Machine Learning (ML) the customer can improve search results with customized search after visiting the website. By creating search results the title rate builds it possible for internet resources to rank results based on the significance of the particular test. There are many personalized algorithms that make it possible to associate each customer with a list of services that are most likely to be based on requirements and willingness. These are algorithms for personalization and make it possible to predict user preferences, even if the user does not know much about search results. Except for the inclusion of section text and comments based on images and service descriptions, it is now the best way to add dynamic processes and decision-making processes to target the user's Web resources. Scientific advances in contextual recognition using Machine Learning networks now offer the tools to automatically mark asset descriptions on the e-commerce Web site. Information technology responds positively by developing data filtering tools to solve this problem [9]. Recommendation systems appeared in

the mid-1990s [10].

Promotional programs are used by E-commerce websites to promote things to their users. These items can be recommended based on the top buyer or seller on a particular website, based on previous user history or based on previous customer purchasing behavior analysis. So we can simply say that strategies are part of customizing a particular website, because they provide assistance to each user. The Recommender app supports customization on each user's website. Software tools and techniques that give suggestions on how to represent the interests of a particular user [11].
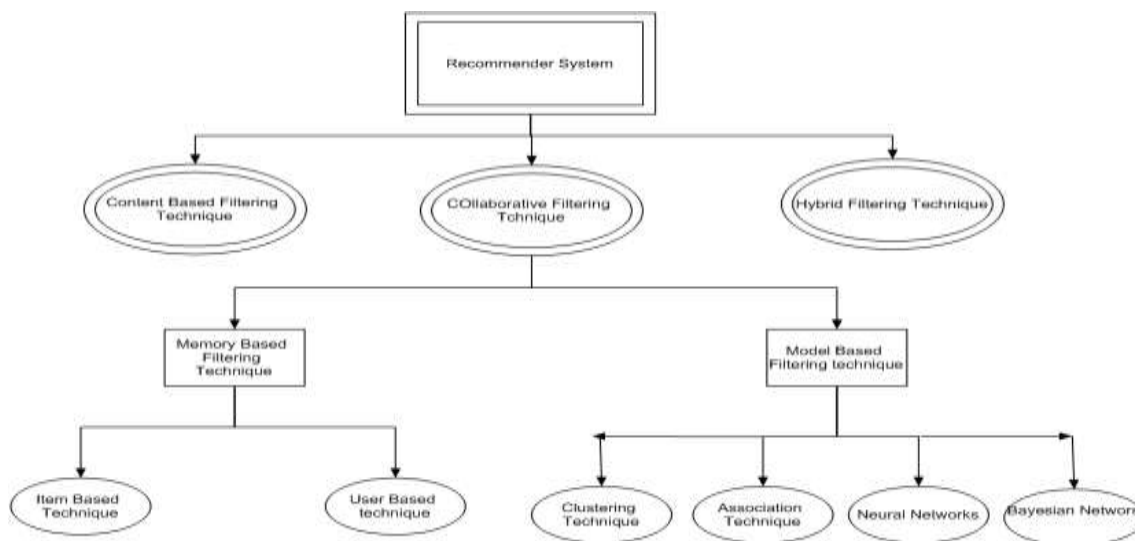
Figure1: Recommendation Techniques

Recommendation Systems are based on Content based filtering, Collaborative based filtering or combinations of both that are Hybrid based filtering approach. If we take an example on movie data set in content based and collaborative based approach, then we have in content based filtering-

Rating	User 1	User 2
5	M1 (Avenger)	M1
5	M2 (Adventure)	M2
4	M3 (Action)	M3

Table1: User 1 and User 2 with ratings

Based on the recommendation given by the user1 on the above category, here we can easily see that user1 is highly interested in M1 (avenger) and M2 (adventure) movies. In the Collaborative filtering approach items finds similar behavior or similar patterns and recommends items to users based on what other users wants. For example-

User1	Rating	User2	Rating

M1	5	M1	5
M2	4	M2	5
M3	5	M3	4
M4	4	M4	4

Table2: User 1 and User 2 with ratings

The above values are based on recommendation. In collaborative filtering approach it is based on user behavior, patterns or just like a group of things. Here we have seen the user1 have given good rating and user2 have given good rating, so we can say user 1 and user 2 are of similar type. The Netflix, Amazon prime are few websites which usages very great use of collaborative filtering approach.

2. Literature Review

Recommendation systems play a vital role in popular websites such as YouTube, Netflix, Facebook, LinkedIn, TripAdvisor [12]. Many Multimedia firms develop as well as implement promotional programs as part of the most important service offered to their customers [13]. For this purpose we can say Netflix, as we know that an online streaming service provider on the recommendation and providing first-time customer award, was able to significantly improve the performance of their recommendation program [1]. Another research article reports on their research findings on why the service providers may have interest in using such type of techniques. The following features are indicated:

- How to increase the number of products sold;

- How to sell a larger variety of articles;

- How to improve customer satisfaction;

- How to improve customer loyalty;

- Know with a better understanding of what our customer wants.

One important factor to consider when designing a recommendation system is the research site so that's why, it has a major impact on algorithms that need to be adopted [14]. In fact, so many resources that provide a basic tax on the recommendation system (RS) and differentiate existing recommendation systems in one prominent application area [1]. There is an area for applications based on particular areas so that, we can suggests a typical classroom environment with the most

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common systems used [7]. One important issue to keep in mind when designing a Recommender system is especially in the application area that has a major impact on the Recommender system techniques that needs to be adopted [17].

Fun feature - Recommendations on television, music, online television [15].

Text Content - Newspapers, recommendations on web documents, blogs, website content, e-learning software, email and other text applications [16]

Commerce websites - consumer and seller recommendations like e-book, e-products etc.

3. Problems in Building Recommendation Systems

Cold Starting Problem: This refers to a situation where the promoter does not have enough information about the user or item to make appropriate predictions, where the new user has added. Collaborative filtering (CF) is a way to personalize user recommendations from related preferences in the past. The problem of cold startup, which explains the difficulty of making recommendations when users or items are new and added to the system, so this will create a big challenge for filtering collaboratively.

Data sparsity problem: This problem often occurs when a customer check a finite number of products available, in case when the catalog is very large. The output is a limited number of customers who have not sufficient data to distinguish those customers, which affects the services of recommendation systems.

4. Method to use in Recommendation System:

There are two types of recommendations techniques personalized and non-personalized techniques. We have following methods to personalized recommender systems.

- Our individual likes and dislikes are not used for custom suggestions.

- View the products which we might buy, even if we have never been on the website.

- Population behavior can be used to guide suggestions.

- Other people like this; therefore we will probably like it too.

- Input: X

    User attributes: such as name, age, location etc.

Product Attributes: Screen resolution, RAM etc.

- Target: Y

  - Will we buy the product or not.

  - What will we rate the product.

  - Predications can be used to rank or sort the items.

Given a users and items ratings matrix M below, where we have 6 users (rows) have rated 6 items (columns). Ratings can take up integer values from 1–10 and 0 indicates absence of rating. Let, we have to find if user number 5 will like item number 3 or not. Hence, user number 5 becomes our target user or active user and item number 3 is the target item.

The following is the user – items matrix (M)

	0	1	2	3	4	5
0	3	4	6	7	8	9
1	3	4	3	2	5	8
2	4	5	6	0	8	9
3	8	7	4	5	6	8
4	9	7	6	4	6	7
5	4	5	6	8	9	3

Table 3: Sample Matrix (M) of User (rows) and items (Columns)

5. Collaborative filtering based personalization method on the user's needs

Existing movie recommendation programs, such as IMDb, Netflix, and Rotten Tomatoes, apply to personal tracking the individual requirements of customers. These programs help to identify or choose the movies; provide practical recommendation systems that take the need of a particular customer, as well as the frequency of movie viewing, customer preferences, characters, and time intervals. To maintain such system that can support decision-making to offer customers with appropriate movie recommendations. It is important to integrate the currently expertise recommendations in person hybrid methods while based on Chinese studies. The important issue of this program is to present appropriate recommendation systems on movies taking into account the individual requirements of the customer. The intended recommendation systems are recommended to be used to gather data on the basis of user preferences of various users in selecting

products and to provide appropriate day to day recommendations. Additionally, the system can be simply modified to recommend music, products, books, crypto currency resumes, or exchange markets. The hybrid algorithm can retrieve the information in a variety of ways, make it unique, and provide relevant recommendations.

NoSQL (Not Only SQL), is used to accumulate the information that helps incorporate the appropriate information into two sub-systems, the sub-profile user profile and the underlying content system [11]. Each process focuses on a variety of aspects using Machine Learning methods. Hybrid training methods are used for a recommendation tailored to us. There are several recommendation systems that can be presented such as test responses from the new users, selection of a particular algorithm, learning methods, and performance emergence [12]. A cold start problem arises when a user account is not within Recommender System and there is no previous user rating [9].

6. Conclusion

The purpose of the study is to build a decision-making system to develop recommendations for content based on collaborative filtering and machine learning taking into account the individual requirements of the use. For achieving this goal, the following steps are used:

- establish common operating requirements for system maintenance to develop recommendations for content that distributes commercial content on the Internet;

- create a way to personalize economic content according to user requirements;

- develop software to distribute commercial space on the internet space based on collaborative filtering approach and Machine Learning systems.

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<div align="center">CHAPTER 19</div>

THE INVESTMENT SCENE – UNDERSTANDING THE INVESTORS BEHAVIOR AND PREFERENCES AMID COVID-19

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[2]Sheenam Gogia

Abstract

The ongoing coronavirus pandemic is a critical threat to not just the public's health but also to the investors and their valuable investments. The long lockdowns have also impacted the Indian economy and different sectors. To fulfill the objective of investment, it is necessary to understand and have knowledge about the market and different avenues available in the market for investment purpose and also, risk linked with each avenue so, that investor can take proper investment decision, In the current scenario, Markets very volatile therefore, it is very necessary for the investors to study and analyze the market as where to park their money for the safety and getting good returns from their investments. Investors need to understand the avenues they should consider in this covid-19 pandemic. Thus, it has become an immediate need to carefully understand the behavior and preferences of the Investors of India. The present study analyzes the attitude, behavior and preference of the Indian Investors. The study is conducted on working class investors of Bangalore city. The study is conducted through primary survey using online questionnaire. Few criteria's have been considered for drawing the sample from the population. The study will help the financial institutions to adopt proper strategies to earn good profits by understanding the preferences and attitude of investors towards investment in amid covid-19.

Keywords: Avenues, Behavior, Covid-19, Investment pattern, Investors,

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1. Introduction

Investment is the obligation of funds at present, in expectation of some good rate of return in future. An investment is provoked with range of investment avenues like bank deposits, real estate, small savings, life insurance schemes, bullions, commercial deposits, corporate security- bonds, mutual funds, and equity and preference shares. From all investment avenues, saving bank deposits are safest and most preferred by the Indian investors.

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For economic development, it is required to invest all the savings in a meaningful way. How much money is invested by people out of total savings, frequency of their investments, financial instruments in which they invest and risk aversion demonstrate investors behavior and investment pattern.

The entire world is undergoing uncertainty and hardship due to the exceptional COVID-19 pandemic. This epidemic came at a time when the worldwide economy was already facing tough times. [1]Hence, in the given situation, it is important to take cautious financial activities, both preventive and corrective, to ensure overall financial wellness of investors and their family. The virus had brought a lot of downfall in the economy and have increased the Panic among the investors too. It is also giving the money managers a hard time.

For effective investment, it is very important for the investors to not to get panic and stay positive because one wrong decision can result in huge losses. Thus, it has become very important to carefully understand the investing scene in the current scenario and attitude of the investors as to understand how they behave while taking investment decisions. For the present study, investors of Bangalore city are taken into consideration.

2. Literature Review

Stern and Walter (1969) conducted a study "The Investment Scene- An overview". From the study, it was identifying that there are two types of Investors-Aggressive and serious long-term investors. The aggressive investors are those investors who are young, knowledgeable and identifies risk and return associated before they invest. Also, they are not price-earnings ratio oriented. On the other hand, serious long-term investors are those investors who are interested in earning trends and are more price-earnings ratio oriented.

In 1977, A study was conducted by **Lewellen Wilbur et.al** in order to analyze the "Pattern of investment and behavior of the individual Investors". A Study was conducted on 972 respondents residing in U.S. The result of the study shows that age of the investors played an important role

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and strongly influence investors decisions. Younger and Middle-age investors prefer short-term capital gains whereas old-aged investors prefer long-term capital gains. Also, it was found that young investors were ready to take more risk and invest in risky avenues as compared to other investors of different age group.

A study was conducted by **Jawaharlal in 1992** entitled "Understanding Indian investors". The study was conducted on total 1200 respondents who were either shareholders or debenture holders. Data was collected using questionnaire method. The results of the study revealed that investors generally prefer to have large portfolio of more than five companies. But, investors were not good at accounting and calculations.

A survey was conducted in 1999 by **ORG- Marg Research Organization** to analyze the "Choice of Investors towards different Investment avenues". From the study, it was found that Bank deposits was the most preferred investment avenue among the investors. Also, Mutual funds were the least preferred investment avenue. Therefore, companies should take steps to make investors aware about the mutual funds investment. Post office savings, Bonds issued by Government, Insurance were also preferred by some of the investors. The factors which affects investors choice while selecting investment avenues were also studied. It was found that preference of the investors was based on factors like risk, return, liquidity, tax benefits, safety, growth etc.

In 2000, **Bandgar P.K** conducted a study on investors in Greater Bombay named as "A study on preference of middle-class investors towards various financial instruments". Data was collected from the respondents using structured questionnaire. The results of the study revealed that investors of middle-class were not so knowledgeable about the investment avenues and lacks skills of investing. Also, Female investors invest more in risky avenues as compared to male investors. Also, it was discovered that middle-class investors of Greater Bombay prefer to invest in avenues like Banks deposits, Debentures, insurance, Government schemes etc. There was a shift in preference of the investors towards investment avenues from bank deposits to shares and debentures.

