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Young consumers' green marketing orientation: role of customer citizenship behaviour in determining real estate purchase intention in India

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Abstract

Purpose – The purpose of this paper is to assess green marketing as an influential factor in the purchase of real estate. In this study, the consumer citizenship behaviour of young individuals will be studied with an assessment of real estate purchase intention, strategic green marketing orientation (GMO) and tactical GMO.

Design/methodology/approach – The sample frame consists of young consumers from India's metropolitan cities. The respondents were in the range of 18 to 35 years of age. These cities provide a high standard of living, more career options and better educational opportunities. Five separate sections of a standardised questionnaire were used, and a structural equation model was used to assess a total of 393 valid replies.

Findings – Green marketing impacts the behaviour that influences the desire of young customer to buy green real estate.

Research limitations/implications – As the focus of this study is primarily on major cities, future research may study similar behaviour in non-metropolitan cities. The study can also be conducted among consumers of other age groups.

Originality/value – The originality, to the best of the author's knowledge, exists in examining how young consumers' opinions about green marketing impact their intentions to purchase green houses and real estate in India. This study will be accessible to all parties involved in the housing and real estate industries.

Keywords Young consumers, Green marketing orientation, Customer citizenship behaviour, Purchase intention, Real estate, Strategic and tactical

Paper type Research paper

1. Introduction

There is a link between the construction of infrastructure and concerns related to the climate and the environment. According to studies, increased air pollution is primarily connected with the construction industry (Balasubramanian and Shukla, 2017; Gray *et al.*, 2014). As a protective measure, green building practises are used by businesses to lessen a building's impact on energy usage, the environment and human well-being (Lacroix and Stamatiou, 2007). These practices, when used during the developmental process, can reduce the negative effects of infrastructure on people and the environment. Numerous studies have



already examined the construction business and its difficulties in various parts of the world (Hassan *et al.*, 2012; Tan *et al.*, 2011). Despite the importance of promoting green real estate and the expanding scholarly focus on environmental issues, it is still far from clear what influences people to accept and buy green homes. Environmental contamination has recently reached catastrophic levels for our planet, making habitat protection the top priority as both humans and other animals are sustained by the ecosystem. Natural resources are provided by the environment to support human habitation (Thai, and Nguyen, 2022). Despite this, the concept of “greening” the environment is not always the ideal one due to the acceleration of global warming, deforestation and pollution of the air, water and earth (Andersén, 2022). The WHO study from 2016 states that more than 80% of individuals who live in urban areas experience air pollution, with dust levels in the air surpassing WHO-permitted standards. According to various other studies, any business operating today must develop competitive environmental strategies in their marketing practises because the world in which businesses operate is environmentally sensitive (Armstrong and Kotler, 2009; Chen, 2011; Johansson and Winroth, 2010; Ozkaynak, 2019).

Green real estate as a new industry came into discourse related to the protection of the environment, conserving resources and achieving harmony between people and nature. However, compared to green buildings, the idea of “green real estate” encompasses a larger range of activities, emphasising all green-related linkages across the full construction project cycle, including project design, construction, operation, management, maintenance, decorating and service. The number of green buildings and their star rating are crucial metrics for measuring the progress of green real estate (Yang and Fang, 2020). Green marketing has gained substantial worldwide attention in the current dynamic and intensely competitive economy (Kumar, 2016; Moslehpour *et al.*, 2021). Green marketing is primarily concerned with safeguarding the environment while operating in a business economy. Modern marketing has caused a number of issues in recent years. Although the expansion of marketing activities sparked a rapid expansion of the economy and a process of liberalisation and globalisation, it also gave rise to intense displeasure in its insensitivity to nature.

The concept of “Green Marketing Orientation” (GMO) has evolved progressively over the years in the real estate industry in India. Initially, real estate developers were more focused on meeting the basic needs and preferences of the consumers, such as location, price and amenities. However, with the growing concern over environmental issues, developers started to incorporate green features in their projects, such as energy-efficient lighting and appliances, water conservation systems and use of sustainable building materials. The first step in the evolution of GMO was the adoption of green features as a marketing strategy to differentiate their projects from competitors. Developers started to promote their green features through advertising and marketing campaigns, highlighting the environmental benefits of their projects to attract environmentally conscious consumers. The second step in the evolution was the recognition that consumers’ green attitudes and behaviour play a significant role in their purchase decision. Real estate developers started to invest in research to understand consumer behaviour and preferences regarding green real estate. The third step in the evolution of GMO was the integration of customer citizenship behaviour (CCB) into the model. CCB refers to pro-environmental behaviour that goes beyond the individual’s personal benefit and contributes to the greater good of society. Real estate developers recognised that promoting CCB among consumers can have a positive impact on their purchase intention for green real estate. Overall, the evolution of GMO in the real estate industry in India reflects the growing awareness of environmental issues among consumers and the need for real estate developers to adopt sustainable practices and marketing strategies to stay competitive in the marketplace. As consumers’ concern for the

environment continues to grow, GMO is likely to continue evolving and becoming more sophisticated in its approach to promoting sustainability in the real estate industry.

There are benefits to businesses that have an environment-friendly approach to their marketing strategy. A study has shown that an organisation's environment orientation influence customer support, legitimacy of the firm's environmental friendliness and subsequently higher levels of confidence in the organisation (Chen and Chang, 2013). Due to industrial enterprises' impact on environmental challenges during the process of raw materials transforming into completed goods, previous studies on environmental marketing have been widely undertaken and centred on these businesses. As the real estate industry is sometimes referred to as the "silent" environmental harmful sector, further research is necessary to the focus on the environmental issues in this industry. The study's goal is to look into the key factors influencing young consumers' intentions to buy green real estate in India to close this research gap. The negative consequences on the built environment, human health and global climate change may be considerably reduced by the Indian real estate sector through sustainable measures. The research's findings can help the Indian government see the rationale behind investing in green housing and real estate on a broad scale. India is one of the developing nations that has the same perplexing contradiction between environmental deterioration and economic progress. The study's findings can thus provide policymakers and organisations in developing nations with useful examples and experiences. Earlier research on real estate purchases did not take young customers into account. Understanding their intended purchases can help close this study gap. Furthermore, establishing appropriate policy strategies by decision-makers would be essential in directing the development of green real estate.

Real estate developers are concentrating on creating eco-friendly and energy-efficient constructions as the idea of green buildings is becoming more popular globally (Bon-Gang, 2018). The ecology has suffered as a result of fast industrialisation, urbanisation and depletion of natural resources. Eco-friendly structures that use water management methods and energy-efficient mechanisms are required. Such structures have been successfully built by some developers (Suki and Suki, 2015). Homes for sale in green housing developments are in high demand. As more investors, consumers and office occupants are aware of the benefits of owning an energy-efficient, sustainable home or business, demand for real estate is outpacing supply, according to property developers. Indian homebuyers have made the market more competitive for real estate developers. The new generation of homebuyers is willing to pay more for spaces that are in addition to other things like location, design and affordability, are also eco-friendly. This research aims to identify a relation between green marketing initiatives and CCB and how it impacts the purchase intention among young adults.

2. Theoretical background and hypothesis development

2.1 Green marketing orientation

Green marketing implies that a company or brand has tried to increase the value of goods or services by making environmental claims about their characteristics or systems, business practises and their manufacturing or marketing procedures (Giantari and Sukaatmadja, 2021). Three ways that firms "green" themselves are through the process of adding value (at the corporate level), the implementation of management systems (at the corporate level) and the creation of environment-friendly products. By doing so, they can lessen their negative effects on the environment and society, which will also increase the availability of goods and services that are safe for consumers (Chang, 2011; First and Khatriwal, 2008). The results demonstrate that strategic green marketing and GMO have good and significant influence on consumers' intentions to purchase environmentally friendly products.

GMO refers to a company's strategic approach towards environmentally friendly practices in their products, services and marketing campaigns. In the context of residential real estate in India, GMO involves incorporating sustainable features in residential properties, such as energy-efficient appliances, green building materials and solar panels, and promoting them through green marketing campaigns. The importance of GMO in residential real estate in India has gained momentum in recent years due to the growing concern for the environment and the need to adopt sustainable practices. The Indian real estate sector is one of the largest contributors to greenhouse gas emissions, and there is a growing awareness of the impact of unsustainable practices on the environment. As a result, there is a need for real estate developers and marketers to adopt sustainable practices and promote them through green marketing campaigns. Previous research on GMO in the residential real estate sector in India has shown that adopting a green marketing approach can have a positive impact on consumer behaviour. Furthermore, studies have shown that GMO can also have a positive impact on the environment and society. Lastly, GMO in residential real estate in India involves adopting sustainable practices and promoting them through green marketing campaigns. The importance of GMO has gained momentum in recent years due to the growing concern for the environment and the need to adopt sustainable practices. Previous research has shown that GMO can have a positive impact on consumer behaviour, the environment and society, highlighting its potential to contribute to sustainable development in India.

Although green marketing has received considerable attention in scholarship, few contributions have offered a useful framework that may unite the disciplines of environmental orientation and environmental/green marketing principles (Papadas *et al.*, 2017). One of the top management's strategic initiatives is also "strategic green marketing orientation" (SGMO), which focuses on a company's environmental strategy, external environmental considerations, proactive environmental actions and environmental sustainability. SGMO integrates environmental consideration into fundamental organisational procedures and company operations (Polonsky, 2015). According to Banerjee (2002), incorporating green values into a company's business strategy contests the traditional marketing orientation of maximising sales and profits. A growing body of research is challenging the marketing philosophy of increasing consumption, pointing out how such positioning clashes with sustainability and responsibility (Stoeckl and Luedicke, 2015). Tactical GMO (TGMO) entails quick changes that make conventional marketing more environmentally friendly. This dimension includes actions to improve environmental performance in the supply chain (Zhu and Sarkis, 2004), product-related decisions to lessen the environmental footprint (Pujari *et al.*, 2003), promotion tools to lessen the negative environmental impact of the company's marketing communications and communicate the benefits of products (Kilbourne *et al.*, 2002) and modified pricing policies for green products (Chen, 2001). These strategies give room for flexibility in processes for businesses looking to conserve energy and/or reduce pollution to protect or benefit the environment.

2.2 Customer citizenship behaviour

Customer citizenship refers to voluntary and optional behaviours that improve an organisation's effectiveness even if the customers are not directly associated with the successful production and/or delivery of a products or service (Groth, 2005). This idea is derived from the study of organisational citizenship behaviour and has drawn scholarly interest (Nguyen *et al.*, 2014). Customers and workers can both be thought of as the human resources of service firms when it comes to service products. Customers' non-purchasing habits are, in fact, highlighted by CCB. It consists of extra-role actions that clients actively take before, during or after receiving services (Di *et al.*, 2010; Nguyen *et al.*, 2014).

Groth (2005) created a scale for consumer citizenship behaviour using the Q-sort technique to investigate its nature. The scale evaluates how likely customers are to promote a product or service, to offer feedback to the business and to assist other customers. Recent research has further divided the two parts of the customer civic behaviour scale (Curth *et al.*, 2014; Yi *et al.*, 2013). Regard for other customers (i.e. readiness to assist) and regard for the company are the two components (i.e. recommendation and feedback).

2.3 Purchase intention

The degree to which clients are willing and inclined to purchase goods or service from a brand within a specific time frame is known as purchase intention, which is synonymous to buyer intent. A crucial marketing metric is purchase intentions. In truth, marketing based on intents or intent marketing involves promoting goods and services based on consumer intentions or the consumer's intent to accept, purchase or use a specific thing or service that may or may not have been explicitly acknowledged by the business or brand (Haque, 2020). Measurements of purchase intentions are useful while creating marketing campaigns or promotions. It can be extremely simple to precisely repeat what kind of material should be displayed in an advertisement based on the intent of a customer (Madlberger and Kraemmer, 2019). The intentions may reveal details about the consumer's comprehension level. The design of marketing activities can be created based on this measurement. An integrated roadmap of implementing an advertising campaign can be created by analysing the purchase intents of a consumer base (Koshksaray and Nabizadeh, 2019).

2.4 Green marketing orientation and customer citizenship behaviour

The foundation for creating value for and from consumers is known as customer relationships (Luigi and Mihai, 2011). Customers are increasingly more knowledgeable and influential among one another during the service design and delivery processes to ascertain advancements in communication technology. Marketing executives are beginning to pay attention to CCB, in which consumers act as if they are employees, providing labour or expertise (Xie *et al.*, 2017). The three main tenets of CCB research are service firm facilitation, advice and helpful conduct (Bove *et al.*, 2009; Groth, 2005; Yen *et al.*, 2011). CCB has drawn more attention in recent years. CCB is observed as a customer's voluntary and altruistic activities that the business values. CCB was formerly known as "customer voluntary performance and customer extra-role behaviours" in earlier literature (Amireh, 2021). CCB has not gotten much attention in the literature on green marketing, despite the fact that several research have looked at the connection between environmentally sustainable practices and customers' behavioural intent. Although there has been a lot of discussion about how to use green marketing, few contributions have offered a useful framework that can link the disciplines of environmental orientation and environmental marketing concepts. As a result, the first hypothesis is developed to determine whether GMO and consumer citizenship behaviour are related:

H1. SGMO has a significant impact on CCB among young consumers.

H2. TGMO has a significant impact on CCB among young consumers.

2.5 Customer citizenship behaviour and purchase intention

Only when a client is pleased with a prior interactional experience in a setting comparable to the current one, which assisted him/her in reaching his personal goal, will he/she express the intention to make a repeat purchase on a customer-to-customer (C2C) platform (Li and Shi, 2012; Xi, 2015).

According to scholarship on purchase intention, customers who are satisfied are more likely to repurchase, whereas unhappy customers are more likely to leave (Shihab *et al.*, 2018). Additionally, word-of-mouth recommendations are more likely to happen if the customer experiences something that makes them feel good (Miswanto and Angelia, 2018). Satisfactory C2C interactions improve one’s view of the quality of the services provided, which influences their likelihood to return or promote the business to others (Kusumawati and Sri Rahayu, 2020). From the perspective of the consumer, corporate trust serves as a means to lessen perceived risks and anxiety factors in a variety of purchase circumstances, enabling a constant state of solidarity to be maintained between the business and the client (Sudibyo *et al.*, 2020). According to previous research, people are more likely to engage in pro-environmental behaviour (in this case, CCB towards green real estate) when they attribute it to intrinsic rather than extrinsic factors (Hewei, 2022). Aa point of further investigation is if such an impact might “spill over” and affect any unintended pro-environmental buying intents. An individual’s good brand attitude may affect their buyer intention and whether they are prepared to pay a higher price, according to a previous study (Mukherjee and Banerjee, 2019). The brand attitude of a company is determined by the familiarity and confidence that customers have in the brand; the higher this familiarity and trust, the more likely it is that they will make a purchase (Ramesh *et al.*, 2018). To understand the relationship between CCB and real estate purchase intention, the following hypothesis was formulated:

H3. CCB has a significant impact on real estate purchase intention.

3. Research methodology

3.1 Research instrument

Adopted from Martynova *et al.* (2017), this study uses numerous items to measure the study’s components and derive insights. Two subscales, SGMO (eight items) and TGMO (five items), which were both derived from Papadas *et al.* (2017), are used to measure GMO with regard to the real estate business. The third subscale “internal green marketing orientation” is removed from the standardised scale as it is not relevant to this study. The feedback, helping, tolerance and advocacy characteristics of CCB are measured using 11 items that were adopted from Yi and Gong (2013). Lastly, Hoque and Alam’s (2020) three items are used to measure the term “real estate purchasing intention”. Figure 1 presents the conceptual framework of the study. Various scales used for the research are mentioned in the Appendix.

3.2 Research design

Descriptive research design was selected for this study because it is an appropriate research design for investigating the relationship between variables and describing the characteristics of a

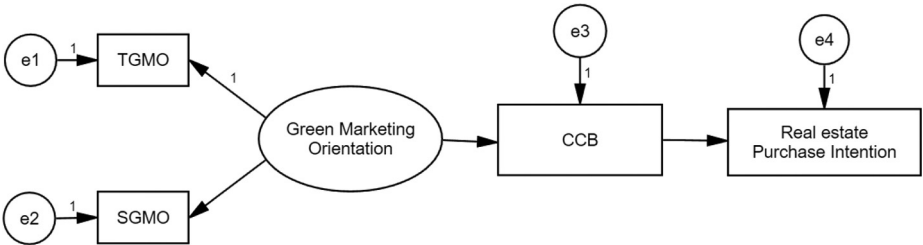


Figure 1.
Conceptual
framework

Source: Author’s own work

particular population or phenomenon. In this study, the aim was to describe the level of GMO among young consumers and its impact on their real estate purchase intention in India. Descriptive research design allowed the researchers to collect data through surveys and analyse the data using statistical techniques to obtain descriptive statistics, such as means, standard deviations and frequencies. These statistics provided a clear picture of the level of GMO among young consumers and their real estate purchase intention, which was the main objective of the study.

The data was gathered from young customers who expressed a desire to purchase real estate in the near future, and the analysis was done by using a purposive sampling technique. Due to its huge economic impact on the nation and the wide range of client demographics, the real estate industry was chosen so that the findings would be applicable on a broader level. In total, 25 surveys were conducted to assess the content validity and item clarity. Likert scales with endpoints of 1 for “strongly disagree” and 5 for “strongly agree” were used by respondents to score the items.

The youth market is important in this context due to the demographic’s purchasing power and effect on family members’ spending. Young consumers provide ideas, thoughts and information on significant topics across the whole youth market, from the early phases of preparing for motherhood to toddlers, tweenies, teens and young adults. Additionally, young adults frequently establish trends that are embraced by other demographic groups. Considering all the mentioned factors, the data for this study was collected from young consumers ranging between 18 and 35 years of age. A total of 394 valid and complete questionnaires were collected, yielding a 78% response rate. The respondents to the study are 28.2 years old on average. Male respondents made up a considerable portion of the sample (68.4%). Respondents primarily reside in metropolitan areas like Bangalore, Mumbai, Chennai and Delhi.

3.3 Common method bias

As the data set was gathered from the same group of respondents, common method bias is taken into account (Homburg *et al.*, 2011; Podsakoff *et al.*, 2003). In accordance with Podsakoff *et al.* (2003), many actions were taken to address any consequences that were discovered. Firstly, because the survey was generated online, agreement tendency bias was removed by assigning the poll’s questions at random. It was emphasised to respondents that there was no right or wrong way to respond to the questions, and they were urged to answer them honestly. The Harman single-factor test was applied second (Homburg *et al.*, 2011). In two models, a single-factor model and a multifactor measurement model, the test examines a chi-square difference. Lastly, from the reference provided by Liang *et al.* (2011) was used, and hence, it is evident from this that the common method bias was not a major concern.

3.4 Descriptive statistics

The demographics of the survey are shown in Table 1. It includes the age, gender and education components. There are four subgroups within the age ranges of 18–24, 25–30, 31–35 and above 35. The age group of 18 to 24 has the greatest frequency of 210 and percentage of 53.4 out of the 393 respondents. 25- to 30-year-olds are second with 38.4%. The three subcategories of the gender concept are male, female and prefer not to say. Male respondents make up 57% of the survey participants, while female respondents make up 43%. There are five subcategories under the profession construct, namely, salaried, business, freelancing, student and other. The student respondents received the greatest response rate, 83.5%. Respondents who are paid have a frequency of 60, which is the second highest. These

Sl no.	Classification	Category	Frequency	%
1	Age	18-24	299	76.1
		25-30	62	15.8
		31-35	28	7.1
		Above 35	4	1.0
		Total	393	100.0
2	Gender	Male	224	57.0
		Female	169	43.0
		Total	393	100.0
3	Profession	Salaried	60	15.3
		Student	328	83.5
		Other	5	1.3
		Total	393	100.0

Table 1.
Demographics

Source: Author's own work

demographics will provide a clearer understanding of the data gathered and aid in further analysis and comprehension.

4. Results

SPSS and AMOS have been used to test and analyse the independent and dependent variables. The stated hypothesis will either be proven or disproven based on the study's findings and data analysis. The fit indices of the variables, confirmatory factory analysis, structural equation modelling, descriptive analysis, discriminant validity, reliability of the variables, Cronbach's alpha and regression coefficients will be displayed as a result of the data analysis. After understanding the link between the three variables, GMO, CCB and real estate purchase intention, the model is researched and examined.

4.1 Construct reliability

First, the data's internal reliability was assessed using Cronbach's alpha reliability test (Bonett and Wright, 2014). For the constructs, scores above 0.7 are deemed good as per scholarship (Raykov and Marcoulides, 2011). Table 2 displays the factor loadings, AVE, composite reliability and Cronbach's alpha. Table 2 also shows the results of the descriptive statistics analysis and includes the mean and standard deviation for each construct. The satisfactory Cronbach's alpha values for each construct demonstrates their internal dependability. The reliability of the constructs is demonstrated by the composite reliability of all the constructs, which, in value, are more than 0.7 (Hair et al., 2010). As the average extracted variance (AVE) was more than 0.5, the convergent validity could be proven.

4.2 Kaiser–Meyer–Olkin test

The suitability of the data for factor analysis is evaluated using the Kaiser–Meyer–Olkin (KMO) test. KMO assesses the percentage of common variation that may be explained by underlying causes and is used as a sample adequacy indicator. KMO scores that are higher than 0.6 suggest that factor analysis is beneficial. The KMO test results shown in Table 3 are all more than 0.6, which validates the data for factor loading purposes.

								Green marketing orientation
Construct	Item	Factor loading	Mean	SD	AVE	CR	Cronbach's α	
SGMO	SGMO1	0.678	3.140	1.115	0.548	0.906	0.943	<hr/> <

Table 2.
Psychometric
properties of
measures

4.3 Discriminant validity

Testing if each component reflects a separate dimension requires the discriminatory validity of the scales to be determined. Using standardised linear or covariance correlations, the constructs were correlated. The findings show discriminating validity indices between the various factors tested as they assume values far from 1. As stated in Table 3, attempts were made to guarantee that the correlation confidence interval between any pair of constructs did not equal 1. This was done to further analyse this dependence. This demonstrates that these variables represent two different ideas. Assessment of the discriminant validity was done by computing the square root of average (AVE) for each idea. The squared correlations with all components were compared. The value of AVE should be higher than its correlations (Hair *et al.*, 2010). The square root of AVE is greater than the correlations of the cross-constructs, as seen in Table 3.

Construct	KMO	SGMO	TGMO	CCB	REPI
SGMO	0.864	(0.740)			
TGMO	0.801	0.769**	(0.772)		
CCB	0.847	0.759**	0.796**	(0.738)	
REPI	0.627	0.585**	0.682**	0.741**	(0.770)

Source: Author's own work

Table 3.
Discriminant validity

approach is used to examine the

Structural equation model (SEM) is a method for a



Table 4.
Structural equation
model results

and TGMO and the relationships between CCB and SGMO are validated. The supported hypotheses demonstrate how the two variables are related and dependent on one another. This demonstrates the veracity of the hypothesis generated throughout the literature review. *H1*, *H2* and *H3* have been established as true.