3. Research Gap

Since, it's an ongoing pandemic therefore, there are very few studies conducted and available related to the studying The Investment Scene – Understanding the Investors behavior and

preferences amid covid-19. So present study is intended to study the investing behavior and pattern of the Investors in the current ongoing epidemic.

4. Objectives of the study

- To understand the pattern of Investors in current pandemic.
- To analyze the best avenues available for investment in current scenario.
- To analyze the investment decisions taken by the investors amid this crisis.

5. Scope of the study

The study will attempt to study the investing pattern and behavior of investors in current scenario and will help in identifying how the investors are managing and considering their investments while making investment decisions.

Sample Size: 100 Respondents

6. Data Analysis and Interpretation

Gender

Gender	Frequency
Male	72
Female	28
Grand Total	**100**
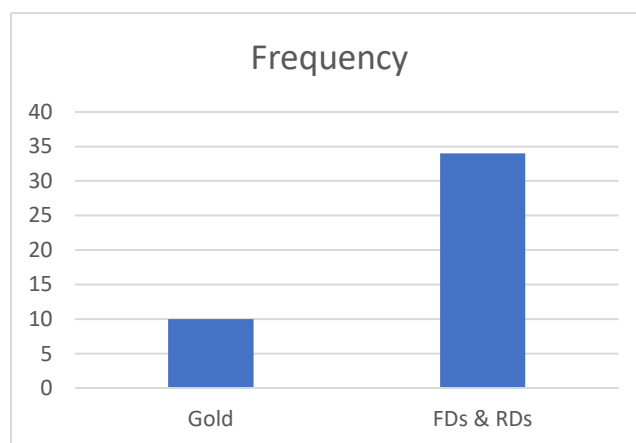
Above table and graph revealed that a large proportion of investors under study were males.

Age of the Respondents

Age	Frequency
25 & less	20
25-35	55

35-54	15
55 & above	10
Grand Total	**100**
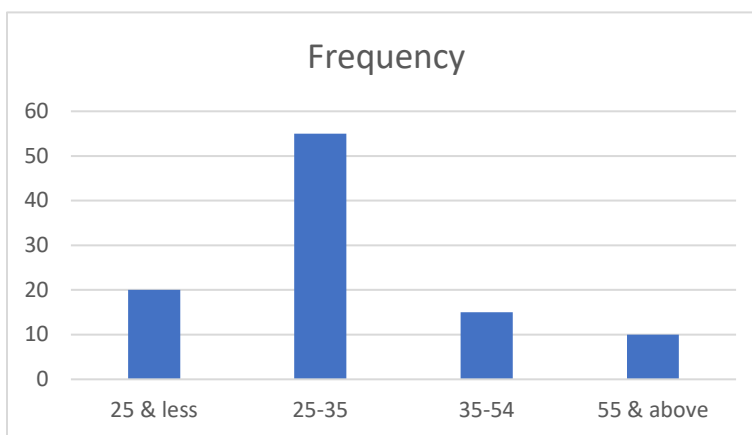
Frequency

From the above, it is interpreted that most of the investors falls in the age group of 25-35 followed by 25 and less than 25 years of age.

Most Preferred Investment option by the Investors in this current pandemic.

Investment avenue	Frequency
Gold	10
FDs & RDs	34
Bank Savings	16
Small Saving schemes (PPF,NSC)	25
SIP in Mutual Funds	15
Grand Total	**100**

Frequency
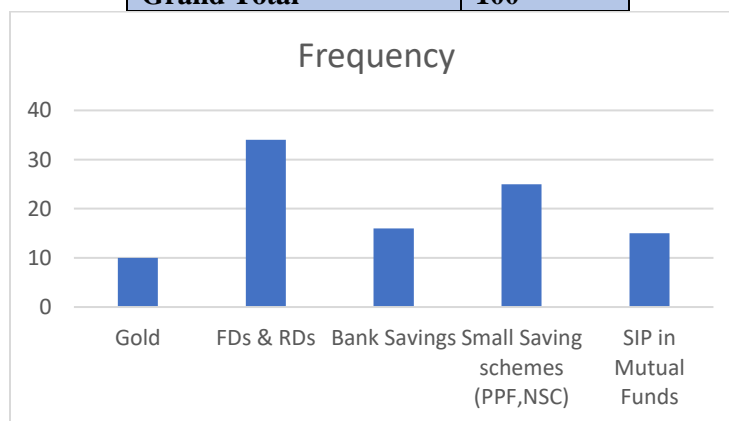
Above table and graph revealed that the most of the investors had preferred investment in FDs & RDs and Bank savings followed by small saving schemes. Also, few investors had preferred SIPs in mutual funds in this pandemic.

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Reason for selecting the above investment avenues by the investors

Reason	Frequency
Liquidity	30
High return	15
Tax Saving	20
Safety (low risk)	35
Grand Total	**100**
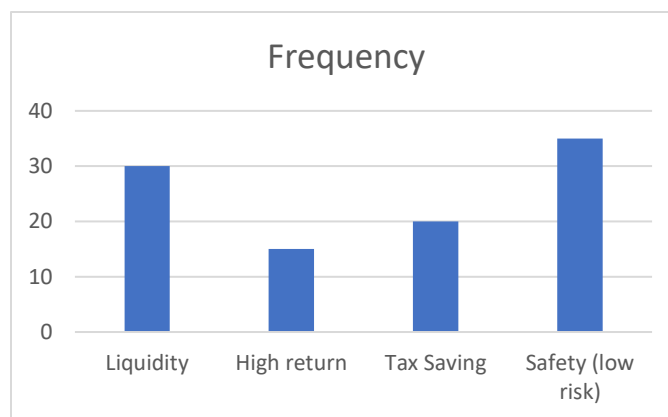
Above table and graph revealed that most of the investors had considered safety and liquidity as the important for them while making investment decisions in this crisis amid covid-19

Factors considered by the investors while making investment decision

Factors	Frequency
Returns they provide	30
Future growth	25
Risk involved	20
Past performance	15
Others	10
Grand Total	**100**
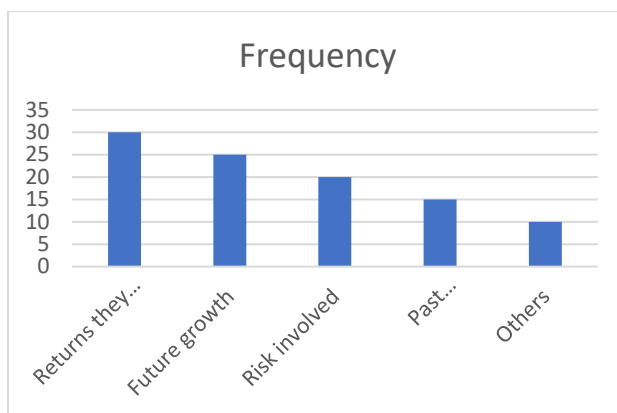
Above table and graph revealed that most of the investors had considered returns and future growth as important factors behind their investments in order to ensure overall financial wellness of their family.

Pattern of risk-return preferred by the investors in the current scenario

Risk-return pattern	Frequency
Low risk - High return	45
High risk - High return	20
Low risk-Low return	25
High risk- Low return	10
Grand Total	**100**
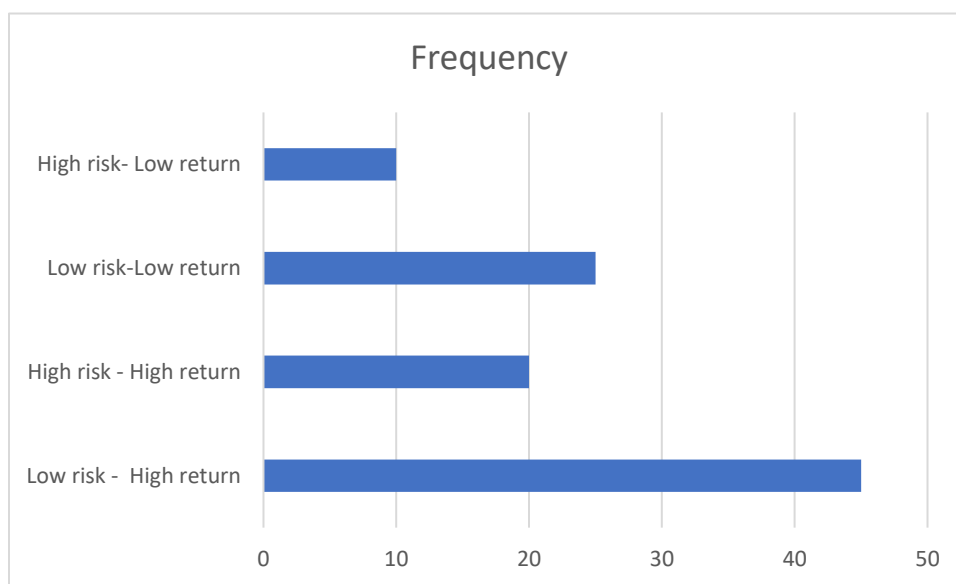
Above table and graph revealed that most of the investors under study had preferred low risk-high return pattern in this current scenario.

7. Findings

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The Major findings from the study were that it is important to take practical financial decisions, both preventive and corrective in order to ensure overall financial wellness of an individual and his/ her family. From the study, it has been found out that investors are taking investment decisions very cautiously by considering the factors and the current market scenario. The Investors of Bangalore city in this pandemic are preferring the investment avenues like SIPs in Mutual Funds, Bank savings, FDs and Gold. Most of the Investors prefers safe and liquid investment options in this coronavirus pandemic. The main factors that most of the Investors considered while making investment decisions are returns and future growth. Also, most of the investors prefers to invest in Low risk - High return investment option.

Also, it has been found out that the following points are considered by the Investors to make right investment decisions amid this crisis:

Avoid Exiting – Due to the downfall of the market, many investors preferred for exiting now and re-entering later. But, most of the investors are benefited by continuing rather than exit.

Starting new SIP- It is also found out that the most of the investors increased the amount of existing SIPs i.e. started a new SIP in the existing funds

Investing more - It is found out that this crisis scenario had benefited to the investors who were under invested as, they utilize their time to maintain their desired investment levels.

8. Suggestions

From the above study, the following suggestions may be worth considering while making investment in today's market amid covid-19.

- Investors should align their investment decisions with the changing reality.
- Investors should opt for particular investment avenue according to their preference and risk taking capacity.
- Investors should take a close look at their financial records.
- The investor should monitor their investments and should tackle the current situation with financial prudence.

9. Conclusion

"The Covid-19 crash is just a phase and shall pass"

The ongoing covid-19 pandemic threated not only to the health of the people but also to their investments. Therefore, it is important to take right and corrective decisions as how to park the money for the safety and growth of the capital in the current scenario. It is concluded from the study that in this crisis, most of the investors of Bangalore city had preferred to invest or continue to invest in investment avenues like Bank savings, FDs and RDs, SIPs in Mutual funds. Investors of Bangalore preferred these avenues as these avenues are safe and highly liquid. Investors had also not considered exiting as the option as, they realize that crashes and crisis are an invincible part of the market and it shall pass soon. Most of the investors stays positive and maintain their investments instead of exiting.

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CHAPTER 20

MARKETING OPPORTUNITY & ENDURANCE: DIGITAL THRUST VERSUS DIGITAL TRUST

[1]Dr. Alpa Srivastava

Abstract

Beauty is in the eyes of beholder and hence the total digital adoption with trust may take its own establishment time but the reality is making it closer day by day. The article focuses on the major aspects and features established win-win position for both the counterparts i.e. seller & consumer. Digital thrust is the outcome of experienced benefits and need is to adopt the same not only as social transformation tool but also as professional transformation mechanism to explore the immense opportunities existing all over the world. Thus, digital thrust is needed as market orientation almost cyclical in nature where in One man's trash is another man's treasure.

Keywords: digital marketing, customer, marketer, seller, trust, risk and mitigation, win – win position

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1. Introduction

In our daily life we are observing many privileges like – SMS alerts for each and every transactions of bank, notification for required market opportunities, email notification, promotional mails etc. It may be noticed here that mostly all such notifications mentioned above are almost pertaining to our own areas of interest, utility or need based subscriptions. This is the finest aspect of digital marketing. At this platform customer finds everything about his/her interest well displayed for his/her choice with luxury of the convenient time for purchase along with many payment options including digital mode of payment or COD as per choice and hopefully at a better comparative pricing. Is it not enough to gain a competitive edge by marketers for those exploring digital market opportunities? Certainly yes, future of marketing is almost clear to be overwhelming with digitization in the coming years.

Now, the way concept of digital marketing has evolved in last 30-years, it is quite mature now, like a perfect groom and well established as a suitable match for modern marketing. Hence, let us understand the broadly defined types of digital marketing and make it a better platform of a preferred choice. A fair understanding of marketing is to raise or generate the demand in consumer market providing proactive and selective information. The process of creation of information may vary but content involved may be mostly of three types i.e. written

content, audio content and video/ audio-visual content. Can anybody imagine these days to ensure broadcasting or spreading of content without any digital help? Certainly not possible. Reason is quite obvious of being it so diversified, convenient, cost effective and ultimately acceptable by the targeted consumer market segment. Here is the key to respond and understand, that how digital thrust is well established situation and a pre-accepted condition as well, to be adopted by marketer.

2. Types of Digital Marketing

Artificial intelligence made the digital world so impactful that may be understood by knowing the way it works and how marketing evolved digitally may be highlighted as follows-

2.1   SEO (Search Engine Optimisation): Digital world is so advanced that it will not let anything relevant out of your sight by observing your area of interest during each search, which is able to correlate it with customer's age, geographical location, education history, observed personnel interest from search history, observed the activities at various social media sites like facebook, Instagram etc. and hopefully not let you out of mind any way possible.