5. Discussion and managerial implications

The tendency of young customers to purchase or to influence the purchasing decisions of others in the real estate business is a concern in India. Although many people are ignorant of the GMO, the government, officials and academics are quite concerned about it. Significant efforts should be taken to influence buying intentions to address this issue. By investigating the strategic and tactical factors that influence the behavioural features of the consumers in India, the current study aims to close a gap in the literature. The study found that one of the factors influencing young customers' desire to buy or make their choice to make a purchase are behavioural factors impacted by a green marketing strategy. To generate a favourable buying intent in the real estate market, citizenship behaviour is crucial. Descriptive research design was appropriate for this study as it allowed the researchers to conduct a cross-sectional study, collecting data at a single point in time. This was suitable as the focus was on describing the current level of GMO and real estate purchase intention among young consumers in India. Additionally, using a large sample size was advantageous as it provided a more representative picture of the population of interest, which was crucial for generalising the findings to the entire population of young consumers in India.

This study aimed to investigate and analyse the effects of CCB and SGMO and TGMO on green purchase intention in the real estate business. Three different hypotheses were proposed, and information from 393 respondents who indicated a willingness to invest in green properties in the near future was gathered. To determine the viability of the given hypotheses, the data were examined using SEM with the use of the SPSS program. The proposed hypotheses were examined in the current study using the signalling theory as a framework. Organisations alter their practises to incorporate strategies that allow them to obtain or maintain an edge in the marketplace in any competitive climate. Strategic content or strategy orientation in this sense refers to the organisation's overarching strategic direction while developing new projects. In other words, it may be seen as the fundamental idea that directs a company's marketing and strategy-making efforts. The aspect of an organisation's culture known as strategic orientation governs interactions with consumers and rivals in the marketplace. The company's strategic direction is used to establish the right behaviours for consistently greater business success.

A tactical approach to green marketing entails quick changes that replace the conventional marketing mix with a greener one. This dimension includes actions to improve environmental performance in the supply chain, product-related decisions to lessen the environmental footprint, promotion tools to lessen the negative environmental impact of the firm's marketing communications and communicate the environmental benefits of products and adjusted pricing policies for green products. These strategies provide flexibility to businesses that aim to conserve energy and/or reduce pollution to protect or benefit the environment. When comparing the strategic and tactical components of green marketing, the tactical component has a greater impact on CCB. Given the significance of sustainability in the modern, cut-throat marketplace, this study makes two contributions to the literature:

- (1) By merging previous research on the idea and function of green marketing, GMO is proved to have contributed to improving consumer civic behaviour.

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- (2) By confirming the nomological network of the GMO scale, earlier findings are supported, which suggest green marketing approach may have a favourable impact on consumers' propensity to make purchases.

The importance of sustainability has been increasingly recognised by consumers and businesses alike, as the world faces growing environmental concerns such as climate change and resource depletion. As a result, companies are under pressure to adopt sustainable practises and communicate their commitment to sustainability to consumers. Green marketing, which refers to the use of marketing strategies to promote environmentally friendly products or services, has emerged as a key tool for companies to achieve this goal. The first contribution of this study is to provide empirical evidence that GMO can positively impact consumer civic behaviour. This finding is significant because it suggests that companies that adopt a green marketing approach not only benefit from increased sales and brand reputation but also contribute to the greater good of society by promoting sustainable behaviour among consumers. The second contribution of the study is to validate the nomological network of the GMO scale, which measures the extent to which a company's marketing strategy is oriented towards green or environmentally friendly practices. This validation adds to the existing body of research on green marketing and provides a reliable tool for future studies. Overall, the findings of this study highlight the importance of green marketing in promoting sustainability and suggest that companies can benefit from adopting a green marketing approach. As consumer awareness and concern about environmental issues continue to grow, companies that fail to prioritise sustainability may face increasing pressure from consumers and stakeholders and may ultimately lose out in the marketplace.

5.1 Practical implications

The practical implication of this study is that real estate developers and marketers in India can benefit from adopting a GMO strategy to attract young consumers and increase their purchase intention. The findings suggest that young consumers are more likely to have a positive attitude towards environmentally friendly practices and are more likely to purchase a property from a real estate developer who adopts a green marketing approach. Therefore, real estate developers and marketers can incorporate sustainable features, such as energy-efficient appliances, green building materials and solar panels, in their properties to appeal to young consumers who prioritise environmentally responsible practices. Furthermore, the study highlights the importance of creating awareness about green marketing and sustainability practices among young consumers through marketing campaigns, social media and other communication channels. By doing so, real estate developers and marketers can educate young consumers about the benefits of environmentally responsible practices and increase their knowledge and awareness about sustainability. This, in turn, can help create a positive perception of the real estate developer and lead to increased purchase intention among young consumers. In summary, the practical implication of this study is that adopting a GMO strategy and incorporating sustainable features in real estate properties can help attract young consumers and increase their purchase intention. Real estate developers and marketers in India can use this knowledge to create environmentally responsible properties and market them effectively to young consumers.

5.2 Conclusion

In conclusion, this study has provided valuable insights into the relationship between young consumers' GMO and their real estate purchase intention in India. The findings suggest that young consumers who have a higher level of GMO are more likely to exhibit CCB, which in turn positively influences their purchase intention for green real estate. These findings have

important implications for marketers and real estate developers who are interested in targeting young consumers in India. By adopting green marketing strategies that emphasise the environmental benefits of green real estate, marketers can increase young consumers' GMO and encourage them to exhibit pro-environmental behaviour, which can ultimately lead to an increase in their purchase intention. Moreover, the study highlights the importance of CCB as a mediator in the relationship between GMO and purchase intention. Real estate developers can focus on creating an environment that encourages CCB, such as providing facilities for waste management and promoting sustainable energy use. Overall, this study contributes to the growing body of literature on green marketing and consumer behaviour in the real estate industry. The findings provide insights into the factors that influence young consumers' purchase intention for green real estate in India and can guide marketers and real estate developers in developing effective green marketing strategies.

6. Limitations and further scope of study

This study has some shortcomings that require discussion. For instance, the study is only applicable to respondents who reside in India's major cities and are of a certain age group. The study can also be done for semi-urban areas, or consumers belonging to other age groups who may be more financially stable and independent. The study begins by examining the function of green marketing in relation to the green real estate sector, and only in relation to the Indian content. The findings could be generalised, and a stronger theory could be proposed if this research were repeated in other cities and other related and unrelated sectors. Another weakness of the study is the respondents' answers to the conceptions of green marketing that were based on their personal experience. However, suitable measures were made to ensure that the replies were not purely subjective by applying a variety of validity and reliability techniques. Future studies can investigate the involvement of a variety of mediating elements, such as green satisfaction, green trust and green loyalty, as well as moderating factors like the type of the product, the amount of investment and the owners' knowledge to further enhance the conceptual framework. Future research could also explore the factors that influence real estate buyers' willingness to pay more for greener properties in more depth. For example, studies could investigate the role of demographic factors such as age, income and education level in shaping buyers' preferences for sustainable features. Another area for future research could be examining the impact of green certifications, such as LEED or ENERGY STAR, on property values and buyer preferences. Studies could also investigate the extent to which sustainable features impact the selling price of homes in different regions and markets. Furthermore, future studies could explore the extent to which buyer preferences for sustainable features translate into actual behaviour in the real estate market. Lastly, there is ample scope for future research to explore the growing trend of real estate buyers' readiness to pay more for greener properties and better understand the factors that drive this trend.

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Further reading

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Item	Variable	Author
<i>SGMO</i>		
SGMO1	They invest in low-carbon technologies for our production processes	Papadas <i>et al.</i> (2017)
SGMO2	They invest in R&D programmes to create environmentally friendly products/ services	
SGMO3	They make efforts to use renewable energy sources for our products/services	
SGMO4	They have created a separate department/unit specialising in environmental issues	
SGMO5	They participate in environmental business networks	
SGMO6	They engage in dialogue with our stakeholders about environmental aspect of our organisation	
SGMO7	They implement market research to detect green needs in the marketplace	
SGMO8	Among other target markets, they also target to environmentally conscious consumers	
<i>TGMO</i>		
TGMO1	They encourage the use of e-commerce, because it is more eco-friendly	Papadas <i>et al.</i> (2017)
TGMO2	They prefer digital communication methods for promoting our products/ services, because it is more eco-friendly	
TGMO3	They apply a paperless policy in our procurement where possible	
TGMO4	They use recycled or reusable materials in our products/services	
TGMO5	They absorb the extra cost of an environmental product/service	
<i>CCB</i>		
CCB1	I say positive things about green real estate to others	Yi and Gong, (2013)
CCB2	I give constructive suggestions to the real estate company on how to improve its service	
CCB3	When I have a useful idea on how to improve service, I communicate it to someone from real estate firm	
CCB4	When I experience a problem with the green properties, I let someone know so that they can improve the service	
CCB5	I try to keep my property is good condition (e.g. not leaving trash in the house, cleaning, regular maintenance)	
CCB6	I carefully observe the rules and instructions of my residential property	
CCB7	I do things that can make the green real estate firm's job easier	
<i>Real estate purchase intention</i>		
REPI1	I Intend to purchase green real estate when I buy a property next time	Hoque and Alam (2020)
REPI2	Advertisements impact purchase decision related to green real estate	
REPI3	I would pay any price for a green property	
Source: Author's own work		

Table A1.
Measurement
constructs

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ROLE OF EDUCATION AND HEALTH IN ECONOMIC DEVELOPMENT

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Abstract: This research study tries to explore the role of education and health in improving the economic condition of the country. Education and health justifiably are the two most important components of the social sector. Investment in these two areas contribute to the economic development of the country by raising the income of the poor and maintaining a healthy living. Poverty being one of the major issues of a country can be resolved with proper functioning of the social sector. Affordable and quality education and healthcare can be a great boost to the human capital. In the current era, the increase in human capital is as important as the increase in physical capital. The study focuses on how important education and health is for the social and economic development of a country. It is the government's responsibility to provide its people with basic amenities, good and affordable education and a proper healthcare system.

Keywords: Social Sector, Budget, Education, Health, Human Development Index.

Introduction

Economic development is a broad term which deals with improvement in the physical and social structure of the country. The policies for the purpose of economic development seek to enhance the well-being of the people and improve their quality of life. It is a measure by which we can calculate how well a country is performing with respect to providing quality life to its citizens. It also deals with using a country's limited factors of production and increasing the welfare of the people. An economically developed country will have a good healthcare system, quality education system, per capita income will be high, standard of living of the people will be better, basic amenities like clean drinking water will be available, the life expectancy rate will be higher, mortality rate will be lower and the country will have a low rate of poverty. Economic development can be achieved only with the proper functioning of the government. The allocation of the budget by the government and spending it efficiently towards improving the human capital is the first step towards economic development. Some of the indicators of economic development are:

1. Human Development Index (HDI) - It includes life expectancy index, education index, income index.
2. Human Poverty Index (HPI) - It was introduced by UNDP to measure the performance of low-income countries. It also studies literacy rate, absolute poverty rate, life expectancy rate, availability of healthcare and safe drinking water.
3. Genuine Progress Indicator (GPI) - It takes into account factors like pollution level, inequality rates, crime rates, value of education etc.

Other indicators include Growth Rate of National Income, per capita income, per capita consumption, Physical Quality Life Index etc. One of the major goals of the government is to provide its people a good environment for living along with employment, education, physical and mental health. Education and health, the two most vital heads under social sector, have gained importance over the years. In the primitive years, investment in human capital was not relevant in most countries. Whereas in the current times, it has been observed that a basic education and decent health facilities enhances the skills, increases the productivity and improves the quality of life of the people. It is also noted that investment in health and education is complementary to each other. If the people are healthy it is easier to educate them and educated

people can develop more human capital. On the other hand, educated people will be aware of their health conditions and also take appropriate measures. Therefore, education and health are two fundamental factors of economic development and investment in these areas also play a pivotal role in the development of the nation.

The key to social prosperity is not only the quantitative increase of educational opportunities, but also the qualitative enhancement of the level of education delivered to the labour force.

Review of Literature

Eggoh et al., (2015) in their study finds that with respect to African countries expenditures on health and education have a negative impact on economic growth due to various economic and political factors. The government spending on the education sector is more inefficient than spending in the health sector. Therefore they claim that spending in the health sector will contribute positively in the education sector as well.

According to Ozturk I. (2001), economic development cannot take place without proper investment and development of the education sector. An educated population will promote economic development as will enhance the productivity of the nation which will in turn increase the per capita income of the country.

Piabuo S.M. & Tieguhong J. C. (2019) says that both health and education sectors are fundamental components of economic growth and proper expenditure on these components helps in achieving higher growth rates. They suggest raising funds for these sectors by imposing higher taxes on ostentatious products and harmful products and the revenue generated can be invested in these sectors. They have rightly pointed out that countries poor in governance will not be able to achieve the desired outcome despite a good amount of investment. Therefore, it is important that resources are utilised efficiently especially in countries where these resources are scarce.

Raghupathi V. & Raghupathi W. (2020) finds out that economic indicators like per capita GDP, productivity and income are closely associated with expenditure in the health sector. They mention in their paper that government expenditure on the health sector is the key to higher economic performance and boost the well-being of the people.

Aim of the Study

The aim of the study is to find a correlation between human capital (education & health) and economic development.

Research Methodology

The paper is descriptive in nature. Data has been collected from various journals, articles, government reports, and research papers. The analysis is mostly in the textual form. The background of the study area has been explained in detail to get a clear understanding of the topic.

Role of Education in Economic Development of a Country

Education can be seen as one of the most important forms of investment in the current era. It plays a vital role in the development of human capital. In earlier times, expenditure on primary and secondary expenditure was negligible. The transformation took place in the 20th century with the advancement of science and technology which led to the production of better quality goods and betterment in the techniques of production. This led to the production of more commodities to cater to the needs of the growing population. This in turn led to the sharing of knowledge from person to person as well as from country to country. For a nation to be productive, it needs people with skills, education and knowledge which will help the nation to survive in the international markets. A country's standard of living can be determined by

seeing how well the skills and knowledge of human capital is being utilised and taken care of.

Providing quality and availability of education at different levels also is challenging for many countries. Students completing their basic education would like to go for higher studies, which may or may not be possible due to various factors like unavailability of higher technical education nearby, costly education, restrictions from family, financial constraints, the need to start earning for the family etc. Even though girl child education has come a long way, still there are certain communities who disregard this notion. In certain parts of the world, girl child education is still considered as a privilege and not a right. Investing in education for girls is probably one of the most efficient types of investment a country should make. Educating them will lead to better understanding of family finances, health, child bearing, birth spacing, educational prospects for their children and lower infant mortality rate among many more benefits. Therefore, it is of utmost importance to introduce policies and schemes to bring more girls into education and make them and their families aware of the importance of educating a girl child.

A learned population is to understand the functioning of world markets. International trade is one of the most focused areas in the current times where nations work together as well as compete with each other to be the dominating player across markets. According to the theory of Absolute Cost Advantage by Adam Smith, economics can grow more effectively if they produce the commodities they are efficient in producing. Therefore knowledge is required to achieve this level of efficiency in the production of goods. For trading internationally, it is very important to produce goods of good quality while also reducing the cost of production. This shows that technical knowhow and systematic methods of production are necessary to meet the demand of the people in international markets. Therefore, a country needs a good education system to prepare the young population to match up with the international standards.

A country lacking in physical resources, raw materials and other natural resources should necessarily focus on the development of their human capital. Only by developing the human capital will they be able to efficiently use the available resources. Even if resources are available in abundance, it is important to use them proficiently. So along with primary and secondary education, technical knowledge, training, research and development, learning by doing, aptitude boost should be given utmost importance. Education will impact economic development only if it is utilised in the right way.

Role of Health in the Economic Development of a Country

As an effective education system, a good healthcare system is a fundamental requirement for any nation for its growth and development. It is important to provide information regarding health and nutrition at the basic school level. Students should be made aware of living a healthy lifestyle. In the current times, where diseases are so widely spreading it is important to spread awareness about the same. It is also important to provide vaccines to children so that these diseases can be prevented. Underdeveloped countries suffer the most in this area where the availability of proper health care facilities are scarce. Children in these countries suffer from diseases like polio, hepatitis etc which could have been easily prevented with vaccinations. Even if these vaccines or medicines are available, people might not be aware of it. Therefore, it is important that people have the complete knowledge regarding spread and treatment of the common diseases in their area. Safe and clean drinking water should be available to all. Unclean drinking water can cause many diseases like cholera to spread uncontrollably. Girls should be made aware of the safe practices for menstrual hygiene. Underdeveloped and developing countries are heavily lacking in basic healthcare amenities like hospitals, clinics, medical equipment etc. with lacking medical infrastructure and other provisions, the mortality rate of these countries increases along with death during childbirth and also infant mortality rate. It is a simple realisation that countries that are suffering from chronic health issues, how will they develop economically? How are they going to contribute to society when they themselves are struggling with life and death situations. Therefore, to look into these matters and many more, governments

both central and state, should allocate budget and make sure the expenditure on the healthcare system is done efficiently. The government should provide its people with proper healthcare facilities along with health programmes and schemes to benefit its people. Any country will long for a healthy population as it will lead to higher productivity and in turn will increase the per capita income of the country. A healthy population seeks to develop new skills, advancement in technology, and focus on educating which is bound to increase the income and social well-being of the people. In cases where a country is going through extreme poverty will not be able to provide proper healthcare and medical facilities to its people. Bad environment conditions lead to chronic diseases and low life expectancy rate and reduce the productivity rate of the labour force. Another drawback is that all the regions of a country or all the countries don't grow together at the same pace. One of the major reasons for disparity in development in different regions is poor medical facilities in some regions and advanced medical and healthcare facilities in other regions. To bridge the gap between these regions it is important to invest in regions where facilities are mostly lacking.

With the advancement in technology and medical science it is important that people reap its benefits and aid in the growth and development of their nation. An underdeveloped country seeking to develop and provide a better living environment for its public should look into investing more in its human capital. Once the human capital is developed it will cause a positive chain reaction in the economy. A healthy individual will look to contribute more towards the economy. He will invest more in education as, with the increase in life expectancy, they aim to lead a better quality life with higher income and healthy lifestyle. Healthy people have a positive attitude towards life. They are more energetic, skilled and have a vibrant approach towards life.

During the unprecedented COVID-19 pandemic it was realised that the countries were not fully equipped to face such a catastrophe. The healthcare system worldwide collapsed and the death rate began to rise rapidly. Even the developed countries faced enormous challenges in arranging medical equipment and medicines. Underdeveloped and developing countries along with the huge loss of life, suffered great economic loss. Economies were crippled due to loss of livelihood. Had we been prepared for such a crisis its effect wouldn't have been so devastating. At least now, in the post pandemic era, governments should understand the importance of investing and expansion of the health care sector. Governments should facilitate more research and development, better and affordable health care facilities and most importantly spread awareness regarding the importance of leading a healthy life.

A Case Study on the Country of Central African Republic (CAR)

Central African Republic, a country in the heart of Africa has a scanty population of 5.4 million people. The country being rich in natural resources and agricultural potential haven't reaped its benefits for its population. Human capital and Human Development Indicators place the country in the bottom of the list. Over the last four decades the country has faced tremendous violence, limited availability of basic services for its people, inadequate infrastructure and widespread gender-biased violence.

In 2020, 71 per cent of its population lived below the international poverty level which was \$1.90 per day in PPP values. The country is still one of the poorest countries, being near the bottom of the UN Human Development Index. Its HDI rank is 188 out of 189 countries according to 2020 data. It faces a mortality rate of 882 per 100,000 live birth which is among the highest in the world. According to the unicef report 2020, the death rate among children under the age of five is sixth highest in the world with 116 children dying before their fifth birthday. The life expectancy of CAR is 53 years. Chronic malnutrition affects more than 40 percent of the population. The fertility rate is also recorded as high as 6.2 children per woman.

The country faces severe shortage of medical facilities and skilled healthcare workers. In the year 2010, the government of CAR spent US\$6 on health per head (Green, A. 2012). It has been seen that financial aid from international organisations and the government has been deteriorating. It lacks access to vaccinations

for easily preventable diseases which further increases the mortality rate of the country. Due to lack of awareness and treatment facilities, people dying due to diseases are also high. Even if medical facilities are available in the rural areas, it's basic first aid. Despite malaria being the leading cause of morbidity and death, only 26% people in these areas have access to the treatment. Women also face challenges due to lack of a proper healthcare system. Many lives are lost during child birth and unsafe abortions.

The COVID-19 pandemic affected the country of CAR adversely. According to the Central African Republic Humanitarian Situation Report by unicef, 57 percent of the population will require humanitarian assistance in 2021, which includes 1.3 million children. They also reported that 3 percent of the population will be experiencing difficulty in surviving due to acute vulnerabilities. Education cluster reports that around 1.4 million children dropped out of school after the pandemic.

The below table shows the current health expenditure (% of GDP) in CAR

Year	Per Capita (US \$)	% of GDP
2010	\$18	3.83
2011	\$20	3.87
2012	\$21	3.94
2013	\$18	4.95
2014	\$21	4.91
2015	\$19	5.03
2016	\$22	5.44
2017	\$30	6.67
2018	\$54	10.99
2019	-	7.75

Source: World Bank Data

Source: macrotrends.net

Here we can see that there is a marginal increase in the health sector spending till 2018 and the percentage goes down in 2019. The per capita value is very less compared to developing and developed countries. If the expenditure doesn't increase the future generation will be suffering from major health challenges.

Through this small overview it is understood that an underdeveloped country like CAR needs more than just funding and policies to develop. The core of the economy has to be lifted up to get it moving towards economic development.

Conclusion

An upward moving growth rate and an incremental level of economic development is what every country strives for. To achieve this goal numerous policies and schemes are being undertaken by the governments. The ultimate goal is to keep the citizens of the country happy and satisfied. Growth in the human capital is a stimulant for economic development. Quality education and good health is a major challenge faced by most of the developing and underdeveloped nations of the world. Countries are striving to get more funding to allocate in these sectors. Many underdeveloped and developing countries face challenges with regards to basic amenities. In these countries human capital is the least focused component. As the study concludes that it is important to develop the human capital in order to achieve higher levels of economic development, it is important for the governments to make sure that there is proper allocation of resources. The budget

allocated to the education and health sector needs to be used efficiently to reap its maximum benefits. Along with allocation of budget, it is essential to provide the people with a healthy living environment where peace and prosperity will prevail.

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SIGNIFICANCE OF BIG DATA ANALYTICS FOR ORGANIZATIONAL EFFECTIVENESS

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Abstract

Effective risk management techniques can be developed using big data analytics to find new dangers in data trends. Businesses may make quicker and better decisions with the help of the insights business users derive from pertinent data. Businesses can gain timely insights on sales, marketing, finances, product development, and other topics with the aid of data analytics. It enables teams within organisations to work together and get better results. Businesses can improve future business operations by analysing historical business performance. The researchers have collected the data from 200 employees working in information technology sector using survey method with the help of well-structured questionnaire. The researcher identified that descriptive research design and Non probability convenience sampling method is suitable for the research study. The findings of this study will be useful to many companies to sustain in the competitive world.

Keywords: Big data analytics, organizational effectiveness, Analytic methods, Analytic tools etc.

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1. Introduction

The phrase "Big Data" has recently been used to describe datasets that grow to sizes that make it challenging to handle them with traditional database management systems. They are data sets that are too big to be recorded, saved, managed, and analysed in a timely manner with the aid of commonly used software tools and storage platforms. Due to the continual increase in big data volumes, a single big data collection can currently hold anywhere from a few dozen terabytes (TB) to many petabytes (PB) of data. Massive data might be difficult to obtain, store, search, share, analyse, and show as a result. Businesses are currently studying enormous amounts of extremely detailed data in attempt to discover anything new.

Approaches to Big Data

1. Performance Management
2. Data investigation
3. Sociological Analysis
4. Decision-Making

Challenges to Big Data Analytics

1. Knowledge Gap Professionals
2. Lack of adequate comprehension of Massive Data
3. Data Growth issues
4. Confusion while Big Data Tool selection

Literature Review

Big Data's unique qualities, such as their velocity and variety, present a number of difficulties when choosing features. Big Data is inherently complex and noisy since it comes from a variety of sources. Due to the heterogeneity, accuracy, and incompleteness of the data, feature selection must be done differently (Rong et al., 2019). These qualities also give us a variety of options for choosing features and assessing the current feature selection methodologies (Li & Liu, 2017).

Appropriate data processing and management could reveal fresh information and make it easier to quickly respond to new possibilities and problems (Chen et al., 2013). However, it appears that the expansion of data in the digital world is outpacing the development of the various computing infrastructures already in place. Given the volume of data the world is currently producing, established data processing technologies, such as databases and data warehouses, are becoming insufficient. Iterative and time-sensitive analysis of the vast amount of data is required (Juki, Sharma, Nestorov, & Juki, 2015).

Big data analytics are "the widespread use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive choices and actions," according to Davenport and Harris (2007). In other words, the raw material in this case is data, which is processed

using a variety of statistical methods. What is happening at the organisational level is the implementation of a new management style that is based on evidence, as opposed to making decisions based solely on intuition or prior experience, or so-called "gut feelings." Big data refers to high volume, high speed, and/or high diversity information assets that call for creative, cost-effective methods of information processing to improve insight, decision making, and process automation (Gartner, n.d.)

In light of the big data analytics phenomenon, numerous company reports appear to point to the same fundamental problem, with the majority of the difficulties businesses experience in generating commercial value being of an organisational character (Kiron, 2017). There is still little knowledge of what organisational factors are crucial when seeking to derive economic value from investments in big data analytics, despite the fact that this issue is becoming more and more evident in academic literature and practise (Abbasi et al., 2016; Mikalef, Framnes, et al., 2017). Furthermore, little is known about how the context affects these skills and forms the elements essential to achieving performance improvements (Günther, Mehrizi, Huysman, & Feldberg, 2017).

2. Research Methodology

Objectives of the study

- To study the concept of big data analytics.
- To study the big data analytics tools and methods.
- To study the impact of big data analytics on organizational effectiveness.

Hypothesis of the Study

H1: There is a significant impact of big data analytics on decision making activities of an organization.

H2: There is a significant impact of big data analytics on cost reduction of an organization.

H3: There is a significant impact of big data analytics on sales growth of an organization.

H4: There is a significant impact of big data analytics on market share of an organization.

H5: There is a significant impact of big data analytics on profitability of an organization.

Scope of the study

- The study is conducted across Pune City.
- The study is related to only information technology sector.

Following methodology was designed for the study to collect primary data.

- a. Identify a sample of 200 employees working in information technology sector from Pune City, using convenience sampling.
- b. Design and validate questionnaire

- c. Seek responses on a 5-point frequency scale.
- d. Conduct the survey
- e. Summarize the responses
- f. Analyze the results

Scheme formed for testing of hypotheses

- a. Responses were collected under 2 sections
- b. For each of the sections an average was calculated.
- c. Percentages to questions under a particular section of the questionnaire were averaged to get a single score for that section,

- d. P-values were calculated, and the null hypotheses was checked for rejection or non-rejection.

Reliability and Validity

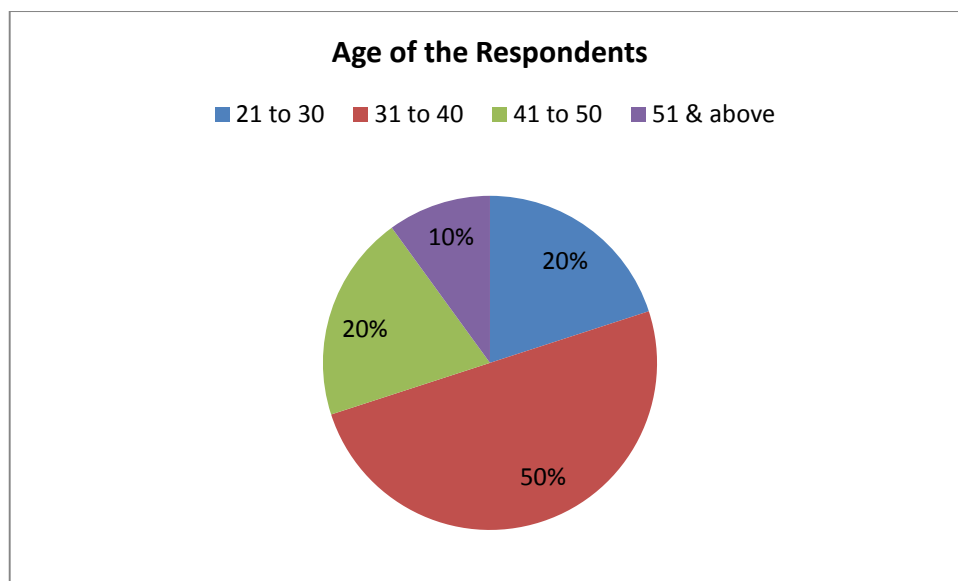
The researcher has carried out reliability test using SPSS. The Cronbach's Alpha identified is 0.840, and it is more than 0.700, that's why the Questionnaire is measured to be reliable. The researcher has used face validity and content validity and confirmed that this research tool is valid for the study.

Research design

Type of Research Design	Descriptive Research Design
Sampling Technique	Non-Probability Convenience Sampling
Sampling Area	Pune City
Sample Size	200 employees
Primary Data	Well-structured questionnaire
Secondary Data	Research papers, Articles, Books, Journals etc.
Data Analysis tools	IBM SPSS-20 and Ms Excel-2010

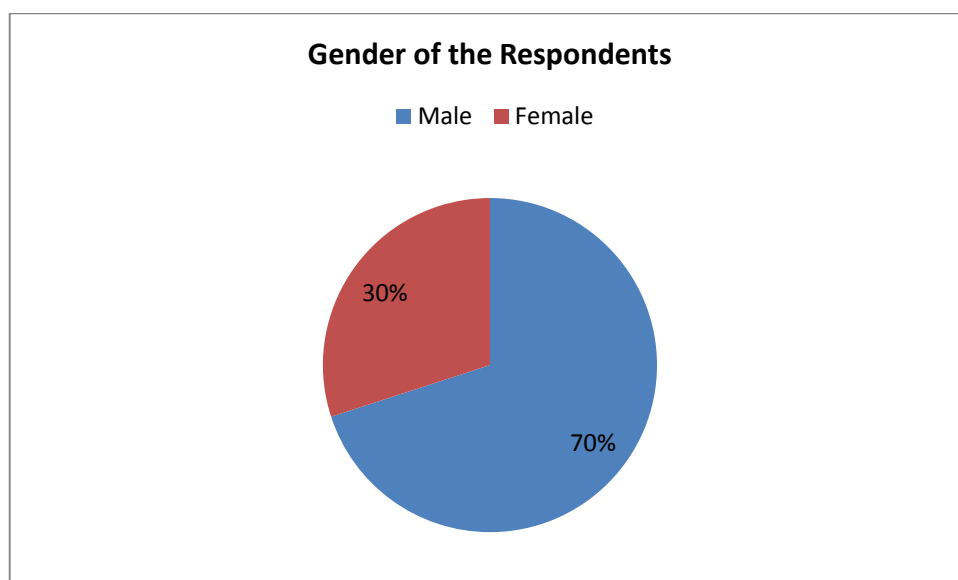
Data Analysis**Age of the Respondents**

Age	Frequency	Percentage
21 to 30	40	20
31 to 40	100	50
41 to 50	40	20
51 & above	20	10
Total	200	100



Gender of the Respondents

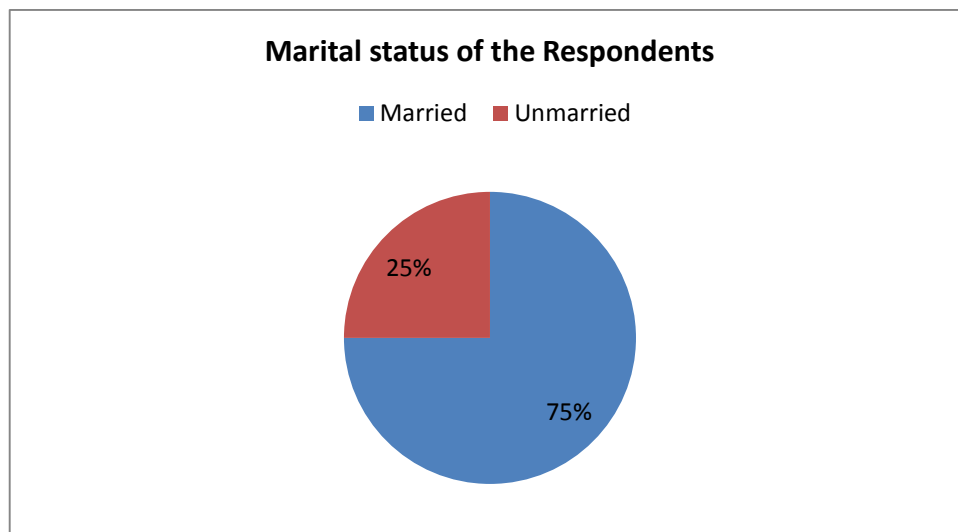
Gender	Frequency	Percentage
Male	140	70
Female	60	30
Total	200	100



Marital status of the Respondents

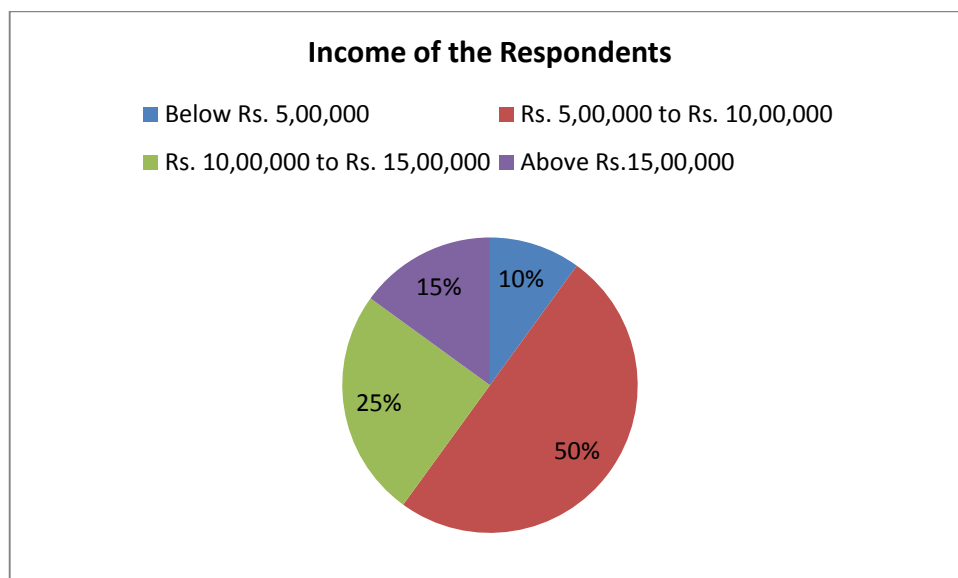
Marital Status	Frequency	Percentage
Married	150	75

Unmarried	50	25
Total	200	100



Income level of the Respondents

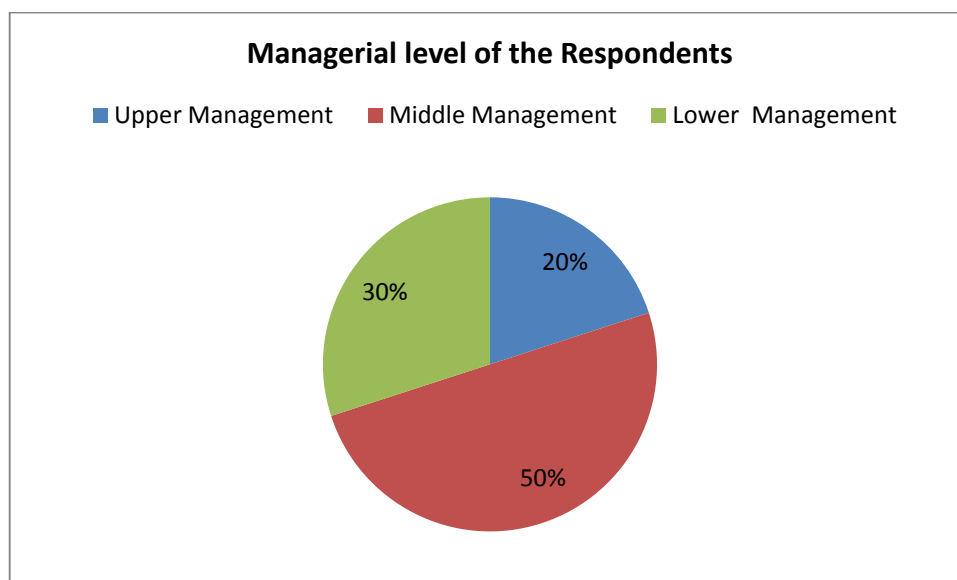
INCOME	Frequency	Percentage
Below Rs. 5,00,000	20	10
Rs. 5,00,000 to Rs. 10,00,000	100	50
Rs. 10,00,000 to Rs. 15,00,000	50	25
Above Rs.15,00,000	30	15
Total	200	100



Managerial level of the Respondents

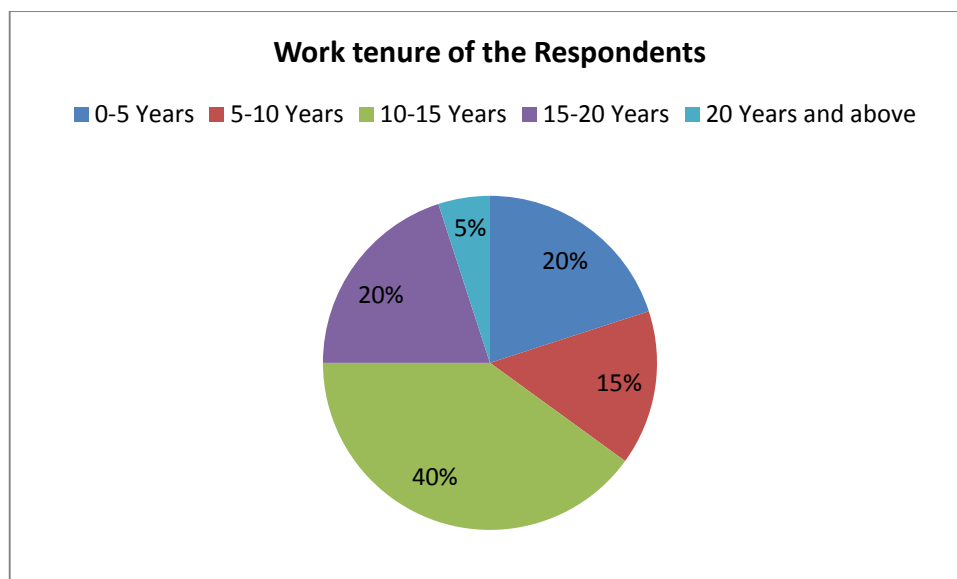
	Frequency	Percentage
Managerial Level		
Upper Management	40	20

Middle Management	100	50
Lower Management	60	30
Total	200	100



Work tenure of the Respondents

	Frequency	Percentage
Work Tenure		
0-5 Years	40	20
5-10 Years	30	15
10-15 Years	80	40
15-20 Years	40	20
20 Years and above	10	5
Total	200	100

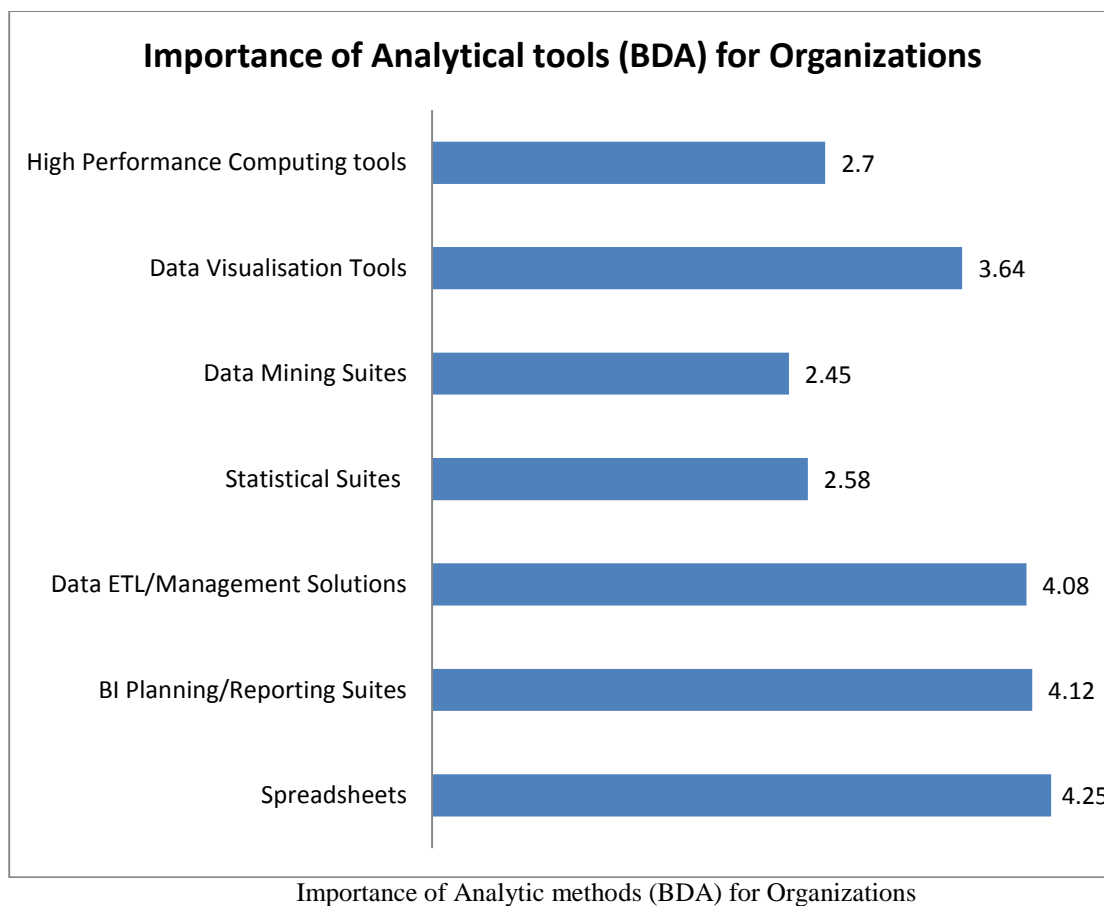


Measurement tool - 5 Point rating scale

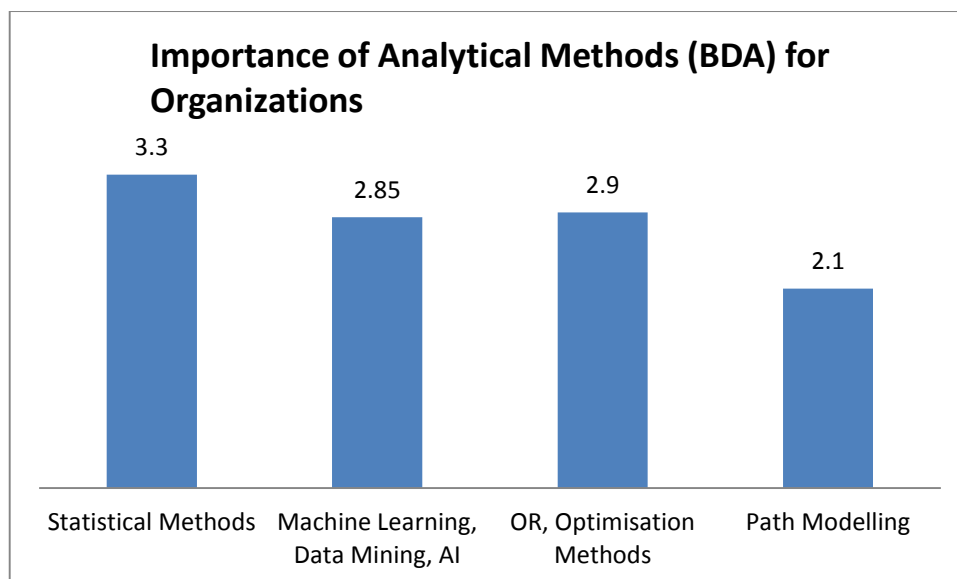
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Rating	1	2	3	4	5

Importance of Analytic tools (BDA) for Organizations

Analytic Tools (BDA)	Mean
Spreadsheets	4.25
BI Planning/Reporting Suites	4.12
Data ETL/Management Solutions	4.08
Statistical Suites	2.58
Data Mining Suites	2.45
Data Visualization Tools	3.64
High Performance Computing tools	2.70

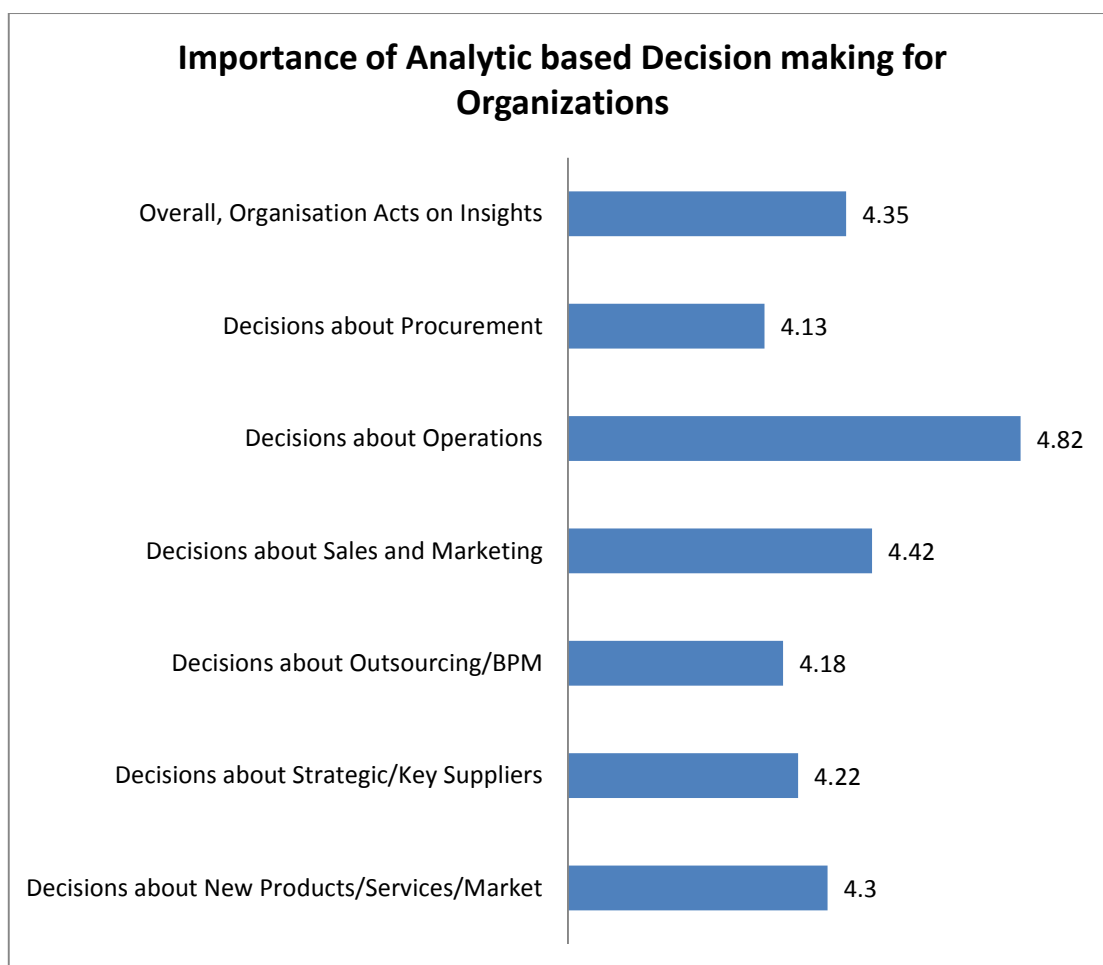


Analytic Methods (BDA)	Mean
Statistical Methods	3.3
Machine Learning, Data Mining, AI	2.85
OR, Optimization Methods	2.9
Path Modeling	2.1