2.1.1 Win-Win Position for Customers/Consumers: The customer is benefited with most valuable content/ blogs/ videos as per his/her own preferences.

2.1.2 Win-Win Position for Marketers/ Sellers: The marketers or advertisers have easy access to targeted segment of the customer/ consumer and hassle-free display of products to relevant to the preferred customer.

2.2 Pay Per Click Advertising (PPC): SEO has reverse mechanism feature which utilises the bid option for advertising by sellers/ promoters to improve brand value or generate demands from respective targeted customer group, higher the bid will acclaim priority display. Working as consumer interface we generally get certain pop-up advertising may be co-related products or observing our area of inclination, wherein some minimum time may also be set for display and rest as per discretion of the user. For example in YouTube videos certain advertisements are displayed for its full time and many with 5 second skip option. Here, per click some payment is payable by the advertiser to Search Engine, who is intelligent in identifying the target customer for advertiser and in turn customer will get informed with relevant information about product range or supplier, who is matching to his/her requirement. Utility software understands the viewer's choice and advertisement placed in front of a right person with right content, as customer's wish to continue in the line normally click the pop-up blinked and

advertiser has to pay as per the count of such click. It may be a best example of cross selling of information.

2.2.1 Win-Win Position for Customers/Consumers: Customer win is sure in the sense that there is nothing special to pay for both, the content of interest and the relevant product information. Through blinked advertising pop-up, the content cost is been borne by the advertisers.

2.2.2 Win-Win Position for Marketers/ Sellers: It is being studied by researchers that priority display in online advertisements play a vital role in reinforcing purchase decisions of web users.

2.3 Social Media Marketing: It is a thumb rule that "what you see is on sale" and Social Media is all about it. Broadcasting the information through various such channels helps in preparing a Brand image at large. Normally brands portray or connect their name with the larger than life characters played by Celebrities without putting the separate advertising and product been highlighted by the celebrity in reel usage frequently to convey a sub-conscious message of use of product in mass. As brain usually resist the idea if pursued directly but easily accepted sub-consciously under influence of the character it can connect. Hence, it has so powerful impact that even proves the main cause in making trends in consumer market.

2.3.1 Win-Win Position for Customers/Consumers: As defamation the biggest potential threat in Brand Making, social media has plaid a vital role in establishing the customer as King, it bounds the seller to maintain best practices in each dealing, more particularly in online sales/ services being performed to avoid negative promotion as minor reason may impact heavily. Hence, certainly develop a win situation for customer also.

2.3.2 Win-Win Position for Marketers/ Sellers: It is the easiest way to market any brand to target group among large audience with powerful promotion and may also generate leads for personnel interaction. Market penetration is much easier.

2.4 Influencer Marketing: It is a normal human nature and a natural behaviour of brain that it trusts people until the same is not breached once. Hence, role function as influencer involves responsibility not to breach such trust to maintain the fan-followings on social media.

It is a good alternative to promotion through a celebrity, which may cost more. Influencer marketers may be a partner to whom specified target customer already taking interest or believing the ideas shared by him/her through social media.

2.4.1 Win-Win Position for Customers/Consumers: As most of the influencer try to deliver true value of product, which creates a win position for end users. The existing relationship with influencer will always remain both ways, where trust is the key.

2.4.2 Win-Win Position for Marketers/ Sellers: Surveys reveal that almost 84% marketers believe promotion through influencer marketing works well at low cost and it's a good way to enter into the market and create some basic customer base.

2.5 Public Relations Content: Large brands are much concern about sustaining their Brand Image and even minor negative comment may affect consumer's and investor's sentiments. Hence, maintaining good public relation is the only available mitigation for them.

The contents involved in this process may be spread by news media in different perspectives. Maintaining good PRC team helps an entity/brand to sustain in such eventuality by making a better understanding about actual position and raising trust of consumers/ investors.

A good PRC team not only helps in maintaining brand loyalty & improves awareness about campaigns, product launches, events conducted for sales promotion etc but also works as panacea during eventuality as crises management toolkit.

2.5.1 Win-Win Position for Customers/Consumers: Large brands are much concern about sustaining their Brand Image and even minor negative comment may affect consumer's and investor's sentiments. Hence, maintaining good public relation is the only available mitigation for them. The contents involved in this process may be spread by news media in different perspectives. Maintaining good PRC team helps an entity/brand to sustain in such eventuality by making a better understanding about actual position and raising trust of consumers/ investors.

2.5.2 Win-Win Position for Marketers/ Sellers: Maintaining a Good PRC team may incur certain cost but improves brand loyalty for a firm.

2.6 Brand Journalism: Marketing through journalism" – focus on building stories and other content that highlights a company or organization's value from a different viewpoint.

Brands basically focuses to introduce such varieties in product that can cater the region specific need, market demand most satisfactorily to targeted range of consumers by addressing the local

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choices/preferences in the main targeted product along with maintaining their brand image. This can be done by duly highlighting their logos, themes, tag-lines and promos.

As it is also true for all brands that deeper the products acceptance deeper the penetration hence concept of Brand Journalism has entered to ensure and remind consumer through various digital or physical platforms, about the availability of branded product by linking it with occasions or be some week-day or festival or any occasion or party events etc.

Brand Journalism, is evolved also to keep the target group of consumers/customers well aware of the product utility or range made available by the Brand with ensuring Midas of a superior feel in the mind-set of end user consumer by adding or highlighting the inherent organization's values, which somehow makes the selection easy for them and possibly help in creating some special moment of truth for further promotion.

2.6.1 Win-Win Position for Customers/Consumers: When it's done in the right way, brand journalism provides consumers with valuable, interesting, and engaging content.

2.6.2 Win-Win Position for Marketers/ Sellers: Through newsrooms, brands can now tell their stories in authentic ways and foster real and meaningful connections like the flipkart is doing by letting the stories of its customer's care executives online available to create a emotional link and create trust as well as loyalty.

2.7 Email marketing: The studies/ surveys reveal that customer is actually preferred to get personalised offers in their area of interest or interested brands and want to get access on available information at their own convenience. E-mail may carry all 3-type of content i.e. written, audio as well as video.

2.7.1 Win-Win Position for Customers/Consumers: Email marketing is the best qualified style for obtaining relevant information from pre-accepted sources with ensuring convenience. It ensures and truly establishes win position from customer's point of view. For example, we all prefer and even expect to get all banking transactions information and other related messages through e-mail. Mostly all brands were specifically providing their specified communications during COVID-19 pandemic management through e-mails like standard operating procedures for on-boarding to flights and many more.

2.7.2 Win-Win Position for Marketers/ Sellers: Concept of e-mail marketing is a well-established model for most of the brands not only ensures customer convenience and awareness about related updates like information on new arrivals, discounts, shopping festivals & product specifications etc. but also to increase customer loyalty.

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Another most important aspect for marketers for accepting e-mail marketing is being it cost effective method of direct marketing and can also be used to target specified customer segment both under mass marketing strategy to penetrate in market and also be present in existing customer's day-to day lives.

2.8 Video Marketing: Promotion through video content is been preferred by the customers more, as revealed in the survey conducted by Hubspot Research.

Video content, if created interestingly, made deeper impact on subconscious memory as involves almost 2-senses i.e. vision & sound, which make is easy to get connect with suitable product easily and naturally as per the content & quality of video. The videos created may be circulated easily for public access through various apps like youtube, whatsapp, facebook etc.

2.8.1 Win-Win Position for Customers/Consumers: Customer position is commanding because, in the right of choice vests in his own hand. The relevant content addressing, his concern, will be viewed and rest may be ignored.

2.8.2 Win-Win Position for Marketers/ Sellers: Product demo explaining USP, video interview of naturally accepted leaders of the fields, testimonials of satisfied customers, video blogs and explainers to answer FAQ's etc. are used as popular tool to promote product through video marketing model. Sometimes videos of trainings, webinars etc also circulated to enhance product values.

2.9 Audio Marketing: Naturally audio content is more convenient in usage than video or written contents. Conveying audio message through FM/ Radio also makes fairly good impact.

Many individuals avoid spending much time on social media these days; however, they prefer to keep due focus on audio content available during their drive time or assistance available through Google Home or Alexa etc. under a busy work schedule. It is a very good tool for digital mass marketing to penetrate in rural and urban area.

Hence, by creating short and long-form audiograms, a good promotion is possible. However, limitation of audio promotion is being it one-way communicator, feedback or immediate response may not be available to attend simultaneously.

2.9.1Win-Win Position for Customers/Consumers: Smart speakers, Bluetooth devices etc makes it so convenient to have access on audio contents without disturbing work schedule or wasting time in reading or viewing the unwanted contents, makes it a win situation for customer.

2.9.2 Win-Win Position for Marketers/ Sellers: Podcasting, social media live audio or conducting events by anchor etc. are the popular ways in which the advertiser can reach the targeted customer.

Some Other types like Mobile Marketing, Native Advertising or conducting Live Chat etc. are there, which are in trend these days but we have covered the major types above to understand the need of digital thrust from both point of views i.e. as consumer and as marketer.

3. **Innovations:** That are involved and creating more prospective future in Digital Marketing world are shown in the following :

3.1 Augmented/Virtual Reality Marketing: To understand the concept, let us observe the incidents wherein we all are already experiencing the virtual realities like each and every click on camera enabled some auto correction feature to enhance the ideal image experience. Like wise use of technology may transform our all five sensory experiences.

Such technologies already under usage in almost all software related programs and applications. Integration of same is already initiated in appliances like your cars may assist you in many ways like searching of addresses or plan out week-end locations and auto drive, voice assistance by Alexa/ Google in day to day life like reminding you timely for medicine or any important tasks etc.

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3.1.2 Win-Win Position for Marketers/ Sellers: Customer experience so augmented set better satisfaction and sense of complacence as been established as our virtual reality in day to day life.

3.2 Sensory Marketing: It is easy to influence a consumer, because his exposure under sensory experience could be secured as it amplifies the experience and emotional attachment. Hence,

now all brands tried hard to establish a positive emotional connecting by augmenting sensory experience of product. There are five senses — sight, hearing, touch, smell and taste and human brain tries to assume all five with all objects like if we see a picture of a Food item, we start assuming taste & smell or if we see a picture of the theme park, we start assuming thrill. Science reveals that this assumption amplifies and be more accurate with increasing sensory experience like adding essence of same food picture will lead the brain to ensure the taste more accurately. Using this concept, user experience is enhanced to the level it ensures positive emotional connection with the product or brand.

3.2.1 Win-Win Position for Customers/Consumers: Better product / brand experience.

3.2.2 Win-Win Position for Marketers/ Sellers: Product innovation may lead the product / brand into less competitive segment.

4.0 Market Conditions: "Instead of one-way interruption, Web marketing is about delivering useful content at just the right moment that a buyer needs it."– David Meerman Scott

With so much of benefits, Digital thrust seems not only the ultimate choice for modern marketing Mix but also it is expanding the concept of true customer satisfaction. To support my statement, I prefer to assume distinct two market condition under which customer experience may be examined in digital world –

4.1 Competitive Market under Digital World– Please refer to Table 1.0 for the conditions in which customers as well as the advertisers will act.

Table 1.0

Sellers	Customers	Market Condition
Will prefer to add innovation to create short term monopoly	Benefited in pricing if many similar products are available and benefited with utility based experiences if specified / innovative options are opted matching the requirements.	Efforts will be focused to create Monopoly in Market to retain in business. Customer is King.

4.2 Monopoly Market in digital world - Please refer to Table 2.0 for the conditions in which customers as well as the advertisers will act.

Table 2.0

Sellers	Customers	Market Condition
Will prefer to maintain monopoly	Customer will focus for alternatives and may supplement innovations to break monopoly.	Will redirect towards competitive market environment.

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5.0 Conclusion: Hence digital market orientation is almost cyclical in nature where in One man's trash is another man's treasure and demand nature may be treated as permanent. If such digitisation is permanent in nature, trust can never be avoided. In this regard, suggestive measures are well established like avoiding saving passwords on devices or google drive etc., avoid sharing of passwords/ pin/ CVV number mention on Cards /OTP, avoid usage of public network place for financial or administrative works and many more as particularly advised in Information Technology Act 2000 (the IT Act, india). We understand that there is need to establish a dedicated Cyber Security Law in our beloved Country to evolve the cyber discipline among its citizens, which is certainly not our area to comment. Other risks that may be evolved are highlighted in the table 3 below –

Table 3.0

Digitisation Related Other Risk Involved	Mitigation Available
Preference pages appears first may tempt for cross selling of product ranges even offers may allure for credit sale, which may impact short term cash flow management.	Self-control and utility-based purchasing is preferred.
Purchase decision is merely based on images offered & specifications mentioned	Reviews & rating makes selection of product comparatively easy and reliable.
UNWANTED advertisements/ cookies/pop-ups/ promotional mails increase risk of hacking of personnel data and information.	Avoid allowing cookies & pop-ups received for promotions. Use suitable internet security & antivirus protection. Preferably use genuine software only.
Even genuine looking web-pages may not reveal the modus-operandi of operational arrangements and physical existence of entity may not be ascertained.	Genuineness of the websites may be ascertained by ensuring the security certificate of the webpage and physical evidence may be separately searched on world wide web.
Sometimes fake reviews may mislead the decision and return policy specified pre-sale makes it difficult to rectify the order already placed online.	May be fairly judged through the company's redressal policy available at portals. Any misleading noticed may be high-lighted through BLOGS, SOCIAL MEDIA ETC to raise awareness.
It may not be easy to analyse the money to value in case of services/ products opted that are pertaining to unorganised sector or un-branded category in nature.	Reliance on personnel or professional references available on social media makes the decision better in mitigating any such risks associated.

It is well said that "When in Rome, do as the Romans", hence digital embrace is the only resort to all the emerging-economies of the world, digital thrust is panacea and digital trust is merely a by-product, which will be naturally extracted in coming days.

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CHAPTER 21

RELATIONSHIP AMONG PERSONALITY TRAITS, PERSONAL VALUES AND WORKFORCE DIVERSITY: A CONCEPTUAL FRAMEWORK

[1]Dr. Anand Thakur

[2]Ms. Manpreet Kaur

Abstract

The personality traits have high relevance for companies having diverse workforce which employ individual with a variety of different characteristics; age, gender, race, religion, cultural background etc. The present study describes the relationship between personality traits and workforce diversity. Past studies certify that individuals who are high in openness to experience, extraversion and agreeableness would be more attracted to diverse workplace, whereas individuals high in neuroticism would be less attracted to a diverse workplace. In uncertain situations (like economic slowdown during pandemic, natural calamities etc.), it becomes relevant to understand and use the individual personality traits to handle diverse workforce. In such conditions, it becomes more challenging for business leaders to lead the diverse workforce with numerous constraints emerging from volatility in economic environment. This paper addresses the challenges faced by organizations in managing the diverse workforce and how to use personality traits to instil enthusiasm among workers in difficult time. A conceptual framework on the relationship among personality traits (Big Five Model & MBTI), personal values and workforce diversity is proposed at the end. The findings of this study will be useful for the organization development & strategic planning even in the period of new normal.

Keywords: Big five model, Workforce diversity, MBTI model, Emerging challenges during pandemic.

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1. Introduction

The use of personality traits and personal values in the right direction and to manage diverse workforce is an important issue in the 21st century. The prosperity of an organization

depends upon its diverse and skilful workforce. As organizations flourish, it becomes imperative to recognize how the organizations are attracted to diverse workforce. Personality traits and personal values play a major role to manage diverse workforce and determine the personality of an individual working in an organization. Personality traits consists of five factors; Openness to experience, Conscientiousness, Extroversion, Agreeableness, Neuroticism. These traits generally remain stable in usual circumstances but may vary in difficult time. Personal values include following aspects; creativity, courage, integrity, honesty, understanding, learning etc. Personality traits and personal values help to shape personality of an individual. Previous studies revealed that many individuals and environmental factors influence employee performance at workplace. In this situation, managing employees' performance becomes even more challenging when organizations deal with diverse workforce. In the 21st century, when the world is emerging as global town, organizations prefer to acquire competitive advantage through diverse workforce. Organization may improve their performance using these influential traits of diverse workforce.

1.1 Personality Traits

Individual's personality can help to better understand a particular person and assist to amplify their strengths and overcome their weaknesses. Recognizing the personality traits of an employee working in the organization is the first step in successfully reaching to their goals. There are many different theories and models on personality traits, like MBTI Model and Big Five Model. MBTI Model (Myers-Briggs Type Indicator) consists of four major aspects such as Introversion/ Extroversion, Intuition/ Sensing, Thinker/ feeling, Perceiving/ judging. MBTI Model is based on 'Either' 'or' concept e.g. A person can be either introvert or extrovert at a time but cannot be both in a particular time.

In fact, Big Five Model comprises of five factors; Openness to experience (fascinated with novelty, wide imagination) Conscientiousness (well organized), Extroversion (sociable and talkative), Agreeableness (cooperative, empathetic, soft-hearted), Neuroticism (negative emotions, depressed, anxious). It is considered to be an accurate and most used personality scale that is normally used by organizations and in psychological research. The Big five model assists the businessmen in predicting the behaviour of employees at workplace. According to their preferences, Organizations use the MBTI and Big Five Model to identify workers" personality traits and keep them motivated even in the period of COVID-19.

1.2 Relevance of Big Five Model in Present Scenario

Big five model is also known as OCEAN or CANOE Model. Big five model of personality traits helps to effectively measure differences in their personality. Big five model is used to measure a person's most important personality attributes and helps to understand which role suits best to a particular person in an organization. 'Big five' helps to elaborate the personality of an individual. Many studies have been conducted on the Big Five Model of personality traits (OCEAN Model), that how these traits can predict a person's performance at a workplace. If the company leader has a deeper knowledge of Big Five Model of personality traits then it can be utilized to set up a strong relationship between managers and its associates, but if leader does not utilize their personality traits in appropriate manner then it may badly impact on their organization and may result in low productivity and increased absenteeism of workers. Big Five Model is used to maximize the strengths of employees and also find their weaknesses that may lead the organization towards success. Hence, in the period of new normal, it becomes more relevant to understand the concept of personality traits and their effective utilization. Personality traits are the only support system that how they are appropriately used to take the organization towards growth during this difficult time of COVID-19 pandemic. A study conducted by Soto et al. (2013), trace the developmental trend of the Big five traits. Agreeableness and Conscientiousness increase with age and there is no significant trend for extraversion. Socialness decreases and assertiveness increases. Openness to experience and Neuroticism decreases comparatively from adolescence to adult stage.

1.3 Need, Objectives & Methodology

Leader of an organization plays an important role in recognizing the qualities of the workers and their effective utilization. It is also useful in controlling the organization in this era of COVID-19. Owning the workers carrying mix personality traits in an organization imply improved performance over time. The present study describes the relationship between personality traits and workforce diversity. Past studies certify that individuals who are high in openness to experience, extraversion and agreeableness would be more attracted to diverse workplace, whereas individuals high in neuroticism would be less attracted to a diverse workplace. These personality traits help organizations to manage workforce diversity and to accomplish their goals. In uncertain situations (like economic slowdown during pandemic,

natural calamities etc.), it becomes relevant to understand and use the individual personality traits to handle diverse workforce. In such conditions, it becomes more challenging for business leaders to lead the diverse workforce with numerous constraints emerging from volatility in economic environment. This paper addresses the challenges faced by organizations in managing the diverse workforce and how to use personality traits to instil enthusiasm among workers in difficult time. A conceptual framework on the relationship among personality traits (Big Five Model & MBTI), personal values and workforce diversity is proposed at the end. The findings of this study will be useful for the organization development & strategic planning even in the period of new normal. Greater diversity of personality indicates that greater balance of strengths and weaknesses and this is important for any company. This study plays a significant role to handle diverse workforce and use of personality traits in best possible way even in the period of pandemic.

A number of studies(Lall,2020;Anglim,2019;Ali,2019,Ismail,2018;Itam,2019) have been conducted in the past on personality traits, personal values and diverse workforce but are scattered in nature or there is dearth of studies relationship among these variables The present study examine personality traits(Big five model and MBTI Model),personal values and workforce diversity in this leadership scenario of new normal through exploratory research (secondary data analysis).Impact of uncertain conditions on personality and workplace etc. have been taken into consideration.

2. Literature Review

Title of the paper & Journal	Author	Year	Objective	Findings
1.''Personality traits, individual innovativeness and satisfaction with life'' (Journal of Innovation &knowledge)	Ali	2019	How personality traits influence innovativeness of individuals and satisfaction with life perception	Author found strong relationship between the personality traits of an individual, innovativeness and their satisfaction level. Organizations are spending ample resources to promote innovation and productivity between employees. But innovative characteristics also consider the awful traits like Arrogant, manipulative , dramatic, inflexible etc.
2.''Values at work: The impact of personal value in	Arieli, et al.	2020	To describe manager's values affect organization and its members	Personal values play an important role in shaping the behaviour of individual. Stability of values is important predictor of behaviour at various levels of

organization'' (Applied psychology)				organization.
3.''Do psychological diversity climate, HRM practices, and personality traits(Big five) influence multicultural workforce job satisfaction and performance'' (Sage Open)	Doghan, et al.	2019	To better understand the role of psychological diversity climate, HRM practices and personality traits	This study helps to understand how individuals with different personality traits respond to different situations in different cultures.
4.''Predicting employees Attitudes to workplace diversity from personality, values and cognitive ability''(Journal of Research in Personality)	Anglim, et al.	2019	To describe correlation between personality traits, values and cognitive ability	Organizations achieve their diversity goals by selecting, training diverse candidates and improve harmony and respectful relations at work.
5.''Age diversity, director' s personal values, and bank performance'' (International review of financial analysis)	Talavera, et al.	2018	Examining the role of board age and personal values diversities on bank performance	Age diversity is not beneficial to Chinese banks. Age diversity suffers from communication barriers, generate interpersonal frictions and conflicts in the boardroom and ultimately reduce bank performance.
6.''Relationship between personality traits, cultural intelligence and intercultural communication competence'' (Procedia-Social &	Yeke, et al.	2016	To establish relationship among personality traits ,cultural intelligence and Intercultural communication competence	Cultural competence is positively related with intercultural communication on competence. Employees should satisfy at their workplace only then they can contribute to missions of organization. Proper management of cultural diversity, understanding personality traits and intercultural communication is important to successfully achieving

Behavioral Sciences)				organizational goals.
7.''Relationship between values and workplace: an exploratory analysis'' (Emerald Insight)	Singh, et al.	2011	To explore the impact of value preferences on workplace	It focused only on the perceptions of prospective employees. In addition to this, knowing the employer's perspective about the evaluation of the workplace attributes may provide a different perspective of the meaning of workplace.
8.''The relationship between Big five personality traits and counterproductive work behaviour'' (Science Publishing Corporation)	Ismail, et al.	2018	To examine the relationship between Big five personality traits and k among employees in the manufacturing industry	This study depicts a strong relation between all big five personality traits and CWB. Unproductive activity destructs the goal of organization and it becomes harmful to organization because it directly influences the functioning of organization
9.''Evaluation of Myers-Briggs personality traits in offices and its effects on productivity of employees an empirical study'' (International journal of Current Research and Review)	Poursafar, et al.	2015	To identify employee's personality type in Architect offices and its influence	Employees have different interests and concern in their work environment and these differences would have positive and negative effects on productivity of an organization. It is recommended to consider individual's personality types and their inner characteristics.
10.''The role of personality and diverse workplace preferences'' (The UCI Undergraduate Research Journal)	Tinker	2018	How individual's attitude affected by diversity in a workplace	Organizations are becoming more diverse by employing diverse workforce and representing minority at workplace. There is less positivity when there is low representation of minorities and comparatively more positivity when there is high representation of minorities.
11.''Personality traits and performance'' (www.researchgate.net)	Khan	2017	Focus on association of personality traits and performance parameters	There is positive relationship between personality and job performance , there is no factual evidence for this relationship in leadership/ supervisory position. One of the personality traits

				Neuroticism is correlated with negative behaviour in terms of performance of an individual.
12.''The impact of workplace diversity on organization'' (Review of Integrative Business & Economics)	Dike	2013	To examine the different ways of dealing with workplace diversify and to provide guidelines for diversity management in small and big companies.	Workplace diversity has contributed more to productivity. Big companies are more passionate about diversifying their workforce but small companies see it as a choice .When the cost burden is high, the small companies find it difficult to manage.
13.''Diversity and Inclusion Management: A focus on employees engagement'' (Management Techniques for a Diverse and Cross-Cultural Workforce)	Itam, et al.	2019	Implementation of unique and innovative diversity at workplace	Organization culture should be respectful, unique, healthy, flexible, open and active to encourage employee's commitment and engagement.
14.''Diversity in the workplace: benefits, challenges and required management tools'' t (http://edis.ifas.ufl.edu)	Farnsworth, et al.	2008	To help managers effectively manage diverse workforce	Organizations need to learn how to be successful with diverse cultures and also critical feedback for learning about mistakes and successes. Organizations should be prepared to challenges faced within diverse workforce.
15.''Impact on personality on attitudes towards diversity and diversity initiative'' (http://scholarworks.wm.edu)	Lall	2020	Understand the impact of personality on diversity attitudes in the workplace	Personality impacts on individual's general attitude toward diversity and diversity initiatives. It depends upon organization how distinct organizations implement diversity initiatives. It may be possible that most individuals in an organization may not support diversity in the workplace.

Personality Traits and Organizational Performance

Khan (2017) conducted a study to understand the previous literature of personality traits, performance parameters and their relationship. It revealed that, one of the personality traits Conscientiousness predict the performance of an individual and other three personality traits Extraversion, Openness to Experience and Agreeableness are not a predictor of work performance, but helps to predict prosperity in specific work. Personality traits are related with

behaviour of an individual which shows that childhood personality traits predict adult career achievements.

Talavera, et al. (2018) finds that less diverse workforce provides more precious information and enhances performance of a bank. Age diversity is negatively related with Bank performance. If Directors are diversified then it becomes more risky to the organization and makes impact on wealth of a Bank and conflicts arise in decision making process. If decisions are not properly taken then it effects functioning and profitability of Banks. This study shows that age diversity in Chinese Banks has an important and negative impact on performance of banks. Such type of age diversity is not favourable to Chinese Banks, because age diversity leads to communication barriers and create conflicts in the workplace which causes reducing bank performance. Findings of this study recommended that, performance of banks can be improved if banks prefer to employ directors of similar ages and consider less generation gap between board members.

Personality Traits, Personal values and Workforce Diversity

As per Arieli, et al. (2020), personal values play a pivotal role in shaping the behaviour of an individual at workplace. It shows that relationship of personal values and behaviour at workplace. Personal values should be stable if these values remain stable then it become accurate predictor of behaviour at various level of organization. Personal values generate positive impact on behaviour of individual working in an organization.

Dike (2013) examined various tools for managing workplace diversity and also showed that two big companies Ford Motors and Coca Cola educate their employees on importance of diversity and also provide guidance on personal values. Both companies believe that, in this global village survival of companies requires diversity in their companies. Diversity in companies becomes successful only then if higher management supports diversity management. Diversity has both negative and positive impact on the concerns but higher authorities have to figure out best strategy for effective management of diversity at workplace.