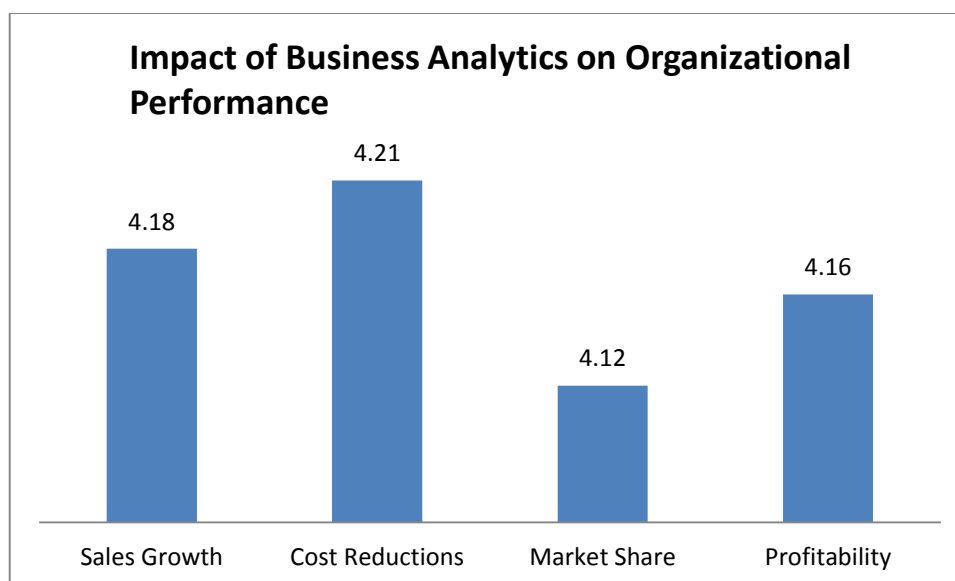
Importance of Analytic based decision making for Organizations

Analytic-Based Decision-Making	Mean
Decisions about New Products/Services/Market	4.3
Decisions about Strategic/Key Suppliers	4.22
Decisions about Outsourcing/BPM	4.18
Decisions about Sales and Marketing	4.42
Decisions about Operations	4.82
Decisions about Procurement	4.13
Overall, Organization Acts on Insights	4.35



Impact of Business Analytics on Organization Performance

Performance	Mean
Sales Growth	5.13
Cost Reductions	4.72
Market Share	4.84
Profitability	4.94



Hypothesis Testing

		BDA in Organization	BDA in Decision making	BDA in Cost reduction	BDA in Sales growth	BDA in Market share	BDA in Profitability
BDA in Organization	Pearson Correlation	1	0.174	0.147	0.135	0.133	0.128
	Sig. (2 tailed)		0.001	0.001	0.002	0.002	0.001

From the above table we can say that all the hypothesis of this study H1, H2, H3, H4 and H5 are accepted as all the test results are significant. Big data analytics is positively correlated in decision making ($r = 0.174$, $p < 0.01$), Big data analytics is positively correlated in cost reduction ($r = 0.147$, $p < 0.01$), Big data analytics is positively correlated to sales growth ($r = 0.135$, $p < 0.01$), Big data analytics is positively correlated to market share ($r = 0.133$, $p < 0.01$), Big data analytics is positively correlated to profitability ($r = 0.128$, $p < 0.01$).

3. Conclusion

From the present research study it is observed that there is a significant impact of big data analytics on organization effectiveness.

Contribution to Industry

This research study will be helpful to information technology sector to design new strategies related to big data analytics and its implementation for organization effectiveness.

Contribution to Academicians

This research study will be helpful to academicians to develop theoretical models related to big data analytics and its tools..

Contribution to Students

This research study will be helpful to students to understand the concepts like big data analytics, various tools and methods of big data analytics, decision making, organization effectiveness, etc

Scope for the further research study

There is also a further scope for the research on the topics like study on various tools and methods of big data analytics, future of big data analytics, effectiveness of big data analytics for various organizations, importance of big data analytics for employees and customers etc.

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AN OVERVIEW OF THE PRINCIPLES THAT WILL GOVERN CASHLESS TRANSACTIONS IN THE FUTURE

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Abstract

The current paper examines the history of cashless transactions in India. Cashless payment methods are an integral part of the transactional system in India and these have huge potential for growth. These methods are convenient for consumers as well as merchants given their low costs, speed of execution, and the convenience of not carrying much cash. India has a significant number of offline transactions, and according to industry estimates, the number is expected to grow with the increase in demand. The biggest challenge that India has to face is that most of its population still operates on a cash-based system and it will take time for the country to move away from this cash-based system. By having access to basic financial services like bank accounts and credit, Indians will be able to seamlessly make transactions through non-cash platforms. The findings of this systematic review of literature show that the widespread use of cashless payments is a recent occurrence; however, cashless payments have been in vogue for decades. It explores further in the 14 basic principles that govern cashless transaction and its emergence over the years. The paper contributes to original knowledge by introducing the basic principles that will govern cashless transactions in the future. Introduction

Keywords: cashless payments, cash-less transaction, mobile commerce, value added services

1. Introduction

Cashless payment methods are an integral part of the transactional system in India and these have huge potential for growth. These methods are convenient for consumers as well as merchants given their low costs, speed of execution, and the convenience of not carrying much cash. India has a significant number of offline transactions, and according to industry estimates, the number is expected to grow with the increase in demand. The biggest challenge that India has to face is that most of its population still operates on a cash-based system and it will take time for the country to move away from this cash-based system. By having access to basic financial services like bank accounts and credit, Indians will be able to seamlessly make transactions through non-cash platforms.

A cashless economy is characterized by many negative and positive effects. On the negative side, this would mean an impending crisis of sorts: no one can simply run away with money anymore because there are machines that check if someone has paid or not (Stiglitz (2010)). On the positive side, it would mean that the struggle to monetize a sense of social connectedness may be easier.

Background

In India, there have been several changes that have affected the ways in which money transfers happen. These include the emergence of mobile banking and the introduction of newer modes for commercial payments, such as card-based systems, internet banking and other digital platforms. In this paper, we present a historical overview of cashless transactions in India. The first section describes how cashless transactions came into existence in India and how it has been available over the years until recent times. The second part examines the rise of electronic payments in India and its use in making tax evasion easier. What is happening with cashless

transactions in India today and how it has established a foothold, what is changing, and also the future of cashless transactions in India.

Cashless transactions: A historical overview

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In India, there have been several changes in recent years that have affected how money transfers happen (Singh (2014)). These include the emergence of mobile banking and the introduction of newer modes for commercial payments, such as card-based systems, internet banking and other digital platforms. In this paper, we present a historical overview of cashless transactions in India.

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History of cashless payments in India

Cashless payments have been available in India for a number of years now, with various government initiatives being put in place to increase their adoption rate. However, it was not until the past few years that cashless payments became a preferred payment method. The cashless transaction (Ct) in India has been incorporated in a number of government initiatives. In 2001, the government introduced the Aadhaar number and its related services such as for its biometric verification, for e-governance, etc. Also in 2001, the National Payments Corporation of India (NPCI) got set up by RBI to facilitate payments on cards and this was followed with the launch of PDS Payment System (PPPS), which was considered to be a major solution to eradicate corruption from the PDS system. Several other projects were launched by the UPA such as the National Rural Employment Guarantee Act (NREGA), MGNREGA, and the National Social Assistance Programme (NSAP). All of these government initiatives are aimed at making India cashless and promoting e-transactions.

NCAER recommends that for India to make a significant inroad into cashless payments, policies should be made so that it does not have to depend on bank accounts. These include making other non-bank intermediaries provide payment services on their platforms and with help from banks. Incentives can be provided for merchants who offer acceptance points across different channels such as card, mobile payments and even QR codes. Since these points can benefit from the scale and reach of bank distribution networks, it is crucial that banks do not have to invest heavily into the infrastructure of such points.

But making cashless payments popular in India has not been easy. According to a study done by Harsha Dutt, India does not have a reliable mobile channel for payment transactions as most mobile phones in India are prepaid ones. The main reason for this is that most of the operators use pre-paid SIM cards to make payments and because it is difficult to offer prepaid plans with

no balance limit, the amount they can pay cannot be higher than Rs.10-15 per transaction. Mobile payments through banks have been a popular choice as far as volume of transactions is concerned but the low volumes of this payment method are likely to continue.

The traditional modes of payment in India, such as coins and paper money, have not been replaced by electronic means. They continue to be the main source of payments and only the growth in electronic transactions has increased its share. This is because there are several other modes for making payments that are preferred by consumers and merchants, such as debit cards, credit cards and mobile telephony. In rural areas especially there is a strong preference for cashless payments over cash based ones where even credit card use is low. The comparison with countries like China shows that cashless transactions are not yet popular in India.

2. Review of Literature

Mishra and Agrawal (2012) have provided a detailed overview of cashless transactions in India. They discuss the main drivers that are responsible for this shift to cashless transactions and the various strategies that have been introduced to promote the trend. Mishra notes that India benefits from being a low-cash economy, which has led to its success in becoming a modern economy. Transactions, both electronic and non-electronic have become more important over time as it is believed that they also help fuel economic growth. And because of its size, it is also important to attract investment in this area.

The study also discusses the various government initiatives that have been used to promote cashless transactions in India. These include the launch of Aadhaar, income certificates and linking PAN with bank accounts. The latter has been employed so that only those who have a bank account pay more. It has also forced the use of cards and mobile phones for transactions. However, Mishra notes that there is still scope for improvement in promoting cashless transactions as some parts of the country are not on board yet.

Kaur and Kumar (2011) also discuss the various initiatives to promote cashlessness in India. They also provide a comprehensive list of strategies and strategies that have been used to encourage cashless transactions in India. The authors argue that there is huge potential for growth among Indian consumers as the majority of them use cash for payments and even for their daily purchases. The poor financial literacy and lack of awareness about the advantages of using electronic means to make transactions is also a problem. The study argues that the government could encourage individuals to use digital payment methods by providing subsidies, rebates and tax benefits.

The study also discusses the drawbacks of using non-cash payments as well as digital money for making payments in India especially in rural areas. It argues that the government should provide subsidies and other incentives for merchants who use electronic payment methods. It should also focus on developing mechanisms for using this method in rural areas where it is more likely to be used. This would allow these regions to make a transition to becoming cashless. The study recommends that the government should focus on increasing awareness about the benefits of using digital money as well as promoting cashlessness and it should actively campaign in these regions as well.

Zaware (2012) also provides a detailed overview of the various government initiatives used to promote cashlessness in India. He also discusses some of the problems that have been faced while trying to popularise cashless payments in India. According to Zaware, this is because there are few incentives for people to use electronic means and it is not easy for merchants to accept these methods. The drawbacks of using e-payments include their lack of mobility and their limited acceptance. Even if they are accepted, it is impossible for people who do not have accounts in banks or with mobile phone payment providers to use them.

Zaware & Dutt (2012) provide a detailed review of the paper by Mishra and Agrawal (2012). They agree with the authors that cashless payments in India are likely to continue growing and

the most dominant form of transactions will be made electronically. However, they argue that there is no need to promote cashlessness excessively as India is already a low-cash economy and can be one of the success stories when it comes to this payment method. The researchers note that this move also comes after a period of stability in this payment method, which has allowed citizens to build financial confidence.

The study also provides insight into the various government initiatives that have been used to promote cashless transactions in India such as biometric-based identification systems. They also note that India is one of the few countries in the world that have chosen cashlessness and not cash over a long period. The authors state that the government needs to continue its efforts to promote electronic means of payments or other government schemes may not be effective.

The paper by Mishra and Agrawal (2012) is clearly ahead of its time. As there is no mention of the government initiatives that have been taken to encourage cashless transactions, it cannot comment on them in detail. However it does provide a short overview on how to encourage use of electronic payments such as credit cards and mobile phones. It also explores some of the problems that could affect a country such as India if it opts for cashless payment methods.

The paper by Mishra and Agrawal (2012) provides an in-depth review of the various government initiatives used to promote cashlessness in India. It also provides a detailed discussion regarding how to encourage the use of payment cards, mobile phones and other means for using electronic payments among Indians. The paper rightly notes that there has been very little progress made in promoting cashless transactions in India and that advocates need to do more to encourage them. In fact, there is currently no coherent policy framework to deal with this technology at all which is discouraging both policy makers and citizens from using these methods.

There are several other studies performed to shed light on the current status of cashless payments in India. In fact, several reports by different organisations have also been presented to highlight the benefits of cashless transactions in India and the progress that has been made towards achieving this goal.

The study by Turchi (2013) examines the various government initiatives that have been used to promote cashlessness in India. It also highlights some of the drawbacks of using cashless payments and how they are likely to affect it. Turchi notes that while there is interest in making a transition to a more cashless economy there is still a reluctance among people to use these methods extensively. He notes that cashless payments are likely to grow in India but there needs to be more action taken by the government to promote them.

The paper by Turchi (2013) also discusses the various government initiatives that have been used to encourage cashlessness in India. It also discusses the problems associated with them and how they will affect their use in the country, especially among rural Indians who are less likely to use these methods. The paper notes that this is due to a lack of awareness about electronic means of making payments which is why some of these methods, such as cards and mobile phones cannot be used extensively without any incentives being offered. It further highlights that it is likely that the government will choose to promote cashless payments rather than options such as vouchers and RFID (Radio Frequency Identification).

The paper by Turchi (2013) also provides insight into the list of business practices that are needed to encourage the use of electronic payments in India. It notes that these measures need to focus not just on business owners but also on consumers as they are more likely to use alternative methods. The paper recommends a special tax incentive (rather than a general one) be given to merchants who are willing to accept alternative payment methods. This would make it worthwhile for these merchants, especially in rural areas, to switch from using cash payments and move to using electronic ones instead.

Several authors have studied the challenges faced in promoting cashlessness in India such as the lack of a coherent policy approach which is why there has been very little progress made so far. The authors note that since there has been no clear move to encourage cashless payments, it is likely that their use will not become widespread. Without government initiatives, it will be difficult for citizens to make an effort to use electronic means of payments (Dutt & Nair, 2013).

Regarding the overall implementation of demonetization, several authors like Amin and Goyal (2012) note that the decision on demonetization was taken as an abrupt measure, which was followed by a period of heightened uncertainty, which had created uncertainty among all stakeholders. This has led to people remaining cautious about their spending and transactions. The paper notes that the government needs to work on ways to mitigate the effect of this decision on its citizens.

The paper by Amin and Goyal does not directly provide insight into what effect demonetization will have on economic activity in India, except for noting that there have been increases in payments with cash since November 2016.

3. In the light of the literature reviewed, the following are the basic principles that will govern cashless transactions in the future:

1. Principle of Security: This principle involves the safeguards that are needed to protect both the privacy of the customers and their payments. The security of cashless transactions is a major concern, especially when it comes to direct debit transactions since nearly all data on these transactions is held in electronic form.
2. Principle of Choice: This principle involves giving customers a choice as to which payment instruments they would like to use. Customers will be able to make this choice by choosing from methods that are appropriate for them. For example, if a customer wants to carry out a transaction immediately then cash would be more appropriate than online methods that take time to provide results.
3. Principle of Transparency: This principle involves making customers aware of the charges they incur when using various payment methods. Customers can then make an informed choice based on their personal preferences and needs.
4. Principle of Flexibility: This principle involves giving people options for making cashless payments such as ATM cards, debit cards, credit cards, mobile based payment systems etc. It also requires that merchants must accept a number of different payment instruments such as credit cards, debit cards and mobile payments.
5. Principle of Personalisation: To achieve this principle, it is important to offer different strategies for using cashless payments based on the income levels (and thus affordability) of customers since those with lower income levels are more likely to use cash than others. It also involves honoring the choices of customers regarding what payment methods they would like to use by making them accessible and available.
6. Principle of Environmental Sustainability: This principle involves minimizing the impact cashless transactions have on the environment by promoting techniques such as mobile banking which makes use of a mobile phone's short-range wireless communication capabilities.
7. Principle of Regulatory Transparency: This principle involves offering fair regulations for using electronic means as well as using transparent methods for calculating costs incurred when using these payments.
8. Principle of Financial Inclusion: This principle is achieved by ensuring that consumers with low income levels are able to benefit from cashless payments without having to pay additional costs (such as charges).

9. Principle of Privacy and Confidentiality: This principle involves giving customers the security they require while using electronic means of payment.
10. Principle of Accessibility: This principle is achieved by making different modes of electronic payment, such as mobile and internet based payments, widely accessible and available to everyone.
11. Principle of Simplicity: This principle involves designing the electronic payment systems in such a way that they are easily accessible and usable for all customers.
12. Principle of Consent, Trust and Honesty: This principle involves building trust between customers and the institutions that offer them cashless payments through credible systems for ensuring safety and security, and use of secure payment systems.
13. Principle of Safety: This principle involves taking steps to ensure that customers are not exposed to unintentional risks when using cashless payments.
14. Principle of Adherence to Law: This principle involves ensuring that cashless payments comply with the laid down laws and regulations.

4. Conclusion

The paper has shown that cashless transactions have the potential to deliver significant economic benefits to India in the long-run. However, there is still a long way to go before cashless transactions can go mainstream since there are many hurdles and challenges that need to be addressed. In the opinion of the authors, it will be important to acknowledge and address these challenges so as to help promote cashless payments in India.

The paper states the basic principles that will govern cashless transactions in the future, and suggests that these principles need to be recognized and addressed in order to help promote cashless payments in India.

This paper has reviewed various literature on the impacts of digital payment systems and also reported on the findings of studies on the relative merits of cash as compared to digital payments. The literature review helped identify a set of basic principles for digital payments, which can then be used as guidance for policy making.

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Background

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2. Review of Literature

Mishra and Agrawal (2012) have provided a detailed overview of cashless transactions in India. They discuss the main drivers that are responsible for this shift to cashless transactions and the various strategies that have been introduced to promote the trend. Mishra notes that India benefits from being a low-cash economy, which has led to its success in becoming a modern economy. Transactions, both electronic and non-electronic have become more important over time as it is believed that they also help fuel economic growth. And because of its size, it is also important to attract investment in this area.

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Kaur and Kumar (2011) also discuss the various initiatives to promote cashlessness in India. They also provide a comprehensive list of strategies and strategies that have been used to encourage cashless transactions in India. The authors argue that there is huge potential for growth among Indian consumers as the majority of them use cash for payments and even for their daily purchases. The poor financial literacy and lack of awareness about the advantages of using electronic means to make transactions is also a problem. The study argues that the government could encourage individuals to use digital payment methods by providing subsidies, rebates and tax benefits.

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Zaware (2012) also provides a detailed overview of the various government initiatives used to promote cashlessness in India. He also discusses some of the problems that have been faced while trying to popularise cashless payments in India. According to Zaware, this is because there are few incentives for people to use electronic means and it is not easy for merchants to accept these methods. The drawbacks of using e-payments include their lack of mobility and their limited acceptance. Even if they are accepted, it is impossible for people who do not have accounts in banks or with mobile phone payment providers to use them.

Zaware & Dutt (2012) provide a detailed review of the paper by Mishra and Agrawal (2012). They agree with the authors that cashless payments in India are likely to continue growing and

the most dominant form of transactions will be made electronically. However, they argue that there is no need to promote cashlessness excessively as India is already a low-cash economy and can be one of the success stories when it comes to this payment method. The researchers note that this move also comes after a period of stability in this payment method, which has allowed citizens to build financial confidence.

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The paper by Mishra and Agrawal (2012) is clearly ahead of its time. As there is no mention of the government initiatives that have been taken to encourage cashless transactions, it cannot comment on them in detail. However it does provide a short overview on how to encourage use of electronic payments such as credit cards and mobile phones. It also explores some of the problems that could affect a country such as India if it opts for cashless payment methods.

The paper by Mishra and Agrawal (2012) provides an in-depth review of the various government initiatives used to promote cashlessness in India. It also provides a detailed discussion regarding how to encourage the use of payment cards, mobile phones and other means for using electronic payments among Indians. The paper rightly notes that there has been very little progress made in promoting cashless transactions in India and that advocates need to do more to encourage them. In fact, there is currently no coherent policy framework to deal with this technology at all which is discouraging both policy makers and citizens from using these methods.

There are several other studies performed to shed light on the current status of cashless payments in India. In fact, several reports by different organisations have also been presented to highlight the benefits of cashless transactions in India and the progress that has been made towards achieving this goal.

The study by Turchi (2013) examines the various government initiatives that have been used to promote cashlessness in India. It also highlights some of the drawbacks of using cashless payments and how they are likely to affect it. Turchi notes that while there is interest in making a transition to a more cashless economy there is still a reluctance among people to use these methods extensively. He notes that cashless payments are likely to grow in India but there needs to be more action taken by the government to promote them.

The paper by Turchi (2013) also discusses the various government initiatives that have been used to encourage cashlessness in India. It also discusses the problems associated with them and how they will affect their use in the country, especially among rural Indians who are less likely to use these methods. The paper notes that this is due to a lack of awareness about electronic means of making payments which is why some of these methods, such as cards and mobile phones cannot be used extensively without any incentives being offered. It further highlights that it is likely that the government will choose to promote cashless payments rather than options such as vouchers and RFID (Radio Frequency Identification).

The paper by Turchi (2013) also provides insight into the list of business practices that are needed to encourage the use of electronic payments in India. It notes that these measures need to focus not just on business owners but also on consumers as they are more likely to use alternative methods. The paper recommends a special tax incentive (rather than a general one) be given to merchants who are willing to accept alternative payment methods. This would make it worthwhile for these merchants, especially in rural areas, to switch from using cash payments and move to using electronic ones instead.

Several authors have studied the challenges faced in promoting cashlessness in India such as the lack of a coherent policy approach which is why there has been very little progress made so far. The authors note that since there has been no clear move to encourage cashless payments, it is likely that their use will not become widespread. Without government initiatives, it will be difficult for citizens to make an effort to use electronic means of payments (Dutt & Nair, 2013).

Regarding the overall implementation of demonetization, several authors like Amin and Goyal (2012) note that the decision on demonetization was taken as an abrupt measure, which was followed by a period of heightened uncertainty, which had created uncertainty among all stakeholders. This has led to people remaining cautious about their spending and transactions. The paper notes that the government needs to work on ways to mitigate the effect of this decision on its citizens.

The paper by Amin and Goyal does not directly provide insight into what effect demonetization will have on economic activity in India, except for noting that there have been increases in payments with cash since November 2016.

3. In the light of the literature reviewed, the following are the basic principles that will govern cashless transactions in the future:

1. Principle of Security: This principle involves the safeguards that are needed to protect both the privacy of the customers and their payments. The security of cashless transactions is a major concern, especially when it comes to direct debit transactions since nearly all data on these transactions is held in electronic form.

2. Principle of Choice: This principle involves giving customers a choice as to which payment instruments they would like to use. Customers will be able to make this choice by choosing from methods that are appropriate for them. For example, if a customer wants to carry out a transaction immediately then cash would be more appropriate than online methods that take time to provide results.

3. Principle of Transparency: This principle involves making customers aware of the charges they incur when using various payment methods. Customers can then make an informed choice based on their personal preferences and needs.

4. Principle of Flexibility: This principle involves giving people options for making cashless payments such as ATM cards, debit cards, credit cards, mobile based payment systems etc. It also requires that merchants must accept a number of different payment instruments such as credit cards, debit cards and mobile payments.

5. Principle of Personalisation: To achieve this principle, it is important to offer different strategies for using cashless payments based on the income levels (and thus affordability) of customers since those with lower income levels are more likely to use cash than others. It also involves honoring the choices of customers regarding what payment methods they would like to use by making them accessible and available.

6. Principle of Environmental Sustainability: This principle involves minimizing the impact cashless transactions have on the environment by promoting techniques such as mobile banking which makes use of a mobile phone's short-range wireless communication capabilities.

7. Principle of Regulatory Transparency: This principle involves offering fair regulations for using electronic means as well as using transparent methods for calculating costs incurred when using these payments.

8. Principle of Financial Inclusion: This principle is achieved by ensuring that consumers with low income levels are able to benefit from cashless payments without having to pay additional costs (such as charges).

9. Principle of Privacy and Confidentiality: This principle involves giving customers the security they require while using electronic means of payment.
10. Principle of Accessibility: This principle is achieved by making different modes of electronic payment, such as mobile and internet based payments, widely accessible and available to everyone.
11. Principle of Simplicity: This principle involves designing the electronic payment systems in such a way that they are easily accessible and usable for all customers.
12. Principle of Consent, Trust and Honesty: This principle involves building trust between customers and the institutions that offer them cashless payments through credible systems for ensuring safety and security, and use of secure payment systems.
13. Principle of Safety: This principle involves taking steps to ensure that customers are not exposed to unintentional risks when using cashless payments.
14. Principle of Adherence to Law: This principle involves ensuring that cashless payments comply with the laid down laws and regulations.

4. Conclusion

The paper has shown that cashless transactions have the potential to deliver significant economic benefits to India in the long-run. However, there is still a long way to go before cashless transactions can go mainstream since there are many hurdles and challenges that need to be addressed. In the opinion of the authors, it will be important to acknowledge and address these challenges so as to help promote cashless payments in India.

The paper states the basic principles that will govern cashless transactions in the future, and suggests that these principles need to be recognized and addressed in order to help promote cashless payments in India.

This paper has reviewed various literature on the impacts of digital payment systems and also reported on the findings of studies on the relative merits of cash as compared to digital payments. The literature review helped identify a set of basic principles for digital payments, which can then be used as guidance for policy making.

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DECODING THE LOSS LEADER STRATEGY – A CASE STUDY ANALYSIS OF JIO'S MARKETING SUCCESS

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ABSTRACT

Marketing is one of the crucial stages of any newly launched product. It helps the business to familiarize its products with the potential customers by listing the features and uses. Effective use of the 4 Ps of marketing is vital for any business that intends to establish its new product in the existing competitive market.

Loss Leading is a pricing strategy where a product is sold at a price below its market cost to attract new customers. Loss leading is one of the usual practices when a new product first enters a market. A loss leader introduces new customers to a service or product in anticipation of building a customer base and securing future recurring revenue. The paper will try to understand the marketing strategy used by the telecommunication company – Jio through a case study analysis.

Key Words – Loss Leader Strategy, Marketing, Marketing Mix

INTRODUCTION

Market entry barriers are relevant when considering new market entry, be it any form of market. However, the competition is considerably less in an oligopolistic market considering the limited number of players, allowing every firm to operate successfully. Breaking into an oligopoly market for any new company with similar offerings is a great challenge as it will have to tackle the strong competition from well-established firms that dominate the space. The players in the oligopolistic market are the price setters. Any changes in the price of the commodity by one player will have a huge impact on the others who are in direct competition with them. Therefore, they generally do not enter into a price war and instead, tend to direct their investments into research and development to enhance their product and also to market them. Entering the oligopolistic market requires a large amount of capital since the existing players have the advantage of economies of scale.

Selecting the right mode of entry and finding the right market are vital and strategic decisions for the company management (Couturier & Davide, 2010). One such notable entry was made by Mukesh Ambani's Jio. With the most exclusive cost leadership strategy, remarkable ingress was made by his company into the Indian mobile telecom sector that revolutionized the whole market of telecommunication.

LITERATURE REVIEW

Loss-leading pricing is a pricing strategy used by businesses wherein the selling price of a commodity is placed below the cost it takes to manufacture them to attract customers and to entice them to repeat the action. (Hess, 1987). According to this strategy, the product is sold at a loss initially, however, they expect the customers to get attracted to the product, thereby creating a customer base and negating the loss. A large market player who carries a wider product range has an incentive to use below-cost pricing to compete with smaller retailers in attracting one-stop

shoppers (Chen, 2012). A study conducted by Patrick DeGarba (2006) concluded that a good loss leader is a well-known brand or a good that is widely purchased and lowering the price of such items will attract customers into the store, who will then purchase other items at the regular price. The argument is that customers who are attracted by the bargain will end up purchasing other products or services that generate higher profits (Cohen et. al, 2004). It is also highlighted that consumer search cost has substantially reduced with the rise of e-commerce, and in many cases, loss leader goods have no obvious complements but many substitutes (Dong et. al, 2020).

Loss leading can be very useful in creating customer traffic which can result in increased sales (Hisashi, 2007). However, this strategy is not free from demerits. Reduced prices will make the customer habitual of discounts and will tend to buy such products only when discounts are offered. This can also undermine brand equity in the long run (Kotler, 2004). It is also argued that large retailers can distort retail competition - large retailers can exercise their seller power by leveraging their market power over parts of the product lines into the more competitive product segments causing huge downside to the small retailers (Paul, 2009). Objectives:

OBJECTIVE

The main purpose of this study is to understand the marketing strategy used by the telecommunication company – Jio through a case study analysis.

METHODOLOGY

The study is primarily based on secondary data. Most of the data collected are from various published sources such as articles, findings and case studies to learn about the impact of Reliance Jio on the telecom industry, which is not possible to collect through primary research due to limitation of time and resource scarcity. The data collected are government data published by TRAI (Telecom Regulatory Authority of India) and also published research papers, articles from online news portals and case studies available online.

JIO – RISE OF DIGITAL REVOLUTION

Unbelievable strength, futuristic outlook, indomitable will and burning passion were all that Dhirubhai Ambani had when he set out to work for his way of living in the lanes of Bombay in 1958. From being a spice dealer to a cloth merchant to a textile producer, it was his ambition, inexhaustible energy, and never dying spirit that led him through all the obstacles to emerge as the business tycoon of India. There is no doubt that Mr Mukesh D Ambani has left no stone unturned to carry forward his father's vision and has taken Reliance industries to greater heights. But when he announced the launch of Jio in June 2010, everyone became a little doubtful of his vision which gave rise to a lot of speculations and controversies.

In 2005, Reliance Industries Limited split and there was one major de-merger of note for Mukesh Ambani. His dream project- Reliance Communication became a part of the Anil Dhirubhai Ambani Group. In 2010, Mukesh Ambani moved court against the existing non-competing clause and made a barnstorming return to telecoms, through one of the biggest gambles of its kind in global corporate history (Correspondent, 2011). Reliance Jio was originally called ISBL. In June 2010, after the broadband wireless auction (BWA), Reliance Industries bought a 96% stake in Infotel Broadband. At a total cost of 4800 crores, it was the only company to have won broadband spectrum in all 22 zones across the country (ET Bureau & Agencies, 2010). In 2013, Infotel Broadband Service Limited was renamed Reliance Jio Infocomm Limited (RJIL).

In 2015, the Company began beta testing among their Employees. After the successful results of the testing phase, Jio commercially launched its service for the general public on 5th September 2016 through a “Welcome Offer” which gave the user access to unlimited data, sms & calls throughout the national circles with access over other operators as well (Anil, 2018). Within a short period of one month, Jio announced its acquisition of 16 million subscribers (Desk, 2016). It even faced many legal accusations, including a PIL (Centre for Public Interest Litigation) which was filed in the Supreme Court regarding the grant of a pan-India license to Jio by the Government of India. For the relief of Reliance Industries, The Indian Department of Telecom refuted all of CAG’s claims. As a result, the PIL was revoked, and all the accusations were dismissed (Rautray, 2016). Another accusation to the Telecom Regulatory Authority of India (TRAI) which quoted violation of the Telecom Services through the freebies offered by Jio was also refuted (Manoj, 2017).

MASTER PLAN

Jio’s initial investment amounted to 1.5 trillion which was one of the largest transformational digital initiatives anywhere in the world (Arora, 2017). Where its competitors were focusing and earning revenues on voice calls (saturated market), Jio went on to experiment with data plans. Jio knew that the data plan market was going to give them the head growth. Jio was the first network to provide 4G LTE services and VoLTE services. On its launch, Jio offered data plans with 1GB 4G data per day in the market where most of its competitors offered 1GB data per month. Further, they went on to distribute free SIM cards (Anik, 2022).

Jio realized the scope of getting into the most crucial market and knocking out its competitors. They knew the taste and preferences of the Indian market. They knew how Indian customers waited for happy hours (midnight scheme) to download movies and songs from the net. All the existing telecom operators had the drawback of using old technology which consisted of high-cost capital, expensive technology, and strong government license regulation. Due to all these added costs, investing in new technology was a challenge for them and thus the existing barriers become strong. Jio did not invest in 2G and 3G they straight away went to 4G and created an entry barrier using LOSS LEADING STRATEGY. During the QE Dec-16, Reliance Jio Infocom Ltd. recorded

Growth in Wireless Subscriber base

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share Sep-16 (%)	Market Share Dec-16 (%)
	Sep-16	Dec-16	Net Additions			
Bharti	259.94	265.85	5.91	2.27	24.76	23.58
Vodafone	200.72	204.69	3.97	1.98	19.12	18.16
IDEA	178.82	190.52	11.70	6.54	17.03	16.90
BSNL	93.77	96.79	3.02	3.22	8.93	8.59
Aircel	90.14	90.88	0.73	0.81	8.59	8.06
Reliance Com.	87.16	86.54	-0.62	-0.71	8.30	7.68
Reliance Jio	15.98	72.16	56.18	351.56	1.52	6.40
Telenor	52.86	54.47	1.61	3.05	5.04	4.83
Tata	57.05	52.98	-4.08	-7.14	5.44	4.70
Sistema	6.72	5.88	-0.84	-12.51	0.64	0.52
MTNL	3.61	3.63	0.02	0.44	0.34	0.32
Quadrant	2.98	3.00	0.02	0.80	0.28	0.27
Total	1,049.74	1,127.37	77.63	7.40	100	100

the highest net addition of 56.18 million subscribers (TRAI, 2017). Airtel, Idea and Vodafone even tried approaching TRAI and Court stating that Jio is trying to create a monopolistic market. But their plea was rejected by both.

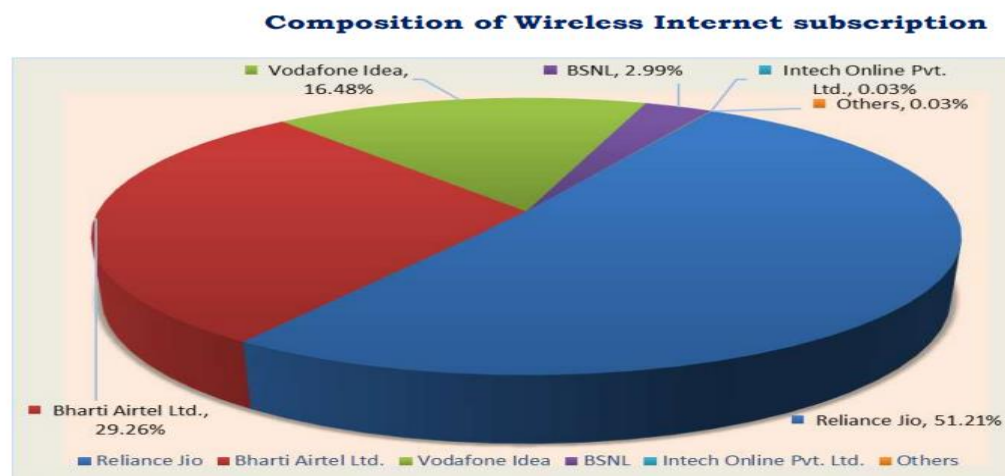
(Source: TRAI)

The marketing strategy used by Jio can also be referred to as Market Penetration Strategy, where you pull off your competitors from their root cause, making their survival difficult. This move was revolutionary as Jio made a monopoly in the saturated market by converting its competitive advantage into a sustainable advantage. The unlimited data plan scheme made India jump to the top 10 slots from 150th rank in the list of Mobile data consumption (IANS, 2016). Other competitors' focus was on Break Even Analysis but Jio focused on Customer perception and Customer Behavioral analysis which gave them a sustainable advantage with the benefit of the Recurring Revenue Model.

Jio's next big focus was on Growth Hacking Strategy. This model can be better understood using the AARRR Pirate Metrics Framework by Dave McClure -Acquisition, Activation, Retention, Referral, and Revenue. At the stage of acquisition, the focus was on getting or acquiring the customers of existing players. During the activation stage, the users decided to take an action and use the product. The third stage was Retention which Jio used to the fullest by declaring a Happy new year offer which extended the free offer till March 2017 by which Jio became the first company to provide free unlimited voice, data and roaming for 6 months. This acted beneficial for the Referral stage where customers themselves became the marketer of their product unintentionally by giving references leading to revenue generation. This was the first time that the focus was not on revenue generation but on customer acquisition.

BREAKTHROUGH

Jio is working on continuous improvement, as they invested a huge amount which none of its competitors could have done collectively in the past 20 years. Despite such huge investment and cost, Jio managed to acquire a huge profit. Jio has already proven to be a rising force being a revolutionary company and the torchbearer of the Indian 4G VoLTE services. Jio is currently the leading telecommunication service provider in India. The Jio company is now working to empower Indian users with the 5G and 6G services as well. Jio is the 3rd largest mobile network operator in the world with over 179.93 million users. In the wireless internet segment, Reliance Jio holds 51.21% Indian market share with 419.97 million subscribers at the Q3 Sep-22 (TRAI, 2023).



(Source: TRAI)

The company also entered the \$100 billion valuation club on The Bombay Stock Exchange, becoming only the second listed corporate after TCS to achieve this feat. Reliance's bull run has been triggered by positive investor sentiment around Jio, its flourishing telecom and media business. Initially started with the communication service, Jio now offers various other services including videos, gaming and entertainment, home solutions, news, and broadband services.

CONCLUSION

In the journey of time, there comes a few life-changing movements. The vision for Digital India was one such movement. Jio was dedicated to realizing this vision for 1.2 billion Indians. Jio gave the power of data to each Indian to fulfil every dream and to collectively take India to global digital leadership. Jio was born with a purpose. It transformed India with the power of the digital revolution. Jio managed to do that which many of its competitors could not even imagine. Reliance's move was such a revolutionary one that it inspires a lot of marketers.

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APPLICATION OF ISHIKAWA DIAGRAM ON ERROR MANAGEMENT: WITH REFERENCE TO INFOSYS LIMITED, PUNE.

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ABSTRACT

The Fishbone Diagram, which is popularly known as the Ishikawa Diagram, is a visual technique for problem-solving which is invented by Kaoru Ishikawa, a Japanese quality control expert. It is a diagram which works on error management by showing the causes of an event that is often used in manufacturing and product development to figure out the different steps in a process, demonstrate where quality control issues might arise, and determine which resources are required at specific times. In recent decades the application of Ishikawa Diagram is commonly used in IT sector on Error Management.

This paper focused on the Application of Ishikawa Diagram for Error Management in Infosys Limited. Infosys was founded by seven engineers in Pune, Maharashtra which provides software development, maintenance and independent validation services to companies in finance, insurance, manufacturing and other domains. The study was done specifically on the VMD (Vendor Master Data) team of Springer Nature in Infosys. Springer nature is a book publishing company having its branches across many countries. The paper presents the results of a study concerning the use of the Ishikawa diagram in analyzing the causes of errors while creating and modifying vendor details in SAP. The study also suggest in improving work quality and reducing errors.

Keywords : Ishikawa Diagram, Error Management, Vendor Master Data, SAP.

INTRODUCTION

Infosys was founded by seven engineers in Pune, Maharashtra Infosys provides software development, maintenance and independent validation services to companies in finance, insurance, manufacturing and other domains Infosys Limited is a global technology services firm that defines designs and delivers information technology (IT)-enabled business solutions to their clients. The Company has developed Finacle a universal banking solution to large and medium size banks across India and overseas. Infosys BPO is a majority owned subsidiary. Through Infosys BPM the company provides business process management services such as offsite customer relationship management finance and accounting and administration and sales order processing. The study was done specifically on the VMD (Vendor Master Data) team of Springer Nature in Infosys. Springer nature is a book publishing company having its branches across many countries.

The paper presents the results of a study concerning the use of the Ishikawa diagram in analyzing the causes of errors while creating and modifying vendor details in SAP. SAP is the application through which the payment was made to the vendor or the authors of Springer nature .Each author have their individual accounts in SAP. Since the Springer nature is a book publishing company the VMD updates the payment details in SAP the details that were updated consist of Name, Address,

E-mail id, VAT number and bank details. To update details in SAP there are separate fields .To determine the cause of the error in each fields which might happen due to humans, machine, methods or material. The study also suggest in improving work quality and reducing errors. The study also helps to understand what the major and minor errors. Some of the major errors include late payment to vendor or wrong payment. Through the study you could see that the cause of errors can be found out and be sub divided to analyze the root cause. The objective of this study is to minimize the errors which can in turn help in efficiently paying the vendors or the author. Once the causes and remedies are available the potential cause affecting the payment can be identified, analysis can be made and suggestions can be implemented to improve the performance of the system.

OBJECTIVES

1. To theorize the concept of Error management through Ishikawa Diagram.
2. To imply the concept of application of Ishikawa Diagram on error management with reference to Infosys Limited, Pune.

REVIEW OF LITERATURE

Liliana Luca (2016), This paper focus on reason determine errors in the evaluation of the parts precision in the machine construction account the main components of parts precision in the machine construction field. The most known Ishikawa models are 4M, 5M, 6M, and the initials being in order: materials, methods, man, machines, Mother Nature, measurement. Analyze all factors, which relate to the problem is studied. This tool is excellent for capturing team brainstorming output and for filling in from the 'wide picture'.

Carmen Nadia Ciocoiu (2010), This article discuss the problem on risk of loss on Specialists in an organization some of the reason which were ineffective communication, reduced salary, poor condition, excessive hierarchy, lack of incentives fishbone diagram can also used for comparative analysis.

Domagala Fabis(2017), This article presents an identification of potential causes and effects of failures of a coolant pump for internal combustion engines. Ishikawa's quality improvement tools have been used to analyze the defects. The main reasons of pump failures and cause-effect relationships have been identified. The major causes were identified and classified in order to select those which have the greatest influence on pump damage during operation.

RESEARCH METHODOLOGY

This Paper is an exploratory research. To study the application of Ishikawa Diagram on error management, the primary data has been collected from Infosys Limited, Pune. The study has been conducted through observation techniques and interviews. From the 5M', Man. Machine, Method and Material in the management principles are taken as the base for this paper.

BACKGROUND

The VMD Team works on 32 entities and these 32 entities are located in different countries each entities are numbered like a entity is Switzerland it is numbered as 1129 (number is incorrect to maintain the confidentiality) As Infosys provides the service of finance to Springer nature so in Infosys there are separate teams of Accounts payable, Accounts receivable and General ledger team and VMD team vendor master data that work for Springer Nature. The VMD team creates

or modifies vendor or author details in these 32 entities. The author and vendor could be any countries the rules of creating accounts or updating an account in SAP is different. The author and vendor are paid and one can find the transaction in their account in SAP. The author or vendor are given an SAP number after creation the vendor or author account number ranges from 100000 to 999999 it may consist of 8 digits. The primary way for identifying the number could be with the help of the number range if the account is starting from 4, 5, 6 then we considered them as vendor accounts. Payment methods are coded in alphabets and numbers in bank details is updated then at the 5th section of SAP there we have to update 8 for bank details and for check it is C but the rules also change depending on the SEPA countries and non SEPA countries.

A fish-bone diagram is one of the seven quality circles (QC) tools. It helps to visualize the potential causes in order to find the root cause of a particular problem. It helps to identify, analyze and improve quality issues. Sometimes, it can also be helpful to analyze what can go wrong - preventing future problems. It derives its name for its shape which resembles the side view of the skeleton of a fish. The form in which payment is given to author or vendor is by Wire transfer or Check transfer. Wire means bank transfer. 5 M' were used in making of this paper excluding Money all others are considered like Man, Machine, Material and Method.

Man category has two causes. There is a cause that the workman working on the production does not have enough training or that he or she is not experienced enough. As a solution, the organization could give adequate training to the workmen working on Creation and modification of vendors In SAP. Other causes are

1. When the author or vendor are asked to fill a form which has blank spaces to fill their following details

- Name
- Address
- E-mail d
- Contact number
- VAT number
- Bank details

The author or vendor fills the wrong information which in turn causes error while updating details in SAP. In bank details the swift code given or bank account given is of incorrect length. The details may also be provided of other banks e.g. Indian author may provide us with swift code instead of IFSC code so the workers might not consider to check and forced the details in the system. The workers may also create duplicate account in the system which leads to unnecessary payment to vendors.

The other reason which leads to errors in creating or modification is there are many rules one has to follow while processing some of the rules are so less used the workers come hardly come across using the rule and may tend to forget while processing e.g. There are certain accounts in the system which is direct debit. The direct debit can be identified by workers in system only if payment method used is C and one will find C 5th screen or 5th page of SAP accounts. So if a direct debit vendor provides us any details we are not supposed to update or create their accounts. Even if there is change in name the workers have to check or remember whether the vendor account is direct debit or not and inform the client. If the employees are not feeling well then while working they are not focused.

The client (Springer Nature) may use old rules to process and when the employees in VMD team come across such transaction it may confuse them.