As per Doghan, et al. (2019), different personality traits react to different situations in different cultures. Personality traits affect work performance and satisfaction level of human resources at workplace. All employees at workplace treated equally having different characteristics such as culture, gender, age, ethics etc. Training is effective way to manage diverse workforce. While selecting employees it should be considered that employees should

posses personality traits; agreeableness, extroversion, emotional stability etc. because if they have these traits then they become able to face challenges and overcome the problems.

Singh, et al. (2011) finds that knowledge and personal values of potential employees are very crucial for an organization. While recruiting employees it must be noted that employee's perceptions must match to psychological environment prevailing in that particular organization. Multinational companies examine the cultural differences and values because it creates impact on business when companies work at global level. Personal values of an individual influences their perceptions and behaviour. The features of employees must match to work environment then it provides fruitful results.

Workforce Diversity; Benefits and Productivity

Itam, et al. (2019), denotes that diversity and inclusion widely use organizational resources. If there is proper communication system between members of organization, then it creates better work culture. An organization which takes initiatives of diversity management and its inclusion at workplace then it leads to better productivity in the organization. If structure of organization is flexible, unique and open then employees are encouraged to face challenges in diverse organization. This study explains that how organizations grow and differences of opinions among employees are managed.

Ismail, et al (2018) finds that all traits of personality having impact on counterproductive work behaviour. Agreeableness and Neuroticism personality traits negatively influences counterproductive work behaviour .In an organization, employees are responsible to increase efficiency and profitability of a concern but counterproductive work behaviour harm the organization. Counterproductive work behaviour considers abuse, theft, destruction etc. which badly influences the functioning of an organization.
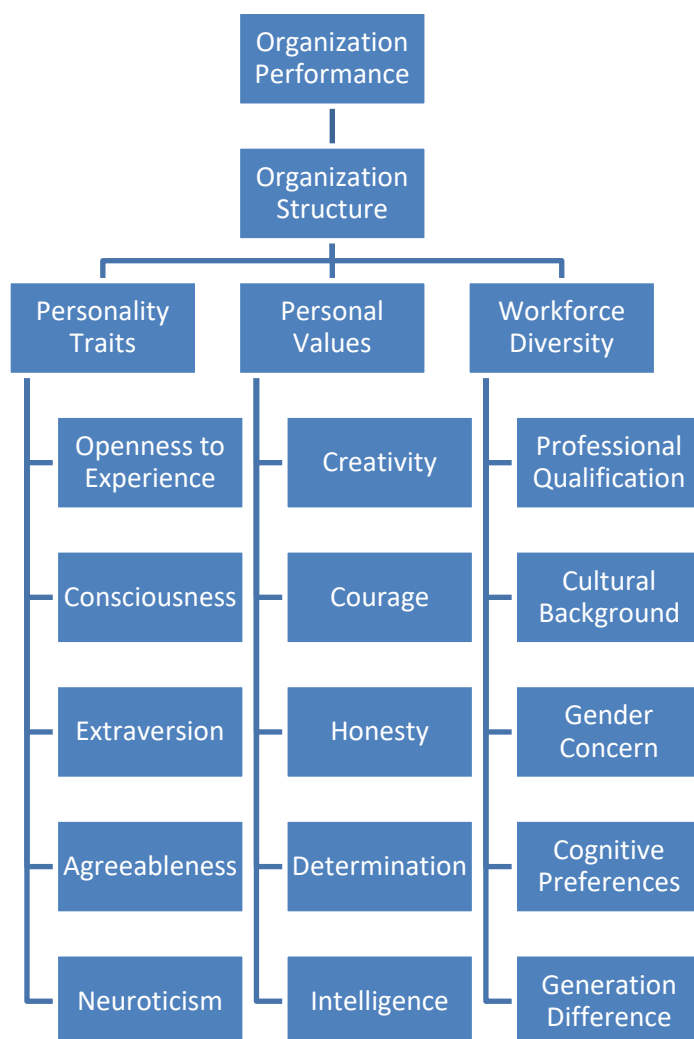
Fig 1: Conceptual Framework of Personality Traits, Personal Values and Workforce Diversity (Source: The Authors)

3. Discussion

Organization performance depends upon organization structure. Structure of the organization includes personality traits (Big five model), personal values, and diverse workforce. Personality traits consists five factors such as openness to experience, consciousness, extraversion, agreeableness, neuroticism. Personality traits influence individual's character, pattern of thoughts, behaviour and workplace. These traits are one of the ways which can be utilized to accomplish organizational goals. Personal values consist of factors such as intelligence, integrity, sincerity, kindness, courage, determination, learning, adventure, honesty etc. Personal value helps to brighten the personality of the employee. When personal values are used to make decisions then it becomes deliberate choice to focus on what is important to

organization. Personal values help to react in difficult situations and make decisions. Workforce diversity plays an important role in any organization. Organizations with diverse workforce employ individuals with different characteristics; gender, race, religion, cultural background etc. Organizations may take advantage of diverse workforce because it provides benefits like; variety of different perspectives, faster problem solving, better company reputation, improves company culture, increased productivity, better decision making, improves creativity and innovation, increased profits etc. Considering diversity within organization is crucial because it creates atmosphere that suggestions, ideas from diverse workforce is equally important. As per Saxena (2014), workforce diversity has its impact on productivity of an organization. Proper management of diverse workforce is big challenge for management; if it is not properly managed then it gives disastrous results. Organization dealing with diverse workforce should have common language at workplace. Parks (2014) finds that meta-analysis establish relationship between personality traits and personal values. Openness to experience and agreeableness are related with personal values, conscientiousness and extraversion also have relation with personal values but neuroticism is not associated with values. Personality traits and personal values describe the stable behaviour of an individual and their thoughts and emotions.

4. Implications

The present study aims to examine the relationship of personality traits, personal values and diverse workforce. Influence of personality traits and personal values on diverse workforce at workplace has been explored. Personality Traits and personal values are related to personal growth of an individual working in an organization. Organization prefer Big five model over MBTI model in judging the personality of an employee. Big five model had significant influence on group performance and diverse workforce. Diverse workforce can be properly managed if leader uses personal values and big five model in right direction. The results are also important because there are many benefits in creating diverse workforce and using personality traits and personal values in any organization. Angling found that organization achieves their diversity goals by selecting and providing training to diverse employees and improve harmony at workplace by using their personality traits and personal values. Talavera argues that more diverse force provides more valuable information and enhances performance of a firm. When various studies are examined then it is found that use of personality traits and personal values are

more important and creating diversity within organization is crucial because it helps organizations to grow and develop. So, this study shows the strong relation between personal values, personality traits and diverse workforce.

5. Observations

The present study examines the relationship among personality traits, personal values and diverse workforce. Based on extensive exploratory research the following observations will be of immense value in successful leadership during new normal and enhancing organizational effectiveness.

1) There is communication gap between management and its workers and this gap influences their professional relationship. Inadequate information about personality traits and personal values further aggravates the issue. Communication gap leads to serious issues between them and management is not able to find their inherent traits and values.

2) MBTI Model is another theory for predicting the behaviour of individuals at their workplace. MBTI Model plays an important role in predicting the behaviour of individuals at their workplace. Unfortunately, this model is not used aggressively and very few studies examined the workforce diversity from MBTI perspective. But it is not used by organizations to judging the personalities of individuals because it is considered old theory and also there is lack of studies conducted on MBTI Model and its relationship with diverse workforce

3) There is lack of adequate skill and knowledge among managers and leaders that how to take maximum advantage of diverse workforce. Skill and knowledge of managers and leaders is very crucial because it results in more productivity, better utilization of resources, growth and expansion, better reputation of concern etc.

4) There is lack of participation of workers in making plans and giving suggestions. Consequently, the inner personality traits of employees are not used by the organization for organizational development. If the ideas of employees are not considered, then they will not able to do their work in effective manner. Participation of employees is very important for making good decisions. If management does not involve employees in making decisions and plans then employees feel inferior and consider negatively that they are not part of organization. Hence, they are not able to do their work in full efficiency.

5) There is lack of training and motivational programmes for employees in improving their skill and efficiency. Training and motivational programmes are necessary to improve their knowledge and thinking ability. Training leads to innovativeness in processes of organization. Motivational programmes create zeal among workers to do their work.

Conclusion

With the increasing competition and constrained resources, retention of good employees becomes imperative for the organization. The company with focussed vision understands the significance of diverse workforce, the personality traits and personal values of such diverse workforce. The present study explores the significance of personality traits (Big five model and MBTI model) and personal values (creativity, courage, determination, honesty) for an organization managing diverse workforce. The present study acts as a road map in organizational development and strategic planning for organization managing diverse workforce in new normal.

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THE PRICE DISCOVERY FOR THE CROSS-LISTED STOCK OF HDFC BANK LIMITED LISTED ON THE US AND INDIAN STOCK MARKET

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Abstract

The aim of this study is to examine the process of price discovery between the underlying stock of HDFC Bank Limited listed on the Bombay Stock Exchange (BSE) in India and its ADR cross-listed on the New York Stock Exchange (NYSE) in USA. Various financial econometric models like Augmented Dickey Fuller (ADF) test, Johansen Co-integration test, Vector Error Correction Model (VECM), Wald test and Variance Decomposition are employed to analyze the long term relationship and causality between the cross-listed prices. The results reveal a long run relationship between the ADR price and the underlying share price of HDFC Bank Limited. Both the prices are found to granger cause each other in short run. However, the prices at BSE are less significant in granger causing the prices at NYSE. The results of variance decomposition indicate that the prices at both markets influence their own prices whereas they plays a weak role in influencing the prices of each other. This shows that price discovery for HDFC's cross-listed stock takes place at the market where they are listed leaving no or less possibility of arbitrage opportunity.

Keywords: HDFC bank**,** ADR, cross- listing, stationarity, cointegration, VECM, Variance decomposition.

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1. Introduction

Since the beginning of 21st century increased globalization has brought the world financial markets closer to each other. Apart from multinational companies even the companies from emerging countries have started tapping global capital markets for raising capital. This has led to strong integration between the world markets.

After the introduction of reforms in the Indian financial sector, Indian stock market has since joined the integration process. The inflow of funds through foreign institutional investors (FII) has transformed the style of functioning of the Indian stock market. This has led to an important linkage between the capital and the forex markets. Also, the Indian corporate have area now allowed to tap the global market with global depository receipt (GDR), American depository receipt (ADR) and foreign currency convertible bond (FCCB) since 1993. Even the world-class facilities provided by the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) have unleashed competitive forces, prompting other exchanges to go for automation and screen based trading. All these have lead to an era of integration and globalization of the previously insulated and segmented Indian stock market.

When a stock is listed and traded in more than one market, the prices in each market is worth examining. Since the stock prices trading at two different markets are based on the same underlying asset, they should be the same due to the law of one price thereby leaving no opportunity for arbitrage. However, due to the presence of noise, the price of the same stock may deviate across markets. (Baillie et al., 2002) found that arbitrage activities keep the price in each market from drifting away from the implicit efficient price. The implicit price is determined by the news that affects the prices of all market permanently. The present research aims to investigate the existence of implicit efficient price in the price-discovery process. Specifically, the study aims at finding the linkage between the prices of HDFC Bank's ADR listed on NYSE and its underlying stock on BSE. It seeks to get answers to specific questions like If there is any long term relationship between the ADR and the underlying stock? If there exists any causal

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relationship between the two stock prices? If the price discovery of individual stock is driven by itself or is driven by the cross- listed stock from other market?

2. Review of Literature

The co-movement of the Indian stock market with the international markets has evinced considerable interest and evoked contesting hypotheses behind the market phenomenon (Hansda & Ray, 2002). To verify the presence of law of one price, (Rajib, 2011) conducted a study on Infosys ADR and the underlying shares price in India. The analysis reveals presence of significant price difference between the two stock prices, which indicates that the two markets under study are not integrated. A similar study was conducted by (Madhavan & Ray, 2014) and they concluded that there is a strong association and a bit of similarity between the GDR prices and their underlying stocks. The price and volatility linkages between London GDRs and underlying stock are qualitatively similar to that of Luxembourg GDRs and underlying stock. Such findings reflect the stock-exchange-invariant nature of law of one price, which indicates a less significant impact of foreign stock exchange per se, when it comes to price dynamics of dually-listed Indian stocks.

A study by (Leung & Kang, 2016) reveals that ADRs intraday returns are driven by the U.S. market sentiments and overnight returns are driven by home market sentiments. (Hansda & Ray, 2002) concluded that the quotes of both Indian and US stock the markets share not only a stock-wise bi-directional causality but are also efficient in quick transmission of the pricing information across the dually listed stocks, limiting the scope for arbitrage-profit out of any prior information on the closing market. The study conducted by (Kumar) revealed that most of the Indian firms recorded decline in volatilities of underlying domestic shares after the listing of GDR on foreign exchange. To study the impact of Foreign Exchange Rate, (Bhatnagar & Khan, 2015) analyzed that forex returns has significant relation on ADR Return while ADR Returns did not Granger Cause Forex return (Geeta Duppati & Scrimgeour, 2017) concluded that majority of cross-listed stocks from US and Chinese markets are not co-integrated and that US market leads

the Chinese market in short run. They also concluded that information flow is stronger from the NYSE to SSE than the reverse way in the short run.

A study of price mechanism for Indian Depository Receipt (IDR) and underlying stock of Standard Chartered PLC was done by (Sriram, 2015). The author could not find any long term relationship between IDR and the respective underlying share price of the company. His another conclusion was that the price discovery happens in the respective markets and investors' can study their respective markets for appropriate strategies. (Bora & Kumar, 2017) conducted research on Long Term Dynamics of Indian ADRs Market to investigate the nature of the return generating process of the Indian ADRs market and the results revealed that returns series of Indian ADRs market do not exhibit random walk behavior and rather depict both nonlinear behavior and persistence.