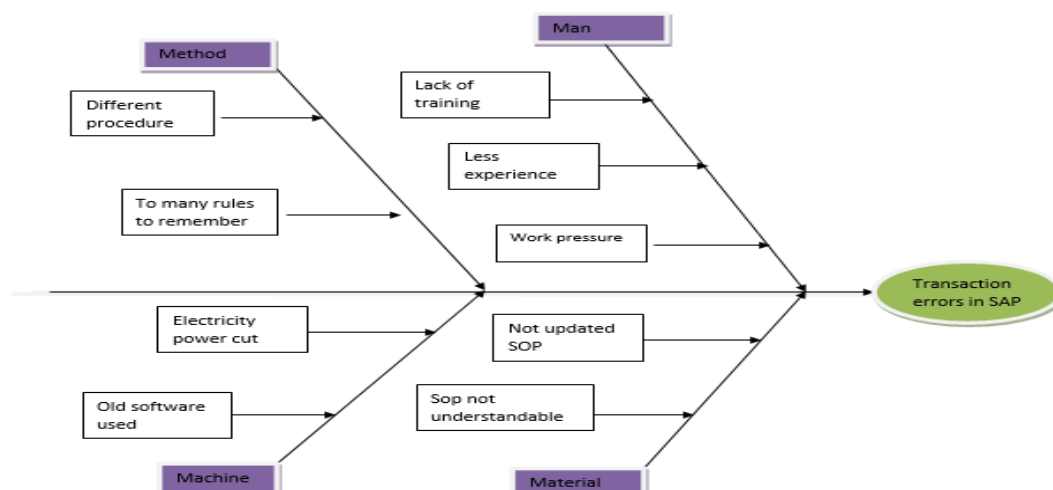
The other causes are work pressure illness or high volume to be completed the employees in VMD team have also to work very fast and they are supposed to process at least 60 creation or modification in total. If there is no support from trainers then the employees may tend to perform less. The details mentioned in invoice may not be clear as VMD team receives invoices in the official language of that country if the author is from Germany then the invoice would be in German language if the vendor is from Netherlands then the language would be in Dutch so VMD employees have to understand the invoice.

Machine: The software used to creation and modification was not aligned accordingly. When an account is created and the electricity goes off the workers might not find the account in the system. The programming details installed in system could be old. When the software is getting updated there would be delay in processing. While searching for an address online the system might not show correct address of author or vendor it also leads to error.

Material: The main material used is SOP for reference it contains all the details on how to process and also have screenshot in the required area for easy understanding. The main issue in SOP is they are very long or some procedure mentioned in SOP is outdated. The details mentioned are not clear for e.g. in SOP if the author or vendor provides us with routing number of 8 digits we are supposed to add 0 to make it nine digits but if the number is of 8 digits and already has 0 in front of it then do the workers add another 0 to the number.

There are 32 entities which the VMD team works on and each entity has common rules and specific rules which should be used on for that particular entity. Some of these specific rules may not be mentioned in SOP

Method: The communication may also hamper the work process. The invoice received could also be in foreign language one must read and understand the invoice properly. The name or details mentioned may not be clear e.g. some of the invoice or details mentioned are in writing so we may misunderstand some numbers. Knowledge Gap between old employees and new employees tends to error in processing. Detection of errors is necessary as even small errors can lead to delay in payment to vendor or author. If there is an error in e-mail id not updated correctly then the payment process for the vendor will not happen. Employees have to be careful while manually entering the number of digits in SAP for bank details.



The VDM team also maintains an update tracker, it is new rules which are updated in a document along with date at which the update was received in the update tracker it is not mentioned whether the rules are still in use or not as one may find for same procedure there are two different rules mentioned in SOP and in update tracker e.g. SOP it is given we are supposed to update title Mr. or Mrs. if it is mentioned in invoice but in update tracker there is update that we are not supposed to use the title so new employees tend to follow the rules mentioned in SOP.

Incorrect processing are also caused by incorrect information given from author. The author sometimes provide VMD employees incorrect bank account number. Before creation of vendor or author accounts in SAP the VMD employees are supposed to check if there is any account which already exist in SAP, while searching of vendor account and if one finds an account which has same name but only any extra letter is added e.g. if VMD employees receive an e-mail with attachment for creation in SAP the first procedure is to search whether the account exist in SAP and in the attachment name is given as 'Luke Anthony' but an account is found my name Luke T Anthony. Then VMD employees have to check if the account is related to Luke or not by comparing other details with invoice it might happen that the account in SAP is old and for comparing other details are not mentioned in SAP then employees can go ahead to create new account in SAP later on the client approaches the VMD team stating why was duplicate account created in name of Luke, It leads to creating duplicate account in SAP.

CONCLUSION

Pareto and fishbone were the quality tools that were used in quality management Fishbone or Ishikawa diagram shows us different causes and the reason for the errors one can drill down to the deepest level to find the reason for the error. In this paper primary observation on the employees and asking questions to the quality person helped analyzing the errors and using fishbone in effective way. Some of the errors in the process can be identified as critical or is the error repetitive. Constructive steps could be used to minimize the errors and helping the new employees to process efficiently the repetitive errors could be addressed to the management. Ishikawa diagram could also help in maintain strong relationship with the clients as we could show the clients our efforts to minimize the errors and making process without any errors. Ishikawa diagram can also be subdivided like if the problem is entering bank details incorrect it can be considered the head of fishbone and what are the causes for the errors for incorrectly updating bank details. It also helps in employee satisfaction as if error is caused because of machine the managers tend to blame it on employees but through fishbone diagram the cause are identified and the employees are not blamed for the error.

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PROBLEMS AND CHALLENGES OF MOONLIGHTING IN INDIAN IT SCENARIO

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Abstract

Moonlighting is when an employed person takes up another job as a supplementary source of income to be worked on after regular office hours. During the COVID-19 pandemic and in the period following, "Moonlighting" became a hot topic of discussion and debate, especially, for the Indian IT industry. Gig Economy has flourished in India since the COVID-19 pandemic. There is huge demand for freelancers and the highly skilled workforce has indeed embraced freelance culture, but mainly as a side hustle.

The problem arises when personnel from the Indian IT industry, which serves Fortune 500 companies, MNCs and global corporations as clients, go for side hustle. Breach of trade secrets, threats to confidential and price sensitive information, productivity loss, are feared by the employers, ethical issues arise. Majority of IT companies reacted adversely - issued warnings to employees, engaged forensic experts to check Moonlighting and even fired hundreds of employees for Moonlighting. However, some companies understood the needs of their workforce and considered allowing Moonlighting as long as it does not harm the employers' interests. The scenario is continuously evolving. The disruption brought in by Moonlighting in the workplace will have long lasting effects on work culture in the Indian IT industry.

This paper is a descriptive type which discusses the reasons that triggered this trend, the reactions that followed and the continuously evolving scenario in the Indian IT industry with reference to Moonlighting.

Keywords: Moonlighting, IT industry, Gig Economy, Side Hustle, Work Culture, Work from Home

INTRODUCTION

Moonlighting can be described as working on another job, with another organization while already employed in an organization. The later is mostly treated as the primary occupation of the person. The other job is taken up as a supplementary occupation. This supplementary job is usually performed after the regular working hours of the primary job. However, during the COVID-19 pandemic, most of the employed persons, especially those working in the Indian IT industry, were forced to "work from home" due to nationwide lockdown. Both employees and employers found this mode of work suitable. Employees worked for their organizations in office hours and undertook supplementary jobs after that. This not only enabled them to earn more money but also provided opportunities to learn new skills and apply their knowledge to enrich their work experience. Post lockdowns, as the economy unlocked, employees in the IT industry still prefer work from home. This was supported by the growing gig economy. Gig economy refers to the system whereby employees provide services to employers or companies on demand, without any formal contracting. Employees wanting to take up short term assignments as side hustle go for Gig work and companies wanting to engage high skilled workers in short term specialized tasks go for "crowd sourcing". Even IT firms including those firms opposing side hustles encourage and make use of crowdsourcing. Examples include Wipro, Tech Mahindra, HCL Technologies, etc. By their very nature, gig work and crowdsourcing are capable of being treated as a

supplementary occupation. Since survival and growth in the IT industry requires standing tough competition and continuous skill up gradation, employees always needed to keep pace with advances in technology. Large IT firms in India objected to the moonlighting practice by their employees. Their main argument being that such practice is unethical and a breach of trust of the company. Companies also fired employees for engaging in moonlighting. They even engaged forensic experts to check moonlighting practice by their employees. Employees were issued warnings to not involve inside hustle. Companies have detailed code of conduct policies with dedicated sections for conflict of interest and confidential information. The code of conduct of Infosys states that "If you take part in any activity that enhances or supports a competitor's position or accept simultaneous employment with any other company or business entity, it is considered outside employment and a conflict of interest. The code of conduct for Accenture states that "starting a business or employment outside Accenture" is a situation for personal conflict of interest. The code of conduct for Wipro states that "Employment or assignments which require use of skills similar to those employees use for Wipro or for Wipro competitors, vendors and customers or where there is a risk that the outside activity may cause threat to Wipro's confidential or proprietary information or trade secrets are situations for conflict of interest, but Part-time engagement in activity unrelated to employees functional skills at Wipro in their spare time even for remuneration are not. Thus, the entire debate revolves mainly around actual and potential conflict of interest and threats to confidential information that Moonlighting may pose problems to the companies. However some companies like Infosys and Tech Mahindra are working on a policy to allow moonlighting.

OBJECTIVES:

- To identify the costs and benefits accruing to employee for moonlighting in Indian IT industry
- To find out the reasons for allowing or prohibiting moonlighting by selected IT firms in India

REVIEW OF LITERATURE

Seema & Geeta Sachdev (2020), identified that Organizational Commitment negatively impacts moonlighting intentions of employees. Increase in Organizational commitment leads to decrease in moonlighting. However, Entrepreneurial Motivation is positively related to moonlighting Intentions. Increase in entrepreneurial motivations leads to increased moonlighting.

Shewta Sangwan (2014), concluded that employers must focus on preventing any conflict of interest with moonlighting employees. It is stated that employer-employee relationship extends beyond the legal contracts. Employers must carefully craft moonlighting policy to maintain harmonious relationship with employees.

Ashwini, Miridulaet.al., (2017), have identified several factors that drive employees towards moonlighting and found that number of family members, marital status of employees, work experience have significant impact on moonlighting.

Khera, D., & Jaggardwal, S. (2021), take moonlighting intention as dependent variable and its motives such as personal reasons, opportunity, primary job related motivation and pecuniary motivation are taken as independent variables and Covid-19 pressure is taken as moderating variable. The authors find that the level of pecuniary motives as compared to non-pecuniary motives is high indicating the panic situation of Indian workers for joining moonlighting due to severe financial difficulties arising due to the Covid-19 pandemic. The study also finds that workers joining moonlighting due to COVID-19

crisis are using the moonlighting mechanism for personal development, reducing personal stress or effectively utilizing their free time etc.

RESEARCH GAP

The study identified the gap and included five top IT Companies to analyze the policies regarding second employment which is known as Moon lighting. Based on the details of these companies the study created a link between the concept and the reality.

RESEARCH METHODOLOGY

The study is descriptive and it is completely based on secondary data. The companies selected for the study are top 5 IT and consulting companies in India in terms of total assets as reported in latest annual reports. These companies are engaged in providing services to clients such as MNCs, Fortune 500 companies, global corporations, etc., using advanced technology. The reason for opting these companies, they are highly skilled workforce is the most important resource for these companies and they invest heavily in human and intellectual capital.

OVERVIEW OF POLICIES OF IT GIANTS REGARDING SECONDARY EMPLOYMENT

The policies of IT Giants regarding secondary employment can be found in their respective code of conduct.

An overview of the policies is tabulated below Table: 1

Companies	Absolutely Restrict Secondary Employment	Allow with or without Restrictions
Infosys	✓	
Wipro		✓
TCS		✓
HCL Technologies		✓
Tech Mahindra	✓	

Source: Code of Conduct of respective companies

Common restrictions lay when deciding whether an outside employment is conflicts of interest include: Dealing with or working for competitors, Any those activities which enhances competitors' position or degrades position and reputation of company, Any activity or assignment that negatively affects the employees' ability to have objective judgment at workplace, Dealing with suppliers or customers, Assignments that significantly affect time devoted to company's work, Employment or assignment in same industry, requiring use of similar skills.

If any activity or assignment or employment outside the organization does not have any of the above features, these are not considered to be conflict of interest by majority companies.

Reasons for moonlighting

Moonlighting phenomenon saw rise during the COVID-19 pandemic. Some of the reasons for this include growth of Gig Economy in India, work from home, financial reasons, etc. Gig work means work delivered on demand, comprising very little or no formal contracting. When the seekers and providers of Gig work do this through internet enabled platforms, it becomes platform gig. There were approximately 68 lakhs Gig and platform workers in India in 2019-20. Also, IT giants have turned towards crowd sourcing for some projects recently. This has brought in opportunities for persons with relevant skills to go for a side hustle.

The COVID-19 pandemic led to imposition of nationwide lockdown. People and organizations were forced to work from home or work remotely. According to a survey by BCG and NASSCOM, 70% employees and 80% employers till prefer work from home combined with on-site work. This gave employees adequate opportunities to find out and exploit opportunities that would help earn extra income.

COVID-19 pandemic puts financial constraints on individuals. Employees saw cuts in both fixed and variable pay and as well as bonuses. This necessitated a search for newer ways to make up the financial loss. Also, there were fears of unstable future at work as economy slowed down.

Employees can gain more skills in less time by working on multiple projects at a time. They can work on diverse areas and add value to their resume. This improves their career prospects. People resorted to moonlighting as an attempt to have a backup should they lose their primary job. Side hustle was kept as a cushion or shock absorber for financial distress and job insecurity.

Many individuals opt for moonlighting as a part of their plan to start their own business venture. The primary job is held on while another side job is taken up to provide for needed resources and mitigate risk. It is not always necessary that employees moonlight for financial reasons.

Employees may feel unsatisfied with their current jobs and may want a variety of work. This can be achieved by taking up secondary projects outside the workplace. This helps employees have satisfaction through working on multiple projects and interacting with different people.

Costs of Moonlighting for Employees:

Although employees feel the need to moonlight, they may have to bear certain costs:

Increased Stress: Juggling between two jobs can be stressful. Employees may want to perform best at both jobs, being unable to do so can cause frustration. Overburdening themselves may comprise on physical and mental health.

Compromised productivity: Moonlighting can lead to compromised productivity at the primary job. This is because the span of attention may get divided. The energy required to perform the job to one's full potential may not be available.

Potential Breach of Contract: Employees may not pay attention to their contract of service. The contract of service may contain certain prohibitory clauses, requiring employees to work exclusively for the company. Breach of such clauses can land them into trouble.

Loss of Employment: Loss of Productivity at primary job, breach of contract terms, serious conflict of interest or breach of data security may lead to serious consequences. Individuals may lose their jobs at primary place of employment. This may further adversely affect their future career prospects.

Benefits of Moonlighting for Employees:

Following benefits accrue to moonlighting employees:

Improved Skills: Moonlighting helps employees get exposure to varied projects, problems and people. They develop a variety of skills which helps in career advancement.

Increased Income: Moonlighting provides additional income to employees. This helps in overcoming financial difficulties in times of crisis.

Creative Satisfaction: Employees may find work at primary job monotonous. Secondary job may provide opportunities in their areas of interest and give creative satisfaction. This in turn helps boost productivity.

Reasons for Prohibiting Moonlighting:

The top five IT companies which have taken for the study taking stance against moonlighting have stated certain reasons for not allowing Moonlighting. Moonlighting can lead to loss of Productivity of Employees. The organizations depend on the talent and skills of their workforce for the success of their projects. Declined employee productivity means compromise with the quality of work and client dissatisfaction.

Companies dealing with Fortune 500 clients, MNCs, Global organizations need to keep the trust of their clients. Confidentiality of data of clients is the key to the confidence of clients. Moonlighting employees may put confidentiality to risk, thereby threatening the company's reputation. Also, companies have their own confidential information which needs to be protected.

Employees working on secondary job during office hours using the company's resources are a loss and cannot be accepted. Companies cannot afford to lose their valuable resources for work which is not going to contribute to their profits. Lower employee productivity, misuse of resources, additional costs for data security lead to increased operating costs for companies. This puts adverse effects on Profitability.

Moonlighting with other companies in the same industry or competitors give rise to serious conflict of interest. Also, employees may solicit the company's customers or deal with its vendors, which can threaten its business. Misuse of Company's confidential information can seriously jeopardize its business.

Some companies have exclusivity and Non-compete clauses in the contract of service. It means that employees will work exclusively for the company and cannot work with the company's competitors or compete against the company or in any manner that threatens the company's interests.

For these reasons, companies have adverse opinion regarding moonlighting as it would clearly lead to breach of contract of service.

Reasons for Allowing Moonlighting:

The top five IT companies which have taken for the study find moonlighting advantageous for certain reasons and are formulating policies for accommodating the same.

Although employers invest heavily in training, moonlighting provides skill development opportunities for employees at zero cost to the company. Provided, adequate care and precautions are taken to ensure data security. Banning employees from moonlighting may force employees to carry on their work with a dissatisfied attitude. Employees may lose productivity. This can be avoided if moonlighting is allowed with reasonable restrictions to keep the workforce satisfied. Restricting employees' activities outside of the company can lead to unnecessary tension in employer - employee relations. Employer - employee relations extend beyond work and remuneration. Employees must know that the company considers their interests too. Hence, when employees want to have a side job, it is desirable to allow them while also safeguarding the company's interests. Employees wanting to have a side job, when allowed to do so, have greater satisfaction. Employees may want to change jobs less frequently, leading to lower employee turnover.

Employee cost forms the major part of operating costs of these companies. The following table shows employee cost as a percentage of total operating costs for the financial years. 2020-21 and 2021-22 as published in annual reports of the companies.

Table: 2

Companies	Employee Cost as a Percentage of Cost of Operations (2020-21)	Employee Cost as a Percentage of Cost of Operations (2021-22)
Infosys	71%	73%
Wipro	63%	66%
TCS	72%	75%
HCL Technologies	61%	64%
Tech Mahindra	57%	59%

Source: Consolidated financial statements: Annual Reports 2020-2021 and 2021-2022.

IT firms depend heavily on the talent and productivity of their employees. Hence, highly skilled, motivated and committed employees are their valuable assets. Thus, employers must provide what employees need in relation to their work.

FINDINGS AND CONCLUSIONS:

Employees are valuable assets of the companies, which should be retained and enhanced. Employees were forced to moonlight due to several reasons, including the COVID-19 pandemic, work from home, financial stress, ease of gig platform work, additional opportunities, etc. Employers have genuine and serious concerns over the effects that their employees working with outside parties have on their business. Yet, they must respond to this trend in a constructive manner. Employers can adopt a balanced approach to allow employees to moonlight with reasonable restrictions.

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MOTIVATIONAL FACTORS OF STARTUP ENTREPRENEURS: EVIDENCES FORM PUNE CITY

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Abstract

"I see startups, technology and innovation as exciting and effective instruments for India's transformation"

Shri Narendra Modi
Prime Minister of India

Entrepreneurship is pivotal for economic progress of any nation. Development of entrepreneurs leads to rapid industrialization and thus paves the way for the prosperity of a country. The wealth and growth of a nation depends on the excellence of its people. If they are enterprising, ambitious and risk takers, the community or society will develop quickly. Entrepreneurs are innovators and job creators. Their personality reflects entrepreneurship.

The start-up ecosystem of India has grown in leaps and bounds over the past few years, the sheer development can be measured by the rising variety of early stage investments, the growth in the number accelerators and the number of wishful student entrepreneurs aspiring to become next startup entrepreneur.

Previous research suggests that there is a strong and positive link between entrepreneurial motivation and the decision to become an entrepreneur. This study is focused on the motivational factors of startup entrepreneurs in Pune with respect to the Maslow's Theory of Motivation. The five factors of the Need Hierarchy theory was considered for the study. The objective of the research was to analyze the motives of entrepreneurs. The research studied 71 startup entrepreneurs of Pune city across different emerging sectors. Data was collected with the help of questionnaire. The results of the study shows that Self-actualization factors are the major factor of motivation for startup entrepreneurs, followed by Esteem factors, Physiological factors, and lastly the Safety factors and Love/belonging / Social factors.

Key Words- Entrepreneurship, Start-ups, Motivation, Maslow's Theory, Self-actualization factors.

Introduction

Entrepreneurship has become increasingly popular in recent years as more and more people seek to start their own businesses. Starting a business from scratch can be challenging, but it also presents a unique opportunity to bring an innovative idea to life and make a difference in the world. Successful startup entrepreneurs possess a willingness to take risks, think creatively, and work hard to make their businesses successful (Eryilmaz, M. 2017).

India has always been a land of entrepreneurs. Just look at all the traditional stores in our neighborhood – small-time, low-risk businesses, but entrepreneurship, no less. In terms of technology and big-game startups, there has been a significant push in the recent past. In recent years, the Indian startup ecosystem has grown and has matured. Driven by factors like availability of funding, consolidation activities by a variety of firms, evolving technology space and a burgeoning demand within the domestic market has led to the emergence of startups.

Research studies show that small businesses are the backbone of the economy and this is no different when it comes to startups. It is expected that startups will very soon play a pivotal role in the economic fabric of our country. (Business Today 2019) While tons of startups fail, some survive and even

prosper, then continue to be the household names that are popular today. To name a few, Zomato, Paytm, Book my show, Dunzo, Zepto and many more. The list is endless.

Motivation plays a crucial role in entrepreneurship as it is the driving force behind an entrepreneur's willingness to take risks, overcome challenges and persist through difficult times. It is a challenging journey, and it requires a great deal of motivation to keep going when things get tough. A motivated entrepreneur is more likely to take risks, pursue opportunities and invest time and resources into their business (Kuratko and Hodgetts 2007). Without motivation, an entrepreneur may lack the drive to put in the effort required to build a successful business.

Motivation can come from a variety of sources, including the desire to make a difference, financial gain, personal fulfillment, or the desire to create something new. For some entrepreneurs, the motivation comes from a passion for their idea or a strong sense of purpose. For others, it may come from a desire to be their own boss or achieve financial independence. Motivation can also influence an entrepreneur's mindset and attitude towards their business. A motivated entrepreneur is more likely to have a positive attitude, believe in their vision, and remain focused on their goals. This can help them overcome obstacles and setbacks and remain resilient in the face of adversity. Motivation can also impact an entrepreneur's ability to attract and retain top talent. A motivated entrepreneur who is passionate about their idea and committed to their vision can inspire others to join their team and share in their vision. This can help the entrepreneur build a strong and talented team that is dedicated to the success of the business.

With this background the objectives of the study are

Objectives of the study

- To study the motivational factors influencing startup entrepreneurs.
- To study Maslow's Need Hierarchy theory for entrepreneurship.

Review of Literature

Stefanovic et al. (2010), studied motivational and success factors of entrepreneurs in Serbia with respect to the basic methodological approach developed by Chu (using principal component factor analysis with varimax rotation). The empirical research was conducted to analyze the motives of entrepreneurs starting their own business and to determine factors that affect the success of SMEs. The study was based on 11 motivational items of entrepreneurs to establish their own business and 17 items affecting entrepreneurs' success. The study concluded that motivational factors of entrepreneurs are generic in developing countries. The results showed that there was a lack of motives concerned with sustainable development of enterprise in the long run.

Benzinget al.(2005), studied the motivations, perceived success factors and business problems experienced by entrepreneurs in Vietnam. A survey of 378 Vietnamese entrepreneurs in Hanoi and Ho Chi Minh City, proved that Vietnamese entrepreneurs are motivated by the ability to provide jobs for themselves and family members, to gain public recognition, and to prove they can successfully run a business of their own. The study also contributed to important perceived entrepreneurial success factors including friendliness toward customers and a good product at a good price while significant business problems include too much competition, unreliable employees and the inability to obtain both short-term and long-term capital.

Segal et al. (2005) The paper analyzes that since the 1950s, organizational psychology research investigating work-related motivation has progressed from static content models to dynamic process models. The paper evaluates motivation research from both fields, explores few of the commonalities among current theories, and presents a different model of entrepreneurial motivation. It is an exploratory study and the result of the study indicates that perceived feasibility, tolerance for risk, and net desirability significantly predicts self-employment intentions. This research didn't examine the role of negative motivations, or "push" factors. For future research the study provides rich explanatory information that could add value to the survey. Even though the study is original and is based on established theories and models, it provides a good explanation of the motivation to become

an entrepreneur and will be useful to probable entrepreneurs and people who encourage and guide them.