(Eichle & Rövekamp, 2016) conducted a study to identify the economic fundamentals that drive the currency risk perceptions of ADR investors. 831 ADRs located in 23 emerging markets were chosen for study. Their conclusion was deterioration in the fiscal and current account balance, as well as higher inflation, increases currency risk as anticipated by ADR investors. Also, fundamental variables have a significant impact on currency risk, particularly in countries with managed exchange rates, low levels of foreign exchange reserves, and poor credit ratings.

To find the effect of GDR returns on the underlying securities returns or vice-versa, 35 GDRs of Indian companies for a period of 2009-10 were chosen by (Chopade & Sisodia, 2012). They concluded that the returns from the underlying securities affect the returns of the respective GDRs but not vice-versa. The study also reveals that the informational factors of the home market have more prominent effect on the GDR returns than the host market. (Tripathy & Jha) studied the impact of cross listing of ADRs on the Indian stock market using 9 ADR issuing Indian companies for a period of June 2004 to July 2009. Their conclusion is ADR listings have no tangible benefit impact to the local shareholders. This means that diversification into foreign equities provide returns similar to the market. Considering the additional risk associated with ADRs such as currency risk, the country's economy and asymmetric information problems, the performance may not provide adequate rates of return to satisfy some investors.

3. Research Methodology

3.1 Data and Period of Study

Table 1 shows the detail of ADR issue of HDFC Bank used in the study. As there are no overlapping trading hours between the NYSE and the BSE, daily data is used. The daily adjusted closing prices are extracted from yahoo finance and the period of study is from effective listing date of ADR, i.e. 25-07-2001 to 31-08-2020. A total of 4563 observations are used for the study. As the prices of ADR are quoted in US Dollar, they are converted into Rupees using the corresponding daily exchange rate of USD-INR for the sake of comparison. The data for USD-INR exchange rate is obtained from the Reserve Bank of India website. The natural logarithms of daily closing prices are taken for the purpose of analysis.

Table1: Details of ADRs Employed in the Study

DR Issue	Symbol	Exchange	Industry	Ratio DR: ORD	Eff. Date
HDFC Bank Limited	HDB	NYSE	Banks	1:3	Jul 25, 2001

3.2 Error Correction model

ECM is very useful time series modeling technique to examine both the short run and long run dynamics of the series if the non-stationary time series are integrated of first order , I(1) and found to be cointegrated. Conventional ECM for cointegrated series is stated as

$$\Delta y_t = \beta_0 + \sum_{i=1}^{n} \beta_i \Delta y_{t-1} + \sum_{i=0}^{n} \delta_i \Delta x_{t-1} + \varphi z_{t-1} + \mu_t \tag{1}$$

Where z is the Error Correction Term (ECT) and is defined as

$$z_{t-1} = ECT_{t-1} = y_{t-1} - \beta_0 - \beta_1 X_{t-1} \tag{2}$$

ECT is the variable of lagged OLS residuals from the long run cointegrating equation and measures the rate of convergence to the long run equilibrium. The coefficient (φ) of ECT is the speed of adjustment and measures the speed at which dependent variable returns to equilibrium after a change in explanatory variable.

Here, ECM approach is used to investigate both long run and short run dynamics between the prices of Dr. Reddy's ADR and its underlying stock. The models under consideration are

$$\Delta P_t^{BSE} = \beta_0^{BSE} + \sum_{i=1}^{n} \beta_i \Delta P_{t-1}^{BSE} + \sum_{i=0}^{n} \delta_i \Delta P_{t-1}^{NYSE} + \varphi^{BSE} z_{t-1} + \mu_t^{BSE} \tag{3}$$

$$\Delta P_t^{NYSE} = \beta_0^{NYSE} + \sum_{i=1}^{n} \beta_i \Delta P_{t-1}^{NYSE} + \sum_{i=0}^{n} \delta_i \Delta P_{t-1}^{BSE} + \varphi^{NYSE} z_{t-1} + \mu_t^{NYSE} \tag{4}$$

3.3 Wald Test

The Wald test also called the Wald Chi-Squared Test is a method to find out if explanatory variables in a model are significant, i.e. if the short run coefficients of explanatory variables add something to the model. Here, it is used to test if the ADR price at NYSE is powerful and effective in explaining the movement of the underlying stock price at BSE and vice versa.

3.4 Variance decomposition

Variance decomposition provides a different method of depicting the system dynamics. It helps in determining how much of the variability in dependent variable is lagged by its own variance. In addition, it also shows which of the independent variables is "stronger" in explaining the variability in the dependent variable over time. Here, variance decomposition is used to find how much variability in ADR price at NYSE is lagged by its own variance and also due to variability in underlying stock price at BSE. The same is also tested for the price series when interchanged.

4. Findings and Discussions

4.1 Descriptive Statistics

Table 2 depicts the results of descriptive statistics. It is revealed that there is no much fluctuation in the closing price of both the series.

Table 2: Descriptive Statistics		
Variable	**HDB(BSE)**	**HDB(NYSE)**
Mean	9.603683	5.294862
Std. Dev.	0.755323	1.299694
Maximum	9.780919	5.418130
Minimum	10.64430	7.335461
Skewness	-0.762260	-0.213723
Kurtosis	2.510177	1.931166
Jarque-Bera	488.6726	252.5449
Probability	0.000000	0.000000
Observations	4574	4574

Note: The table reports natural log of daily adjusted closing prices. ADR prices are converted in terms of Rupees. NYSE= New York Stock Exchange. BSE= Bombay Stock Exchange.

Negative skewness for both the series indicate a relatively long left tail when compared to the right one. Kurtosis values of < 3 indicate that both the series are flat curved and the distribution is platykurtic. The high value of Jarque- Bera statistic and 0.000 probability value (< 0.1) confirms that both the price series are not normally distributed.

Figure 1 presents the price plots for HDFC Bank's ADR at NYSE and underlying share price at BSE. It indicates that prices are moving in same direction and there is possibility of co-integration between them.

Figure 1: Price Plots for Dr. Reddy's in NYSE and BSE
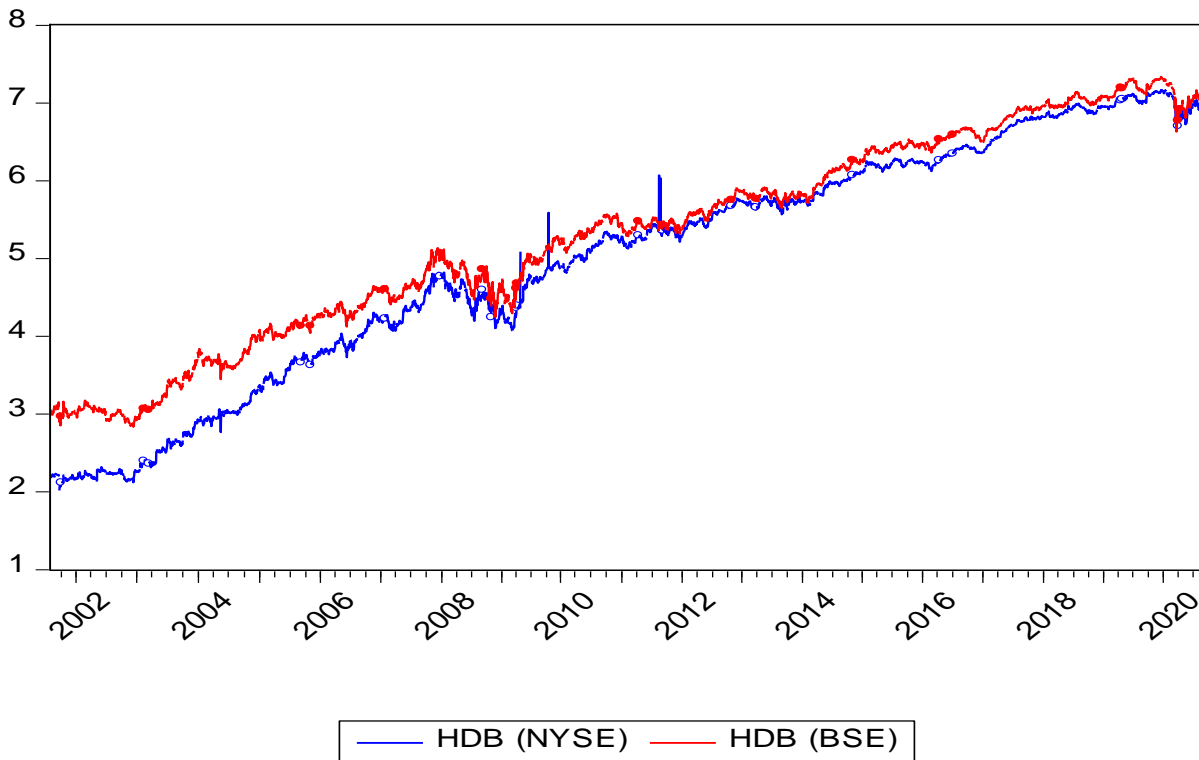
4.2 Stationarity Test

To check if the two price series are stationary or not, the Augment Dickey- Fuller test is performed. The results of the test are reported in Table 3. Both price series are found to have unit root at level for all the three equations (with constant; with constant and trend; and with no constant and no trend) and hence null hypothesis of unit root is accepted. However, the data becomes stationary at first difference and is statistically significant. In general it is concluded that both price series are I(1) processes at 1% significance level. The optimal lag length is chosen based on Akaike Information Criterion (AIC) approach.

<div align="center">

Table 3: ADF Unit Root Test for HDB(NYSE) and HDB(BSE)

</div>

	with Constant		with Constant and Trend		with no Constant & no Trend	
	t- statistic	probability	t- statistic	probability	t- statistic	probability
A) ADF test in levels						
BSE	-1.411550	0.5781	-2.667637	0.2503	2.726568	0.9986
NYSE	-1.177308	0.6864	-2.602973	0.2790	2.126233	0.9924
B) ADF test at first differences						
BSE	-10.29821	0.0000*	-10.34379	0.0000*	-9.872852	0.0000*
NYSE	-17.19632	0.0000*	-17.20701	0.0000*	-17.03353	0.0000*

*significant at 1% level

4.3 Johansen Cointegration Test

Because the price series under study are of the same security (i.e. HDFC Bank Limited) trading at two different markets, we expect the two prices to be cointegrated and having an equilibrium relationship in long term. Here, Johansen cointegration test is conducted to find existence of cointegrating relationship between the HDFC Bank's ADR and its underlying share price.

<div align="center">

Table 4: Johansen Cointegration Test

</div>

Hypothesized No. of CE(s)	Trace Test			Eigenvalue Test		
	Trace Statistic	Critical value	p-value	Max- Eigen Statistic	Critical value	p-value
$r = 0$	17.96788	15.49471	0.0208	16.79804	14.26460	0.0195
$r \leq 1$	1.169846	3.841466	0.2794	1.169846	2.53215	0.3511

* denotes rejection of the hypothesis at the 0.1 level
**MacKinnon-Haug-Michelis (1999) p-values

The optimal number of lags in the model is 4 and is determined by the Akaike Information Criterion (AIC). The trace statistic for null hypothesis ($r = 0$) is 17.96788, greater than the critical value of 15.49471. Therefore, we reject the null of no cointegration in favor of alternative hypothesis of one cointegrating vector. The second test is conducted to check for $r \leq 1$ i.e. existence of atleast one cointegrating vector. The trace statistic for the same is 1.169846 lower than the critical value of 3.841466. Hence we cannot reject the null and conclude that there

is atleast one cointegrated vector. The results are same when max-eigen value test is applied instead of trace test.

4.4 Error Correction Model (ECM)

As the price series are found to be cointegrated, we can now estimate an Error Correction Model (ECM) for equations (3) and (4) as below

$$\Delta P_t^{BSE} = -0.0548\, ECT_{t-1} - 0.5657\Delta P_{t-1}^{BSE} - 0.36313\, \Delta P_{t-2}^{BSE} \tag{5}$$
$$- 0.1812\, \Delta P_{t-3}^{BSE} + 0.4954\, \Delta P_{t-1}^{NYSE} + 0.2077\, \Delta P_{t-2}^{NYSE}$$
$$+ 0.1475\, \Delta P_{t-3}^{NYSE} + 0.0010$$

$$ECT_{t-1} = 1.000 P_{t-1}^{BSE} - 0.97978\, P_{t-1}^{NYSE} + 0.01232$$

$$\Delta P_t^{NYSE} = -0.0175\, ECT_{t-1} - 0.1119\, \Delta P_{t-1}^{NYSE} - 0.0101\, \Delta P_{t-2}^{NYSE} \tag{6}$$
$$- 0.0606\, \Delta P_{t-3}^{NYSE} + 0.0076\, \Delta P_{t-1}^{BSE} + 0.0047\, \Delta P_{t-2}^{BSE}$$
$$+ 0.0057\, \Delta P_{t-3}^{BSE} + 0.0009$$

$$ECT_{t-1} = 1.000 P_{t-1}^{NYSE} - 1.0206\, P_{t-1}^{NYSE} - 0.0126$$

Table 5 depicts the estimated values of the coefficients along with their p-values for both the equations (5) and (6). The error correction coefficient (φ) is -0.0548 and -0.0175 for equations (5) and (6) respectively. This means that around 5.48% of departure in HDB(BSE) from long run equilibrium is corrected by short run adjustment in each period while it is just 1.75% in HDB(NYSE). This indicates that both price series granger causes each other but the causal effect of HDB(BSE) is little bit more than that of HDB(NYSE). The p-values for both the coefficients are also found to be statistically significant at 1% significance level.