Carsrud&Brännback, (2011) The paper attempts to renovate interest in a line of research that largely has been ignored for two decades but which is critical to the study of entrepreneurship. That area is entrepreneurial motivation. This reinvigorates research efforts on an important aspect of the entrepreneurial process that has been examined only at the margins so far. It is an attempt to show how one very important topic, “entrepreneurial motivation,” still needs more study.

Giacomin et al. (2011) The paper tries to analyze the differences among American, Asian and European students about Entrepreneurial intentions, motivations and barriers. It highlights on the issue that should entrepreneurship education be the same in every country or should it be adapted to each context and what concerns students have regarding their entrepreneurship education schemes, to strengthen their perceptions of feasibility and desirability of an entrepreneurial career. The results of the study indicate that entrepreneurial intentions and disposition differ by country but that students across countries are discouraged and motivated by similar variables. However, results indicate that the levels of sensitivity to each motivator and barrier differ by country and also when developing entrepreneurship education programs cultural differences should be taken into consideration.

Babu &Rathnakumar (2013) The study has classified several human motivation factors that influence the entrepreneurial process and entrepreneurship in Chittoor district Andhra Pradesh. The socio-economic, psychological and cultural factors of one’s milieu naturally influence one to be an entrepreneur. In this process, they consider that all human action is the result of motivational factors, however, environmental factors (such includes the status of the economy, the availability of venture capital, the actions of competitors, and government regulations) also play a role that being held constant, but the human motivation plays a critical role in the entrepreneurial process.

Significance of the Study

Startups are the flavor of the season over the couple of years for the Indian markets. This has resulted into the emergence of variety of home grown unicorns across the country. Cities like Bengaluru, Hyderabad, Chennai, Pune are regarded as Startup hubs of India. Pune is regarded as an important hub for talent due to the massive number of colleges in the city, a friendly climate and a vibrant outlook. And the potential that it has is fast showing results. Several startups from Pune have already raised significant amounts of funding and a few of them have also been acquired. Since the startups are growing and so are startup entrepreneurs. It's never a bad idea to seek wisdom from bright and successful minds who have experienced it all before. In India, there are not much studies related to motivational factors of startup entrepreneurs; though some studies are available for computer software start-ups.

Therefore this research study aims to identify the factors that motivate people to take all the risk and start a business enterprise.

Research Methodology

The following is the methodology adopted for the purpose of the study.

Research Framework:

References to various studies carried out in this context to design the research framework and on the basis of scope of research, the researchers derived following factors of motivation for entrepreneurs. The researchers referred to a model given by Abraham Maslow and is said as Maslow's hierarchy of needs is an idea in psychology proposed by Abraham Maslow in his 1943 paper "A theory of Human Motivation" in Psychological Review. Maslow's hierarchy of needs theory is a psychological framework that suggests that human needs are hierarchical, with the most basic needs at the bottom of the pyramid and the highest needs at the top. The needs of the are Physiological Needs, Safety Needs, Love/ Belonging Needs, Esteem Needs and Self - actualization Needs respectively.

The study focused on Maslow's theory and how this theory can help us to understand the motivations and needs of entrepreneurs, and how those needs may change over time as they grow and evolve their businesses.

Therefore the motivational factors of the study are based on these five needs.

Physiological Factors, Safety Factors, Love/ Belonging Factors, Esteem Factors, Self- actualization Factors

Research Design:

The present study is a descriptive research i.e. it describes the characteristics of a particular group. In this study information has been collected from the startup entrepreneurs of Pune city. Data is collected with the help of a questionnaire. Further the collected data is systematically analyzed.

Sample Size and Method

The study aimed at covering startup entrepreneurs in Pune city. The data has been collected from 71 Startup entrepreneurs from Pune city through Snowball sampling or chain-referral sampling method.

Development of Questionnaire

The questionnaire used in the study is framed for startup entrepreneurs in Pune City. Due care of linking the objective with all the questions in the questionnaire has been ensured. The reliability of the survey instrument was satisfactory since Cronbach Alpha Test has been conducted. The Alpha Value of the questionnaire used for the study is 0.864, which is considered to be good. A five point Likert scale has been used.

Sample Description

This study talks about 71 startup entrepreneurs in the city of Pune. The researchers have attempted to get a good mix of entrepreneurs from different fields such as IT, retail, food, healthcare, education, tour and travel, research and development, service etc. which are considered as the emerging sectors. Below table presents sample from different sectors collected by the researcher.

Distribution of Sample

Table:1 Sample Distribution

Industry	No. of Sample
Service	22
Retail	10
IT	16
Education	9
Health	4
Tour & Travel	1
Food	4
FMCG	1
Jewelry	1
Textile	1

Automobile	1
Research and Technology	1

Source: Field Survey

Data analysis and Interpretation

The data collected has been analyzed & the interpretations are given below.

Physiological factors:

Table 2: Physiological Factors

Physiological Factors	Percentage
To meet the basic needs such as food, shelter, etc.	13
To earn money	20
To have work-free relaxation	20
To have flexibility with ideas and plans	23
Innovation of a product	24

Source: Field Survey

From the data analysis it was found that among the physiological factors, Innovation of a product (24%) and Flexibility with ideas and plans (23%) are the most important factors of motivation. The dynamics of motivation among startup entrepreneurs is quite different from the traditional entrepreneurs. For startup entrepreneur's innovation and flexibility is extremely motivating as they want to create value for others. Apart from creating value, they want to contribute to society on their own terms and time.

Safety Factors:

Table:3 Safety Factors

Safety Factors	Percentage
To have job security	17
To increase income	21
To provide jobs to family members	15
To have optimum utilization of resources	22
To maintain my personal freedom	25

Source: Field Survey

To maintain personal freedom (25%) is the most important factor as these days individuals want to work as per their convenience and not under any pressure. Entrepreneurs are control freaks. They believe that they can do things better when not in control.

Social Factors:

Table:4 Social Factors

Social Factors	Percentage
To provide employment	23
To follow family legacy	14
To follow my role model	16
To contribute to the society	24
Support of family and friends	23

Source: Field Survey

To contribute to the society (24%) followed by to provide employment (23%) and support of family and friends (23%) are the major important factors of motivation. Today's entrepreneurs are builders. Creators. They want to produce things in order to succeed and that things need to create value. It's extremely motivating for them that something they have created has value for others. Not all business has the potential to change the world, but many entrepreneurs take this mantra to heart. Lots of entrepreneurs trust their businesses will change the world. It's part of creating value. And they believe that this can do with the support of their family and friends and they are their strength.

Esteem Needs:

Table:5 Esteem Factors

Esteem Factors	Percentage
To gain status and respect	20
To prove I can do it	21
To have ownership and control	21
Have risk bearing capacity	21
To build a business to pass on	17

Source: Field Survey

To prove I can do it (21%), to have ownership and control (21%) and to have risk bearing capacity (21%) are the three most important factors of motivation. Today's entrepreneurs love freedom, whether it is about providing for them, having freedom of ownership or freedom in taking risks and with freedom comes flexibility to make your own schedule and not have to answer to anyone. This also means getting the satisfaction of making your own decisions. Entrepreneurs believe that although starting their own business can be risky, with that risk comes reward. Therefore it is attractive to new entrepreneurs that they can build something big from scratch, at least something bigger than what they could as a salaried employee.

Self-actualization Factors:

Table 6 : Self-actualization Factors:

Self-actualization Factors	Percentage
To explore and have fun	19
For my own satisfaction and growth	21
To be my own boss	19
To do something new and path breaking	22
To provide greater comfort to family	19

Source: Field Survey

To do something new and path breaking (22%) and to have own satisfaction and growth (21%) are the main factors of motivation. Startup Entrepreneurs inspire others to go that extra mile to come up with innovative ways to make their product and want to do things that people don't expect and exceed customer expectations.

Therefore the Motivational Factors of the Study are:

Table: 7 Motivational Factors

Motivational Factors	Percentage
Physiological Factors	20
Safety Factors	18
Social Factors	18
Esteem Factors	21
Self- actualization Factors	23

Source: Field Survey

In the order of needs, According to Maslow's the factors of motivation are: Physiological Needs, Safety Needs, Social Needs, Esteem needs and Self- actualization needs respectively but it was interesting to find out that from the data analysis of the study for startup entrepreneurs, Self-actualization factors (23%) is the most important factor of motivation followed by Esteem factors (21%), Physiological factors (20%), and lastly Safety factors (18%) and Love/belonging / Social factors (18%) . Entrepreneurs having self -actualization as the most important factor are having high drive for entrepreneurial innovation and startup are known for innovation therefore so are startup entrepreneurs

Conclusion of the Study:

Startups are the solid foundation for economic growth and development. Because of their size and agility, they also represent the most dynamic and most efficient segment of the economy of any country, regardless of the stage of its economic development. It is obvious that, with a strong startup ecosystem, it is possible for a country to achieve a sound economic growth and development. The creation of a supportive startup ecosystem is the need of the hour. Only by creating a highly

supportive environment, in which entrepreneurship would thrive, is it possible to increase the rate of successful startups; which would become major job creators for generations of young people to come. In order to facilitate the creation of such a supportive environment, knowledge of the motivational factors of entrepreneurs is very relevant. Only if the institutions in charge of crafting economic atmosphere are aware of these factors, they can recommend suitable steps/measure to move forward and grow in the right direction to create a robust startup ecosystem.

FUTURE SCOPE OF THE STUDY:

The numbers of startups are growing exponentially so it creates a lot of interesting research opportunities. The current study focused on 71 startup entrepreneurs in city of Pune Researchers can explore a larger sample to have a better understanding of the topic. Similar studies can be replicated in different parts of the country

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A STUDY OF PROBLEMS AND CHALLENGES FOR EARNING SUSTAINABLE LIVELIHOOD: WITH REFERENCE TO UNDERPRIVILEGED WOMEN IN PUNE.

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Abstract

The key to inclusive development is when all sections of society men, women, poor, can lead a better, life that can create sustainability. Women are an important part of society they need to be included in the labour force if we need sustainable and inclusive development. A very few studies on opportunities and challenges for earning sustainable livelihood for women are conducted. This paper examines the problems and Challenges of underprivileged women for sustainable employment. To study their problem the survey was conducted around 100 women from different slums of Pune City. Though women have opportunities for earning a living but the opportunities are not sustainable as they have not been able to enhance the status, standard of living, provide health and hygienic facilities, social security and neither a permanent source of livelihood. Therefore proactive efforts towards the implementation of innovative, effective policies for engaging excluded workers and sustainability should be made by all institutions s to improve the lives of the underprivileged women in society.

Key words: women, sustainable, Employment, innovation, challenges, JEL Classification: O15, QO1, E24, O30

1.Introduction

The key to inclusive development is when all sections of society men, women, and poor can all lead a better, decent life that can create sustainability. The different facets of life must come together and work in synergy for growth and development in general. All the different systems at stake have to work with a common vision. It has to be transparent and pure. Only then can there be integrated solutions with a focus on development. Inclusion must include all sectors of society, including the poorest of the poor, and institutions such as government, business, small organizations and NGOs. Innovations are being carried out in all areas of India but are these innovations fulfilling their objective of inclusion, where all sectors and all strata of society have the opportunity to contribute to these efforts, share the benefits and have a voice in decision- making?

Women are an important part of society they need to be included in the labour force if we need sustainable and inclusive development. This paper examines the problems women face for sustainable livelihood development. To focus on this problem around 100 women from the underprivileged section of the population around Pune are selected. The sample is selected randomly from two slum areas of Pune. In the study, we explore whether women form part of the labour force. If not what keeps them away from employment what are the problems faced by these sections of the population in getting employment?

Objectives of the study

1. To understand the meaning of sustainable livelihood.
2. To study the problems of earning a sustainable livelihood for underprivileged women with reference to Pune.

II. Review of Literature

The term sustainable livelihood is popularly defined by Chambers & Conway (1992) as such: "a livelihood comprises the capacities, the assets (stores, resources, claims and access) and the activities required for a livelihood: a sustainable livelihood that can cope and recover stress and shocks, maintain or improve their capabilities and assets and contribute to the net benefits of other livelihoods locally and globally, and in the short and long term." Srilataptnaik, C. Shambhu Prasad (2015), review the literature on livelihoods and point out that, though the implementation and evaluation of SLAs present several challenges. The Indian academicians can present a new approach to sustainable livelihoods to help in the removal of poverty.

According to Vishwambhar Prasad Sati, Lalrinpuja Vangchhia, (2017), the sustainable livelihoods approach to poverty reduction has become one of the main concerns at the global level, mainly in developing countries and in the third world, where livelihoods depend to a large extent on the results of agriculture traditionally practiced. Hilda Jaka and Elvin Shava (2018) for sustainable women's livelihoods, access to competitive markets, and entrepreneurial education supported by adequate funding is fundamental.

According to SOIL report 2017, the focus of sustainable livelihood efforts in India has mainly been agriculture and allied sectors, but there is an urgent need to give importance to other activities like skill development, entrepreneurship, and innovation.

According to reports from the United Nations Human Settlements Programme (UN-HABITAT) (2006) though women are largely present in the informal sector, they continue to face obstacles in achieving economic recognition in urban development. Jaiyebo (2003) observed that, although women are involved in various production-related activities the resources are so limited that their productivity and capability are hampered. Therefore the issue of women's role in urban areas while focusing on gender requires keen attention especially regarding empowerment and inclusiveness in development.

Ramasut Walker March (2002) argue that there is a need for giving importance to livelihoods approaches in urban areas as the gains to their implementation might be high. Since the population in levels in urban areas is growing at double the rate of rural areas, it is necessary to understand their livelihoods to strengthen and support their opportunities. Bhanja and Chaturvedi (2020), 40 percent of the total number of states need to provide more employment opportunities to its population and India is successful at the national level in achieving the SDGs but at the sub national level it is lacking.

Research Gap

From the above-said literature, it is found that there are very few empirical studies on sustainable development for women, especially in the urban areas. Even if problems of women are studied they are related to overall problems but not challenges and opportunities for earning sustainable livelihoods in urban areas. The present study is completely focused on underprivileged women employees with fewer qualifications. Since many women are the sole earners of their families, their challenges are studied in-depth to find out how it affects society as a whole and to give a voice to their experiences. This research would enable policymakers, institutions to come forward and rethink their programmes, device and implement policies to start ventures that would enhance the livelihood opportunities of the underprivileged women as well as provide them with social security measures.

III. What is Sustainable Livelihood?

The DFID has developed a 'Sustainable Livelihood Framework' (SLF) which is one of the most widely used livelihoods frameworks in development practice was developed by The British Department for International Development (DFID) in the year 1997.

The main aim of the DFID framework is to eliminate poverty in poorer countries. The core principles on which the framework is based are that the livelihood approach must be completely people-centric, holistic, dynamic, building on people's strength, there should be a link between micro and macro factors, and most important is that it should be sustainable. Sustainable Livelihood also means equal opportunities for all, improvement in the standard of living, health and hygiene, self-esteem, improved food, and social security.

The livelihood frame work developed by DFID is presented in a simple model as given below:

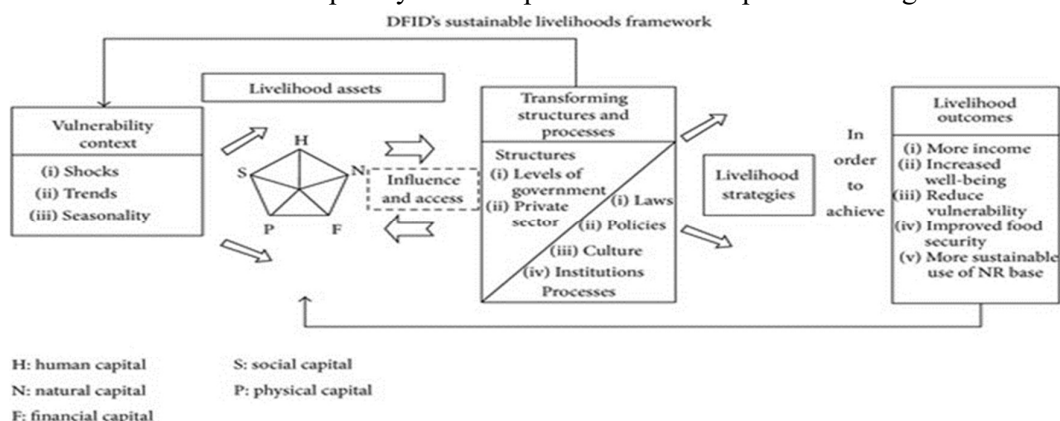


Figure1:Sustainable Livelihood Framework
Source: DFID 2000

IV. Research Methodology

Primary Data: A survey was conducted in two areas in Pune, PMC and PCMC area. In the PMC area a slum area in BT Kawade was selected around 50 households were selected from this area and around 50 women were selected from a slum area in Pimpri-Chinchwad.

Secondary Data: Data has been collected from various sources such as the DFID framework for sustainable livelihood, Sustainable Development Goals Indian Government, and various websites, etc.

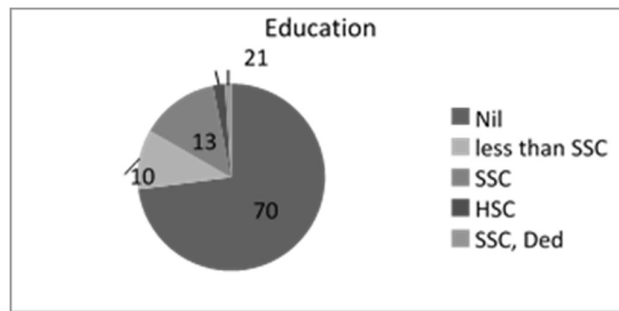
Data Analysis and Interpretation

1. Age and Marital Status of the Respondents

The age of the respondents was between 20-60 years. 70% of the respondents are between the age of 30-50 years. It was found from the survey that 71% of the respondents are married, 3% divorced, 3% separated or their husbands have felt them or remarried, 7% are single and 17% are widowed.

2. Education of the Respondents: 70% of the respondents were found to be completely illiterate, 10% are either 3rd, 7th, 8th, or 9th pass just 13% have managed to complete SSC, 2 are HSC and a respondent has done a teacher training course. Most of the respondents who have completed SSC or HSC are in the age group of 20 to 25 years. These respondents are not able to study further as they have financial problems or family wants them to just get married and settle down. Some women want to study further and have enrolled in a night school.. The figure below represents the education of the respondents.

Figure 2: Education of the Respondents



Source : Field Survey

3. Skills of the Respondent

Along with education, women must-have skills that can get them decent jobs. When the respondents were asked about the skills it is found that around 83% of the respondents do not have any skills. The rest 17% of the respondents knew tailoring, girls have fashion designing, beautician course, teacher training, masonry work, 3% cooking, making flower garlands.

4. Income of the family and Number of dependents in the family

The survey identified that the salary range is in between Min 5000 to Max 30,000. It was found from the survey that around 37% of the families had more than 4 dependents, 22% around 4 dependents 7% -3, 16% around 1 to 2 dependents. 90% of the family members are contributing to the family income source in one way or the other including children.

5. Employment and type of Employment

It was found from the survey that 88% of the respondents are employed and out of the 88%, only 16% seem to have a permanent source of income rest all have temporary jobs.

6. Occupation of the Respondents

It was found 47% worked as maids that are cleaning and sweeping jobs either at home or some in offices, banks, schools and colleges. 2% were collecting garbage around the town, 2% were engaged in making chapatis in hotels. 2% worked as beauticians, roadside vendors selling fruits, vegetables, clothes, peanuts, etc. Some work as laborers in construction sites, cooking jobs, tailoring at home, selling samosa, small shops, etc. Hardly two percent work in any company or do some good business. The table and figure below give a detailed description of the occupations of the respondents

7. Experience of the Respondents

It is found from the survey that 43% of respondents have more than 5-10 years of working experience. Those who work as fruit vendors have been sitting in the same place near the roadside and doing the same work for years. Some work as maids and college attendants for nearly ten years, women working at construction sites work for some years, and then due to health problems they need to switch to another job. In spite of working for such a longtime, there is no improvement in the earnings and conditions of these women.

8. Income of the working Respondents

The income of the respondents varies from Rs. 2000 to Rs. 13000. 53% of the respondents earn between Rs. 5000 to Rs. 8000. 7% earn between Rs. 2000-4000. Hardly 8% earn between Rs 9000-13000. Thus

even though these women work day in and out they are hardly able to make a sustainable living for themselves. Most of the women are earning on a daily wage basis or daily income basis between Rs 200 to Rs 400 daily.

9. Number of working members in the family

59% of the respondent family had two working members mostly both husband and wife working. But in some cases, it was found that it was the mother-in-law/mother and daughter-in-law/ daughter working while the son or husband is not working. 25 % of the women were sole working members in the family and supporting themselves as well as families with more than 4 dependents. In 6%-7% of families, it was found all members of the family were working

10. Expenditure of the family

It is found from the survey and obvious that the expenditure of 96% of the family is more than income or as much as income as most of the families earn around 5000-15000.

11. Type of ownership of house and other assets

The survey shows that 42% of the families have their own houses but the houses are kutchra or made of tins they are near the railway line. These people fear losing their shelter during road winding. 53% of the respondents live in rented houses where they have to pay around 1400 to 3000 rents. One lady has migrated from Solapur and staying with a relative for work. 36% of the families have a vehicle like a rickshaw, cart, tempo if the husband is doing business with vegetables or is a driver. Very few families have two-wheelers. Only two women were found to have driven a two wheeler wherein it is very common in a city like Pune. The other assets like fridge are common in 80% of the houses, TV is also owned by most. But some people just have a fan in the house.

12. How the respondents commute to work

It was found that 62% walk, 8% go in a shared rickshaw and 1% by train, 4% by own vehicle. Only one lady had the facility of a company bus to commute to work, Some women walked to the construction sites even if it is not close to their house to save money.

13. Number of times the respondents have changed jobs

It is found from the survey that around 14% have changed their jobs 4 times, 9% three times, 19% two times, 20% once and 22% have not changed their jobs at all. The reasons given for change of jobs was that the company they were working was making thermocol decorations and with new environment friendly laws it closed down or small-sized organization could not survive in the market due to fewer orders, ill-treatment by owners migration from other cities like Jejuri, Solapur due to no rains. Those who work in construction sites could not do the hard difficult work after a certain age or ailments. Many of them stayed in the same job due to no other work options or they were satisfied with the job they were working.

14. Number of respondents who have bank accounts

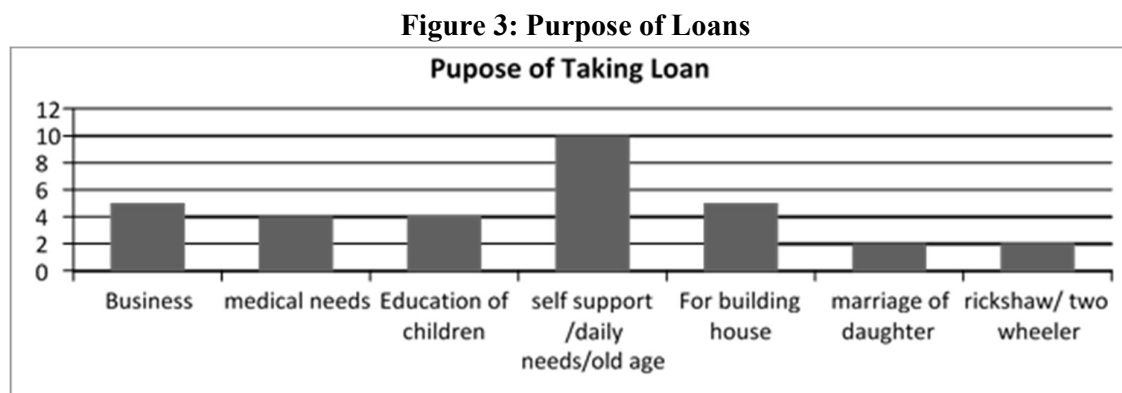
From the survey, it is evident that 64% of the respondents have bank accounts and 36% do not have bank accounts. The ones who have bank accounts are for salary purposes or almost 50% are covered under the Jan Dhan account which is compulsory to avail subsidies for the cylinder. But 36% still are

not financially included. The table and figure below give the details of the financial inclusion of the respondents.