In eq (5), the short run coefficients of the lagged values of HDB(BSE) and HDB(NYSE) are found to be statistically significant at 5% level. While in eq (6), the coefficients of HDB(BSE) are statistically insignificant at 5% level. This indicates that the HDB(BSE) prices do not affect the HDB(NYSE) significantly.

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Table 5: Estimated coefficients for ECM eq (5) and (6)

Error Correction	D(HDB_BSE)	D(HDB_NYSE)
CointEq (φ)	-0.054847	-0.017537
	(0.0000)	(0.0235)
D(HDB_BSE(-1))	-0.565717	0.007604
	(0.0000)	(0.6295)
D(HDB_BSE(-2))	-0.363133	0.004743
	(0.0000)	(0.7774)
D(HDB_BSE(-3))	-0.181190	0.005722
	(0.0000)	(0.6932)
D(HDB_NYSE(-1))	0.495390	-0.111921
	(0.0000)	(0.0000)
D(HDB_NYSE(-2))	0.207709	-0.010130
	(0.0000)	(0.2676)
D(HDB_NYSE(-3))	0.111967	-0.060567
	(0.0000)	(0.0075)
C (μ)	0.000967	0.000861
	(0.0921)	(0.0307)

* p-values in parentheses

4.5 Wald Test

It is conducted to see if short run coefficients of explanatory variables granger cause dependent variable.

H_o: Explanatory variable granger cause dependent variable in short run.

H_a: H_o is not true.

The results reported in Table 6 show that the p-value of chi-square is statistically significant and hence null hypothesis is rejected. This indicates that both the price series granger cause each other in short run. However, it is seen that p-value of eq (6) is near to 0.05, which indicates that dependent variable HDB(BSE) does not granger cause HDB(NYSE) significantly in short run.

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Table 6: Wald Test

	Chi-square	Probability
Eq (5)	976.4806	0.0000
Eq (6)	23.18772	0.0335

4.6 Diagnostic Tests

Following diagnostic tests are employed to check the reliability of the tested models.

Breusch-Godfrey Serial Correlation LM Test

It is used to check if the tested model is free from serial correlation.

H_o: There is no serial correlation in residuals

H_a: H_o is not true.

Table 7: Breusch-Godfrey Serial Correlation LM Test

	Obs R-squared	Prob. Chi-square
Eq (5)	397.4057	0.3254
Eq (6)	14.56829	0.5067

The p-value of 32.54% and 50.67% for equation (5) and (6) respectively are above the significance level of 5%. Thus, we fail to reject H_o and hence conclude that the tested models are free from serial correlation in residuals

Jarque-Bera Normality test

H_o: The residuals are not normally distributed

H_a: H_o is not true.

The high value of Jarque- Bera statistic and p-value of 0.0000 in table 8 indicate that the residuals are not normally distributed. Wooldridge (2012) pointed out that non- normality of errors is not a serious problem when the sample size is too large.

Table 8: Jarque- Bera Normality test

	Jarque- Bera Statistic	Probability

Eq (5)	76760.55	0.0000
Eq (6)	5761.261	0.0000

ARCH Heteroskedasticity Test

H_o: There is no evidence of herteroskedasticity

H_a: H_o is not true.

Table 9 reports the results of ARCH heteroskedasticity. 0.3978 and 0.5241 p- values of chi- square for eq (5) and eq (6) respectively is higher than the significance level of 5% and we fail to reject H_o. Hence, it is concluded that there is no heteroskedasticity in residuals. Thus, the residuals from the tested VECM models are homoskedastic and not heteroskedastic.

Table 9: ARCH Heteroskedasticity Test

	Obs R-squared	**Prob. Chi-square**
Eq (5)	82.77661	0.3978
Eq (6)	709.2090	0.5241

4.7 Variance decomposition

Table 10a reports the results for variance decomposition analysis on HDB(BSE). We analyze that in short run 100% forecast error variance in HDB(BSE) is explained by itself while contribution from HDB(NYSE) is strongly exogenous, i.e. the latter has a very weak influence on the HDB(BSE). With lapse of time, i.e.as we move from period (here, day) 1 to 10, it can be seen that the influence of HDB(BSE) prices is strong around 81% on itself while the contribution from HDB(NYSE) prices is gradually increasing but not too much.

Table 10a: Variance Decomposition of HDB(BSE)

Period	S.E.	LNP_BSE	LNP_NYSE
1	0.027457	100.0000	0.000000
2	0.032180	90.32624	9.673759
3	0.035145	87.61402	12.38598
4	0.038462	85.47468	14.52532
5	0.041825	85.56600	14.43400
6	0.044620	84.32479	15.67521
7	0.047143	83.43951	16.56049

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8	0.049617	82.63195	17.36805
9	0.051965	82.00352	17.99648
10	0.054171	81.29636	18.70364

Table 10b: Variance Decomposition of HDB(NYSE)

Period	S.E.	LNP_BSE	LNP_NYSE
1	0.019056	8.516662	91.48334
2	0.025409	9.546839	90.45316
3	0.030515	10.05389	89.94611
4	0.034322	10.51908	89.48092
5	0.037841	10.83574	89.16426
6	0.041014	11.19769	88.80231
7	0.043970	11.54011	88.45989
8	0.046710	11.87926	88.12074
9	0.049287	12.20479	87.79521
10	0.051719	12.52975	87.47025

The results of variance decomposition on HDB(NYSE) are shown in table 10b. In period 1, the influence of HDB(NYSE) is 91.48% on itself and that of HDB(BSE) is 8.51% on HDB(NYSE). This shows that there is a little influence (around 8.51%) of HDB(BSE) on HDB(NYSE) in short run. As we move from period 1 to 10, the influence of HDB(BSE) is gradually increasing on HDB(NYSE) but not significantly, while the influence of HDB(NYSE) is quite significant, around 87%, on itself. Thus, it can be interpreted that both the prices-HDB(BSE) and HDB(NYSE) has strong influence on themselves and they are not influencing each other significantly in short run.

5. Conclusion

The present study is conducted to examine the existence of any relationship and the process of price discovery between the ADR price and its underlying stock in India for HDFC Bank Limited. In order to test the long and short run relationship, VECM is applied. The daily prices for both the stocks are taken for a period of 20 years from 25-07-2001 to 31-08-2020. Since the ADR prices are quoted in US Dollars, they are converted into rupees before comparison. In Econometrics, it is prerequisite for the price series to be stationary. The

application of ADF test reveals that two price series are stationary at first difference, .i.e. both the series are I(1) processes. Then the Johansen cointegration test is applied to check for cointegrating relationship and the results reveal one cointegrating relationship between the HDB(NYSE) and HDB(BSE) price series.

As the two series are cointegrated, it is possible to apply VECM. The results exhibit that the error correction coefficient (ECT) for both HDB(NYSE) and HDB(BSE) are statistically significant and indicate adjustments towards long run equilibrium in case of any disequilibrium situation. However, the adjustment coefficient of HDB(NYSE) is only 1.75% indicating weak contribution of HDB(BSE) in adjustment to long equilibrium for HDB(NYSE). The results of Wald Test establish that the short run causality runs in both the directions i.e. both the price series affect each other in short run. However, prices at BSE are found to be less significant in granger causing the ADR price at NYSE. Lastly, one of the important revelations of this study is that both the prices are influenced by their own prices in short run and the prices of other market are found to be less significant in influencing each other. Hence, we conclude that for the cross-listed stock of HDFC Bank, price discovery takes place at the market where the security is listed and hence there is no possibility of arbitrage opportunity here. The same research if extended to study the price discovery for all the dually listed stocks from India then the results would give a more clear possibility of arbitrage opportunity to exist.

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CHAPTER 23

IMPACT OF MOBILE TECHNOLOGY IN REDEFINING CONSUMER DECISION JOURNEY - AN EMPIRICAL ANALYSIS

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Abstract

The use of Mobile technology has almost become inevitable in our day to day life. Mobile retailing has emerged as one of the fastest-growing segment of the retail sector in India. The advancements of mobile technology are facilitating shoppers with an option to buy anywhere and at any time, including in-store. To ensure a better online shopping experience, better deals, downloading of coupons, home delivery or BOPIS services, retailers have launched mobile apps thereby made it very convenient for the public to shop and buy online.

The research paper aims to analyze the role and impact of mobile technology in redefining consumer decision journey, across generations with an emphasis on its influence over consumer experience of mobile shopping. To accomplish the aim and objective, a well-structured questionnaire is designed and is used as a source for the primary data, collected from 3 demographics: Millennial (ages 18 – 34), Gen X ers (ages 35 – 54) and Baby boomers (ages 55 and above) with a sample of 300 respondents from Hyderabad.

The gathered data, analyzed with statistical interference, provided us with valuable findings. Few points are suggested based on the findings inferred from the study. The study emphasizes on the need for enhancing the competencies of retail business people, by ably integrating mobile shopping into a multi layered Omni channel concept to ensure seamless customer shopping experience, as its further scope of study.

Keywords: Retailing, Mobile, Technology, Consumer, Shopping, Decision, Online.

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Introduction

In this millennium, technology advances at faster pace. People would like to have everything in their hand. Now-a-days most of the technologies are supported by mobile phones. Mobile phone

is used in various aspects like geographical locations finding, gaming, listening music, and online education, entertainment, booking tickets, and shopping. E-commerce businesses are developing their online store concentrating on the mobile site as well as mobile apps.

Mobile is fast becoming the most important part of E-commerce and the OMNI Channel experience. To remain competitive, retailers need to do more than just keep up with the status quo. The popularity of M-commerce are reaping rewards, whereas those retailers who haven't yet invested in this area are inevitably missing out on a growing segment of shoppers and a large chunk of potential sales. It's even more important than ever before to keep up trends and set to grow as preferences for convenience increase and mobile technology improves.

Google's algorithm prioritizes mobile sites and now ranks e-commerce websites mobile-first. A better performing mobile site will enhance the customer experience and lead to more conversions. Mobile payments are extremely popular methods for consumers right now. Payment methods like Google pay, Phone Pe, Paytm are really convenient ways to pay for goods, with just a tap of a smart phone. Mobile websites and apps easily adapt to the needs of the customer. They help facilitate faster and fashionable mobile payment methods. Many users feel safer promoting payments using just their fingerprints rather than inputting their card details. It's also important to recognize that most people using social media do so via an app for the platform. Switching between apps on mobile is more commonplace than using mobile search engines and browsers. Retail apps are growing in popularity partly due to this shift in mobile user habits, so it's really important for ambitious retailers wanting to make app commerce a part of their strategy.

When a user clicks through site on a mobile device it's faster in loading all images, content and other elements preventing a high bounce rate and lost sales. Time is money when it comes to E-commerce and potential customers will abandon if site doesn't load quick enough. Google has found that if a mobile web page takes longer than 3 seconds to load, 53% of users will leave that page. A report by CBRE predicts that over half of all E-commerce sales will be carried out on mobile by 2021.

- ❖ A report BrizFeel finds that
  - 49% of people shop on their mobile phones. Incredibly high, that sets to grow preferences for convenience increase and mobile technology improves.
- ❖ Code Brew Survey with customers revealed the following findings:

- 78% of people responded stating that they prefer shopping on apps than mobile websites. It's also been found that users spent 18 billion hours on shopping apps in 2018.

- 61% of mobile consumers say they're more likely to buy from mobile sites and apps giving more personalized offers and experiences.

- 80% of in-store shoppers use their phones for browsing products while in-store. A study by Power Review revealed that

- 80% of in-store shoppers are using their mobile phones to search for products while browsing. They also use mobile devices to look at product reviews and compare pricing whilst in stores.

  By creating a seamless, OMNI channel experience for these in-store customers, business will increase its opportunity for conversion.

❖ Venditan Survey with retailers and businesses has the following findings:

- 67% of retailers surveyed believe mobile commerce is important

- 15% of businesses surveyed are planning to improve their mobile commerce offering in the next 12 months

- 48% of businesses surveyed actively track mobile users on their site

- 30 – 40% of their website visits are coming from mobile devices.

- 19% of retailers have found they've been affected by Google's mobile first indexing

- 59% of retailers realized that their main competitors already have mobile responsive websites

✓ Best Mobile Technology gives Best Experience to Customer because:

- Shopping on mobile is extremely popular

- Better Customer Shopping Experience

- Supports OMNI Channel E-commerce

- Popularity of Mobile Payments

- Mobile Apps faster response than Browser

- Mobile Apps give Personalized Experience

- Mobile Apps supports 'In-store' Experience

- Brand Visibility is on Customer's Mobile

- Mobile Apps allow faster Integration, Secure login and fast payments everything is just One-Click away.

- Device features, Push notifications, Better Customer Service are the best advantages of Mobile Apps.

Objectives of the Study

Primary Objective

- To know the impact of Mobile technology on consumer decision making process leading to a Seamless Customer Shopping Experience.

Secondary Objectives

- To study the consumer's preference of using retailer's / brand's Mobile App over Mobile browser for Online Shopping.

- To examine consumer's orientation towards research on Mobile before or while purchasing Online / Offline.

- To understand the impact of in-store mobile browsing & BOPIS on consumer shopping experience.

- To identify the preferences of Millennial, Gen Xers & Baby boomers in making payments Online through Mobile Apps.

- To analyze the overall Online Mobile Shopping experiences of Millennial, Gen Xers & Baby boomers.

Research Methodology

The study is majorly based on primary data. Secondary data is collected from websites, and online journals. Primary data is collected from the respondents through a questionnaire (Appendix I).

- Sample Size: 327 respondents from Hyderabad (Convenience Sampling)
  (Millennial – 187, Gen Xers – 121, Baby Boomers – 19)

- Sample Instrument: Questionnaire (Well-structured Questionnaire with 12 questions – 11 Closed ended & 1 Open ended Question, Liker 5-point rating scale is used)

- Statistical Tools: SPSS - One Way ANOVA, Correlation, weighted and simple average.

Limitations of the Study:

- This study is conducted only in Hyderabad
  - As the data was collected through an Online Survey, therefore no control over the response of the respondents.

Review of Literature

- Kesari Deepa, (2015) *A study of consumer behavior of smartphones application users in Gujarat, http://hdl.handle.net/10603/107481*

  This research aimed to study consumer behavior of smartphone application users of Gujarat, identifying level of awareness, adoption motives, usage patterns, and willingness to pay for smartphone application, mode of payment, preference and satisfaction of users of smartphones applications. The users and their demographic factors like gender, age group, city, education, occupation and income have been studied and analyzed in depth. The major findings of this study were: Android operating system had highest (76.2%) users among the respondents, 12.4% iPhone ios. There was good awareness regarding Entertainment application (14.9%) and Games (15.5%). It is also found that Friends (28.6%) are the most influencing factors for downloading apps, Internet (22.4%), Family (17.2%), advertisement in apps (8.2%).

- Kalia Gitanjali, (2017), *Effect of Online Advertising on Consumers an Analysis, http://hdl.handle.net/10603/189488*

  This study focused on the content of Online Advertisements in context to the homepage of informational websites, the types of layouts used for designing the websites and to examine the layouts of Online Advertisements, and Consumer response towards Online Advertisements.

- Ravindran K, (2018) *A comparative study on the impact of mobile apps in selected rural and urban areas of Coimbatore region, http://hdl.handle.net/10603/237643*

  This study focused on the factors influencing consumers in preferring various mobile Apps, motivational and operational drivers which will enhance the usage of the mobile Apps, compare the impact of mobile Apps in select rural and urban areas of Coimbatore, usage of mobile for financial transaction among the rural and urban consumers, usage of Social Media websites through smart phones. The major findings from this study are: Majority of

the respondents operate mobile Apps more than 5 hours every day, and also use mobile data for net connection. 38% of respondents' number of mobile apps available in their mobile phone are 6 – 10, 48% of respondents' use mobile apps for financial transactions sometimes only, and they made bill payments through mobile Apps. 88% of respondents' think more free apps can be downloaded.

- Harjinder Kaur, (2017) *A study on Consumers Attitude towards Online Grocery Shopping in Selected states of Northern India,* <u>http://hdl.handle.net/10603/221805</u>

  This study aimed to determine the factors perceived to be important by consumers in purchase of grocery products through online channel, to identify the key issues affecting the consumers' preferences for online grocery shopping, to understand the technological barriers faced by consumers in terms of integration and adoption of ICT (Information and Communication Technology) especially internet for Online Grocery Shopping. The major findings of this study are: Majority of the respondents are women and in age group 15-34 yrs, it is inferred that younger to middle age working professionals especially women have positive attitude towards online grocery shopping, good number of respondents are aware about the online grocery shopping websites like bigbasket.com, zopnow.com, pepper tap, aaramshop, etc. The key factors that influence the consumers' attitude towards online grocery shopping – perceived usefulness, ease of use, delivery factor, add on services factors, mode of payment, subjective norms, perceived issues / risks, and perceived technical barriers.

- Nigam Shivani, (2018) *Online buying behavior a study of consumer durables,* <u>http://hdl.handle.net/10603/228305</u>

  This study had the objectives on – factors influencing the adoption of online shopping with respect to consumer durables, online search behavior of online shoppers with respect to buying of consumer durables, factors affecting the online shoppers' preferences while selecting online stores with respect to buying of consumer durables, impact of perceived e-service quality on perceived e-loyalty with respect to consumer durables, study the mobile application usage behavior with respect to buying of consumer durables. Findings revealed that there were some factors which motivated the respondents – wide variety if the products, convenience of shipping, time saving, option of cash on delivery, ease of selection and product features and price comparison. Combo offers, free gifts available also

were also among the least motivating factors. There were some factors de-motivated shoppers in taking purchase decision of consumer durables online – Difference in actual product received and product ordered, risk with products, lack of touch and feel of the product, delivery charges. Non delivery of product and limited payment options available were also among the least de-motivating factors.

- Shakila Anjum S, *A study on the opportunities and challenges of Mobile Shopping in Chennai, http://hdl.handle.net/10603/201995*

  This study aimed to analyze the opportunities and challenges of m-shopping in Chennai and provide better understanding of the readiness level of use of the mobile shopping. It also aimed to identify distinctive driving forces of emergence of mobile shopping by applying revised Technology acceptance model and additional variables which will investigate the factors' effect on adoption of mobile shopping. The major findings of this study are: 93.4% of the respondents are shopping through mobiles and the remaining ar yet to start mobile shopping. More than 1/3 of the respondents are using debit card for payment, majority of the respondents are using flipkart.com, followed by snapdeal, irtc.com, amazon.com and ebay.com. Respondents strongly agreed that dealer's reliability and capability, transaction safety and customer's privacy are the reasons for trust in buying goods through m-shopping. Quality, warranty and prices are important variables for making purchase decisions. Speedy delivery followed by ease of return / refund, customer support and delivery channels are considered important.

- Sudha K, (2018), *Consumers attitude towards Online Shopping a study with special reference to Chennai, http://hdl.handle.net/10603/248882*

  This study focused on identifying the consumers' attitude towards online shopping, related demographic variables of the customers and their attitude, factors affecting online shopping behavior. The factors identified are – price, product quality, credibility, purchase behavior level.

- Khushboo Jain, (2020) *Study of Consumer Buying Behavior towards Online Shopping in Selected Major Cities of India, http://hdl.handle.net/10603/294500*

  The major findings from this study are: major part of the respondents have inclination towards e-commerce. Students contributed 54% of the total sample. 95% respondents primarily use the internet at home while remaining 5% at work place or public facilities.

Majority of respondents suggested frequency of online shopping as very often, 59% of total respondents preferred payment on delivery in online shopping, next payment mode is credit card, then e-wallet, and remaining preferred debit card. 46% suggested that they had very good online buying experience whereas 36% said good, 7% rated it excellent. From statistical analysis it is found that online shopping doesn't saves time but saves money, it is relaxed and easy way of shopping, it is more efficient way out to shop along with convenience factor at par providing full entertainment to the customers with varied offers like cash back. Discounts and rewards. It is found that 8 characteristics had impact online shopping: Brand Loyalty, Secure Payment, Customer Feedback, Service Quality, Discount / Promotion, Time, Payment Options, Speed of Purchase Process.

DATA ANALYSIS

One-Way ANOVA

ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
1	Between Groups	.285	2	.142	.205	.814
	Within Groups	224.620	324	.693		
	Total	224.905	326			
2	Between Groups	3.159	2	1.579	1.195	.304
	Within Groups	428.315	324	1.322		
	Total	431.474	326			
4	Between Groups	1.032	2	.516	.369	.692
	Within Groups	453.078	324	1.398		
	Total	454.110	326			
5	Between Groups	5.846	2	2.923	5.950	.003
	Within Groups	159.170	324	.491		
	Total	165.015	326			
6	Between Groups	1.781	2	.890	2.152	.118

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	Within Groups	134.072	3 24	.414		
	Total	135.853	3 26			
7	Between Groups	1.070	2	.535	.876	.417
	Within Groups	197.847	3 24	.611		
	Total	198.917	3 26			
7a	Between Groups	4.670	2	2.335	1.563	.211
	Within Groups	484.100	3 24	1.494		
	Total	488.771	3 26			
8	Between Groups	5.001	2	2.500	2.047	.131
	Within Groups	395.715	3 24	1.221		
	Total	400.716	3 26			
9	Between Groups	15.388	2	7.694	3.982	.020
	Within Groups	626.086	3 24	1.932		
	Total	641.474	3 26			
10a	Between Groups	9.345	2	4.672	8.195	.000
	Within Groups	184.716	3 24	.570		
	Total	194.061	3 26			
10b	Between Groups	5.370	2	2.685	4.946	.008
	Within Groups	175.884	3 24	.543		
	Total	181.254	3 26			
10c	Between Groups	4.072	2	2.036	3.330	.037
	Within Groups	198.075	3 24	.611		
	Total	202.147	3 26			
11	Between Groups	56.345	2	28.173	8.817	.000
	Within Groups	1035.233	3 24	3.195		

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	Total	1091.5 78	3 26			

Correlation Matrix:

Correlation Matrix						
	Q1	Q2	Q4	Q5	Q6	Q7
Q1	1.000	-.151	.008	.022	.038	-.081
Q2	-.151	1.00	.020	.060	-.033	.054
Q4	.008	.020	1.00	.031	.067	-.030
Q5	.022	.060	.031	1.00	.089	-.008
Q6	.038	-.033	.067	.089	1.00	.317
Q7	-.081	.054	-.030	-.008	.317	1.00
Q7a	.024	.029	.035	.056	.253	.439
Q8	-.059	.123	.014	-.079	.102	.239
Q9	.132	-.033	.109	.190	.064	.072
Q10a	.127	-.097	.061	.212	.137	.107
Q10b	.004	-.002	.118	.142	.174	.101
Q10c	.041	-.014	.045	.195	.078	.047
Q11	-.183	-.007	-.193	-.260	-.116	-.025

Correlation Matrix						
	Q7a	Q8	Q9	Q10a	Q10b	Q10c
Q1	.024	-.059	.132	.127	.004	.041
Q2	.029	.123	-.033	-.097	-.002	-.014
Q4	.035	.014	.109	.061	.118	.045

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	Q7a	Q8	Q9	Q10a	Q10b	Q10c
Q5	.056	-.079	.190	.212	.142	.195
Q6	.253	.102	.064	.137	.174	.078
Q7	.439	.239	.072	.107	.101	.047
Q7a	1.00	.314	.145	.092	.064	.044
Q8	.314	1.00	-.031	-.013	-.066	-.095
Q9	.145	-.031	1.00	.255	.216	.208
Q10a	.092	-.013	.255	1.00	.512	.534
Q10b	.064	-.066	.216	.512	1.000	.552
Q10c	.044	-.095	.208	.534	.552	1.00
Q11	-.067	.012	-.235	-.426	-.342	-.386

Correlation Matrix		Q11
Correlation	Q1	-.183
	Q2	-.007
	Q4	-.193
	Q5	-.260
	Q6	-.116
	Q7	-.025
	Q7a	-.067
	Q8	.012
	Q9	-.235
	Q10a	-.426
	Q10b	-.342
	Q10c	-.386
	Q11	1.000

4. Findings:

- 62% of the respondents are female and 38% are male. 57% of the respondents are Millennial (18-34 yrs), 37% of them are Gen Xers (35 -54 yrs) and 6% of them are Baby boomers (55 & above). 51% of the respondents are employee, 21% of the respondents are home maker 20% are students, and 8 % of the respondents are self-employed.

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- 63% of the respondents are choosing both online and offline as most preferred medium of purchase. 35% of the respondents made 25% of purchases online in last 6 months.

- 33% of online purchases preferred by respondents are Food & Beverages, 22% are household appliances, 12% are Clothing / Footwear / Accessories, Medicines / Cosmetics and Books / Music / Games. Least preferred are Groceries, Furniture / Home Furnishings.

- 35% opt online shopping for better price deals and 26% for ease of buying. Reasons that has less preferences comparison of brands / price, return policies / exchange / complaint resolution.

- 58% of the respondent's prefer User retailer's / brand's Mobile Apps over Mobile Browser.

- 84% of the respondents' do research on Mobile while purchasing Online. It is observed that respondent's find it advantageous for the below reasons: Checking Prices / deals, & Customer reviews, Quality rating and Checking Varieties.

- 63% of the respondents' do research on Mobile while purchasing Offline. It is observed that 58% respondent's find it advantageous to research before visiting a store, 21% don't do research at all. 14% research in-store before purchase and only 7% of the respondents do research after visiting store.

- 51% of the respondents order Online and prefer Home Delivery, 30 % prefer browse product Online & buy in-store, 12% look at a product in-store and then buy Online, only 1% of respondents Buy Online and Pickup In Store (BOPIS).

- 50% of the respondents' feel easy & secure to make payment, 18% are unsure of security concerns about debit / credit transactions. Least concerns are about security of personal data, storing my payment & delivery info an App.

- The post-purchase follow up through Online Mobile shopping, from weighted average it is observed that majority of the respondents are satisfied with Return / Exchange Policies, neither satisfied nor dissatisfied with Warranty Claims, Satisfied with Complaint Resolution.

- The Overall Online Shopping experience through Mobile Apps is rated High (8, 9 & 10) by majority of the audience. This states that respondents are highly satisfied with the Online shopping through Mobile Apps.

- Correlation Matrix shows there is a positive correlation between the respondents' Style of Purchase – order Online and prefer Home delivery, browsing a product Online and then buy In-store and the Overall Online Shopping Experience through Mobile Apps.

- There is a strong correlation between respondent's concerns for making online payments through mobile and respondent's satisfaction towards post purchase follow up by seller – return / exchange policies, warranty claims, complaint resolution.

- There is a strong correlation between respondent's pre-purchase research for shopping offline / online and respondent's style of purchase.

5. Conclusion:

Online shopping has got its craze in the Millennial, and Gen Xers. Baby boomers are still not at ease with Online shopping. Majority of Baby boomers and few Gen Xers are still interested in traditional shopping methods, and always prefer touch and feel. Millennial do research before visiting store and also in-store to check good deals and prices Online. They are at ease with Online browsing for varieties and brands. COVID lock down brought more opportunities for businesses to go online and majority of opportunities are created through mobile technology. Mobile shopping Apps and it's integration with the payment Apps has increased the potential of Mobile Commerce. Consumer uses Mobile for pre-purchase, purchase and post-purchase decisions and mobile technology has a great impact in redefining consumer decision process. To offer a seamless shopping experience to consumer it is need of the hour for every business to integrate into OMNI Channel.

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