15: Number of respondents who have availed loan

32% of the respondents have taken loans for various purposes like for medical needs, the marriage of a daughter, for starting a business, or expansion of business, to meet their daily requirements. 26% of the respondents have taken loans from self-help groups 1% from relatives or friends and 5% have taken loans from banks.

The figure below provide the details of the purpose for taking the loan.



Source: Field Survey

16. Amount of loan taken

From the survey, we found that the loan amount ranges from Rs 6000 to Rs 75000 with 30% of the respondents availing loan amount of above Rs 12000-Rs 75000.

17: Social security measures adopted by the respondents.

The survey shows that 97% of the respondents who are working do not have any social security. Only 3% of respondents claim that they have social security such as insurance, pension scheme like Sanjay Gandhi pension scheme, etc.

V. Findings of the Study

During the survey, the respondents were asked about the difficulties they faced during the work it was found that most of the women were daily wage earners as they are working as laborers with construction sites or street vendors. The daily expenditure also depended on their daily

Wages if they go to work they get income if they do not go they do not get any income. They do not get anything if they take leaves. The main problem they face in getting work is their age and they do not have any education or skills to procure decent jobs. They also cannot leave their children as they stay near railway lines. Some women have migrated from villages due to rains and they cannot find jobs as they do not know anything about the city. One of the major reasons pointed out by the respondents is that even for jobs like “Jhadupocha” there is competition as almost all the women in the slums prefer to work as maids. The seniors do not allow them to work and they do not get that many houses to earn a decent livelihood. The respondents are working to supplement their family income or support themselves but there is no job guarantee as they face sudden removal, their jobs depend on the moods

and fancies of the owners. Even if they are working for more than twenty years there is no social security and they suffer during old age from various ailments due to the difficult work they do. Many of them are into seasonal jobs like selling lemon juice, seasonal fruits, and construction workers and when the season is over they are out of jobs and have no income to sustain. SDG Goals aim at providing basic housing facilities as well as DFID Goals says that everybody should have basic physical assets, from the survey it was found that 42% of respondents had their own house but the houses are kutchha houses with tin roofs and they were near the railway line. For those who live in rented houses, the minimum rent paid by them is around Rs 3500/-, which is very high according to their income. The challenges faced by the respondents can be summed up as in the figure below:

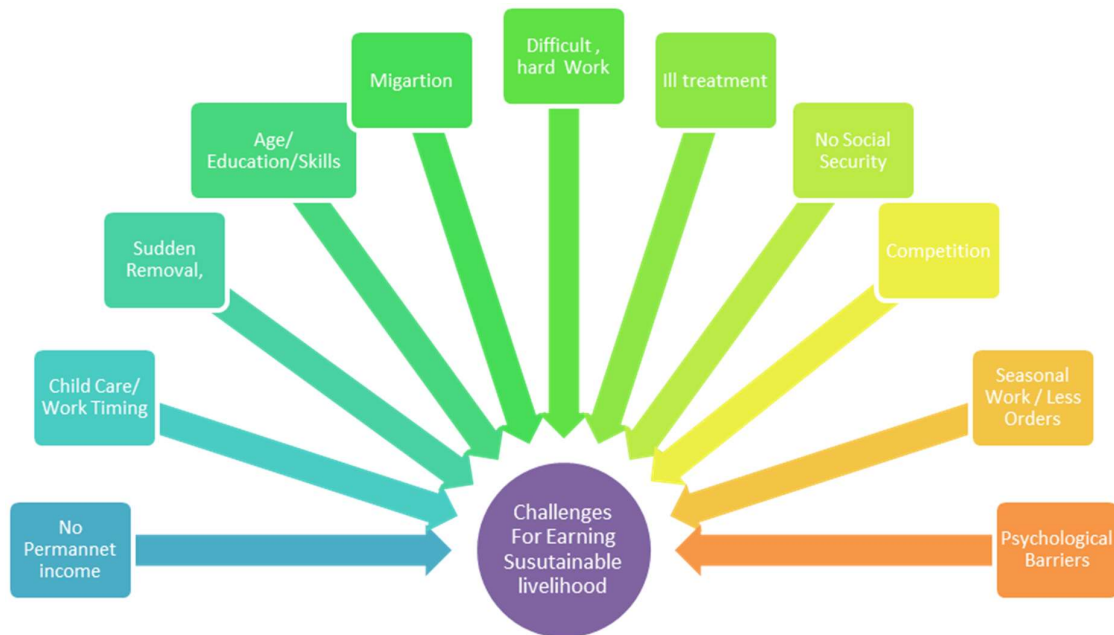


Figure 4: Challenges for Sustainable Livelihood

Source: Researchers

VI. Conclusion

Thus it can be found from the primary survey and the data that the SGDS goal both by the Indian government and DFID does not seem to be fulfilled in the case of the women surveyed in the two areas of Pune. Though women do have opportunities for earning a living but the opportunities are not sustainable as they have not been able to enhance the status, standard of living, nor able to provide health and hygienic facilities nor any social security and neither a permanent source of livelihood.

Therefore proactive efforts towards implementation of innovative, effective policies for engaging excluded workers and sustainability should be made by all institutions like government, corporate, and NGOs as well as privileged individuals to improve the lives of the underprivileged women in the society. It is only then the agenda of the government of Sabka Saath Sabka Vikas can be a reality.

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SIMULATED MODEL BY USING FUZZY LOGIC TECHNIQUE FOR DECISION MAKING PROCESS IN REQUIREMENT GATHERING METHODS

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ABSTRACT - One of the most important and crucial jobs in projects is requirement collection. Due to inadequate requirement collection and tracking follow-ups, more than 80% of projects fail. There are numerous approaches to obtaining the necessary information. Not every technique used in requirement elicitation is appropriate for every project. Certain techniques have problems depending on the nature of the project. MIS research aids in decision-making for selecting the best project and gathering project requirements. The effectiveness of a few stated strategies is calculated using fuzzy logic requirement collection.

Keywords - Requirement elicitation, effectiveness, fuzzy logic, decision-making process, MIS and techniques.

I. INTRODUCTION

Management Information System - MIS

A management information system used for decision-making, coordination, control, analysis, and visualization of information within an organization is known as a management information system (MIS). To put it plainly, it is the study of people, technology, and organizations, to put it briefly. The table1[1] will serve as an illustration of how MIS and CS (computer science) are related. It is helpful to contrast MIS with some of the other information technology-related areas.

Keywords	MIS (Management Information Systems)	CS (Computer Science)
Focus	Organization	Software
Objective	More efficient or effective business	Reliable computer program
Core Skill	Problem solving	Logic/Procedure
Core Task	Determine business requirements for information systems	Deliver information systems to meet defined requirements
Theoretical vs. Applied	Balanced	Applied
Generic Job Title	Analyst/Designer	Builder
Typical Starting Job Title	Business Systems Analyst	Application Programmer
Career Goals	Senior Organizational Manager	Programming Manager
College Home	Business	Science

Table 1: Relationship between MIS and CS

MIS is the ONLY major that gives both business practices and information technology equal attention.

Management Information Technology – MIT

The methods, systems, hardware, and software used by a corporation to carry out its daily operations are referred to as management information technology. Businesses can efficiently manage all kinds of data with the help of MIT. Employee productivity can be increased by implementing MIT, which can also be customized to meet the specific demands of an organization.

Phases in MIT

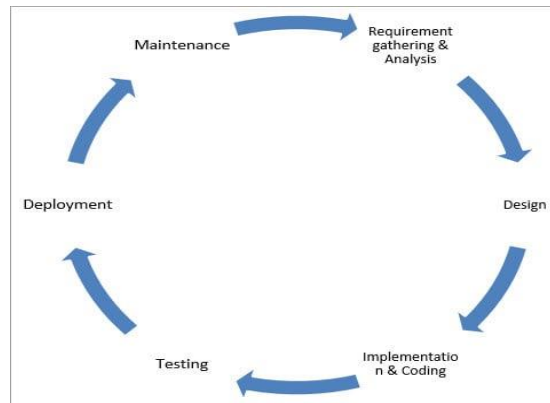


Figure1: Phase of MIT

II. The requirement collection and analysis step, depicted in figure1, is the first and most crucial stage of MIT. During the requirements gathering meetings, the organization team meets with the customer to go over each requirement in depth.

III. REQUIREMENT GATHERING

Requirements Elicitation

Requirements elicitation, also known as requirements gathering or requirements capture, is the process of gathering a list of requirements (functional, technical, system etc.) [6] from the numerous stakeholders (customers, IT staff, users, vendors, etc.) that would serve as the foundation for the formal. Changes need to be made to the specs.

Categories of Requirements

Non-Functional requirements, Functional requirements, Domain requirements, and Inverse requirements are the different categories of requirements.

Functional requirements are referred to as three categories information, interactions, and processes. These describe how the system interacts with its environment and are the intended functionality that the client wants to be put into practise. In general, a functional requirement outlines what the system must be able to do.

Non-functional features that meet technical and operational requirements are known as non-functional requirements. They might talk about things like business continuity, disaster recovery, hosting, environment, security, and encryption.

Domain requirements are also most important because they frequently encapsulate the concepts of the application domains. If these requirements are not suitable, it is impossible to make the system operate successfully and satisfactorily if these requirements are not met. Needs that are both functional and non-functional may be included in the domain requirements.

Inverse requirements describe what the system must not perform.

2.2 Requirement gathering techniques and Methods

The following are the four major types of requirement collection approaches.

- a) Classical Techniques
- b) Intellectual Techniques
- c) Batch Methods
- d) Present-day Techniques

Methods

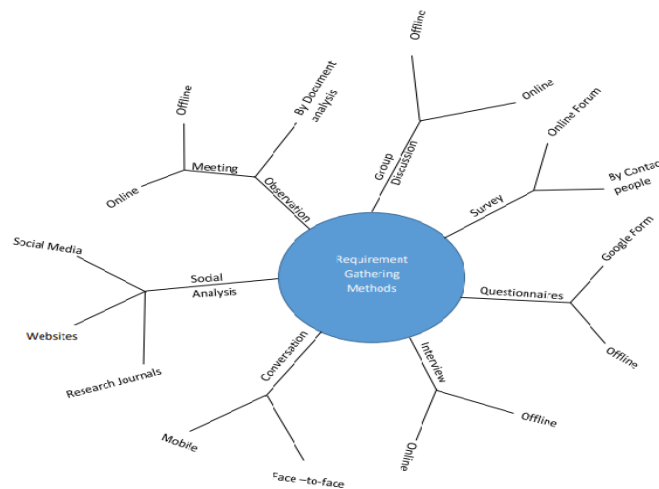


Figure 2: Snow-Flakes Structure for Requirement Gathering Methods

There are many methods for acquiring the necessary data, each having benefits and drawbacks. Time and cost management were the two main factors that had to be taken into account while selecting a solution. The method for acquiring the criteria may vary depending on the situation and different restrictions.[2] Idea generation, prototyping, workshops, social analysis, ethnography, focus groups, storyboards, surveying, protocol analysis, document analysis, scenario planning, questionnaires, group project collaboration, analysis of the existing domain, online discussion, concept/mind mapping, introspection and are a few techniques.

IV. ISSUES IN REQUIREMENTS GATHERING

Issues about requirement collection or requirement elicitation, there may be a number of challenges with obtaining information from customers or stakeholders. Here are a few of the problems: Stakeholders' absence or refusal to participate in requirement gathering conversations, a breakdown in communication and misunderstanding between stakeholders and developers, and inadequate documentation of the current system are all found to have an impact on the quality of requirements in the proposed system.

V. FUZZY IMPLEMENTATION

Input parameters:

1. Project size
2. Duration
3. Estimation
1. Questionnaires.
2. Group Discussion
3. Interview
4. Survey
5. Brainstorm

Figure 3 describes the input and output parameter membership function.

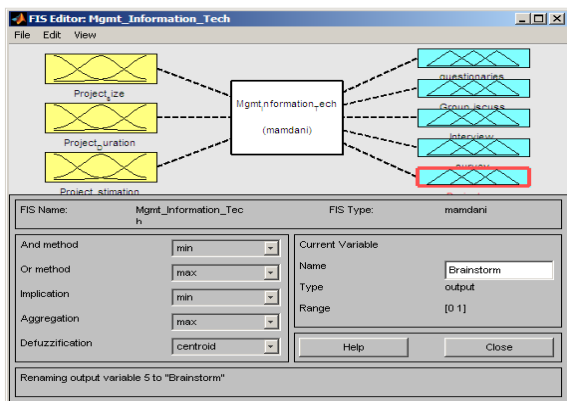


Figure 3: Input, Output Membership Function

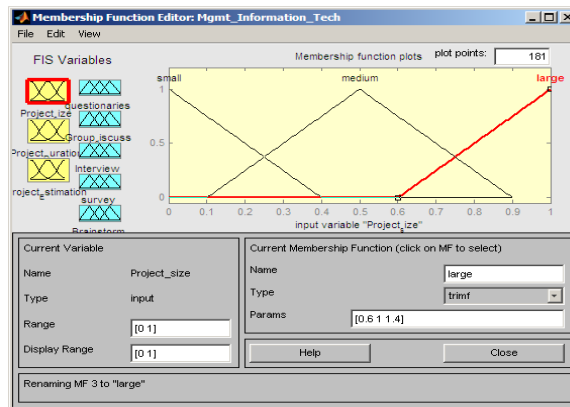


Figure 3.1: Input, Output Membership Function range

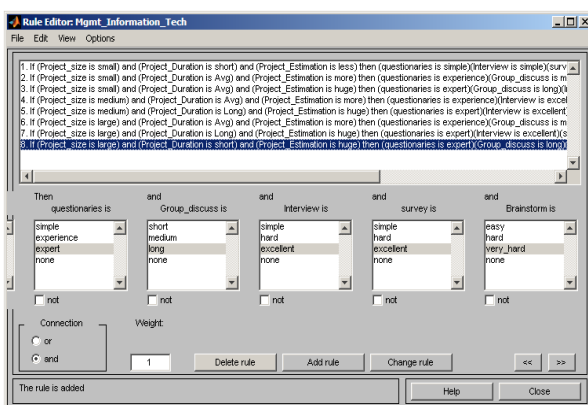


Figure 4: Fuzzy Rules for Membership Function.

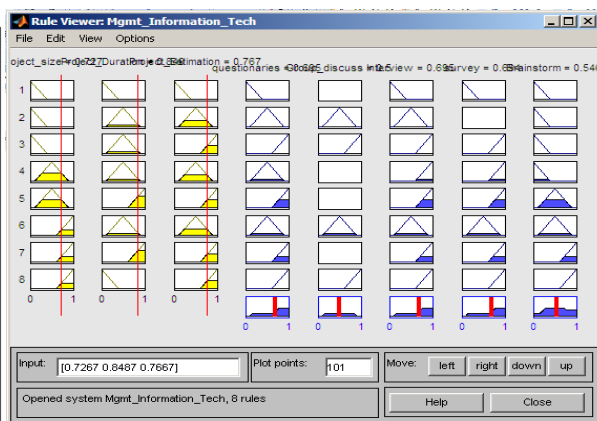


Figure 5: Rule Viewer with Input range of 0.72, 0.84, 0.76

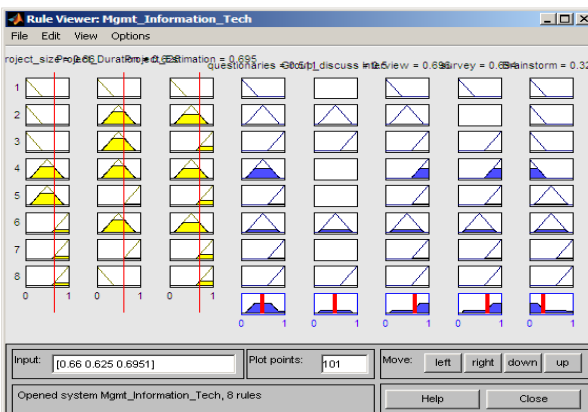


Figure 6: Rule Viewer with Input range of 0.66, 0.62, 0.69

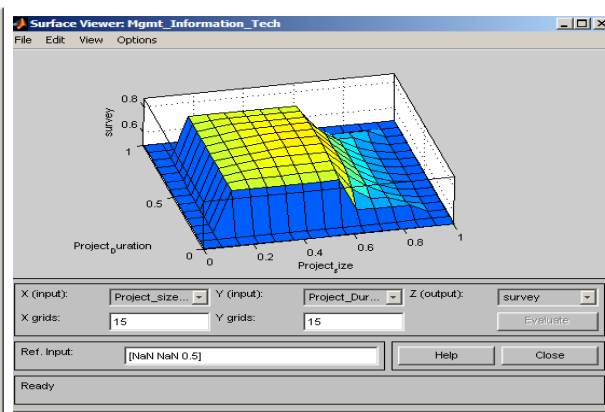


Figure 7: Surface Viewer

VI. CONCLUSION

Each elicitation technique has a predetermined set of unique and distinguishing characteristics, as well as the context in which it will be used. Some methods for gathering requirements are not suitable for all projects. Various approaches are used depending on the project type. The limitations and substantial drawbacks of each technique make it crucial to choose the one that is most suitable for a certain project. Before using a technique, review its requirements and evaluate how it works. This paper assists in identifying a project-appropriate technique for successful and efficient requirement gathering.

The output five parameters are analysed using fuzzy logic Centroid method .

Using eight fuzzy rules the three inputs namely Project Size, Duration, Estimation and the outputs are of Questionnaires, Group Discussion, Interview, survey, Brainstorm are calculated.

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CLOUD COMPUTING -DATA MANAGEMENT, CHALLENGES, STORAGE AND SECURITY TOOLS AMONG SMALL SCALE AUTOMOBILE INDUSTRY

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Abstract:

The wide use of information and communication technologies (ICT) has implemented the importance and success to the cloud computing. Cloud computing offers different types of services to business users. However, using different platforms of cloud raises privacy, security and data management concerns, which is difficult to implement in cloud. The purpose of this qualitative study was to search structure and concept of cloud computing in automobile industry end-users' experiences and challenges. Cloud data storage and security issues of cloud emerging technologies and tools. Provide a security to cloud in industry is critical to success, as many areas are moving towards cloud storage. There is a vast competition of accessing the projects and completing it. The central research question was: How do the management of data and challenges with cloud data storage, privacy and security tools? An exploratory generic qualitative study design was utilized to explore the management of cloud data storage experiences, challenges, and security ideas of the emerging technologies' security tools among end-users of automobile industry. Non-technology department access and manage the data.

Keywords: Cloud computing, database management system, storage, privacy, security.

Introduction

Today's generation is the ICT generation, while using technologies there are different challenges related with data such as database creation, management, storage, security and privacy. The database research community has struggled with scalable and consistent data management for more than 20 years. Distributed database systems were historically the first all-purpose method for handling data not constrained to the capabilities of a single machine while assuring worldwide serializability. As multiple business applications are using cloud services to run more applications and to ensure multiple identities. Data privacy challenges include how to share data while protecting personally identifiable information. Hardware, software, and human resources are developed and used in the information security and data security domains to address this issue. Controlling what personal information is shared online and who can access it has come under more and more scrutiny. There may be privacy or confidentiality concerns whenever an industry, a government agency, or another entity shares information in the cloud. A scalable data management system should, at the most basic level, be able to maintain performance and availability over a sizable data set without having to do major over-provisioning.

The way in which these systems are built is remarkable, both in terms of the principles they employ and those they reject. To simplify future work, to create the groundwork for designing the next generation of data management systems supporting the following generation of cloud applications, the purpose of this study is to thoroughly analyse these systems and identify the key design decisions that have given them excellent scalability.

Objectives:

Database Management System (DBMS)

Traditional file processing settings do not make it possible to get relevant data quickly and easily. Since data is dispersed across many files in a variety of formats, it is challenging to create new application programmes that can extract the necessary data. A database management system is a

group of programmes that makes it possible to insert, edit, and remove data from databases. A database management system (DBMS) is a software programme that allows us to manage databases or data using computers. It consider for interaction between the user and the database. The user asks the database management system to carry out several operations (insert, delete, update, and retrieval) on the database.

All users should be able to obtain the necessary data because the primary goal of DBMS is to store and retrieve information efficiently. Because not all database users are computer-trained, the designers of the database use complicated data structures to describe the data in order to store and retrieve it efficiently. However, users are not required to understand physical database storage details. Particular department in automobile is require to deal with data not storage strategies. The components of the DBMS carry out these required actions on the database and give the users the information they require.

There are different types of data available in automobile industry. Several departments are working together in one organisation such as production, purchase, account, marketing and sales. Information in such departments are interconnected and movable from one place to other place. Handling such a type of data is tedious task and providing privacy and security is necessary.

Cloud Computing

Cloud computing refers to the upon request accessibility of resources on a computer system, specifically data storage and processing power, without the user's direct continuous supervision. Large clouds sometimes has functions spread across multiple locations, each of which is a data Storage. Cloud computing is divided into delivery models and deployment models. Delivery model is further classified into three basic parts such as Infrastructure-as-a-Service (IaaS), Platforms-as-a-Service (PaaS), and Software-as-a-Service (SaaS). Cloud deployment model is divided into (i) the Public deployment, (ii) the Private deployment or (iii) the Hybrid deployment

Cloud services

Cloud provides us services are considered as delivery models. They includes:

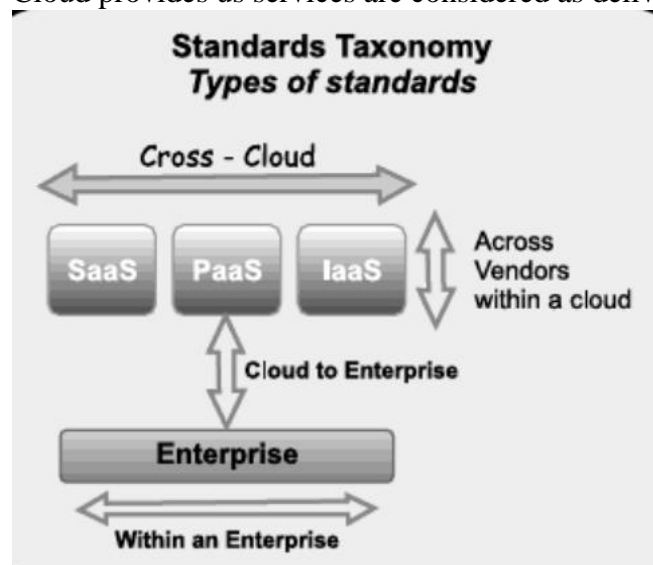


FIGURE 1. Types of Cloud Delivery Services

Software-as-a-Service (SaaS): provides access to certain ready-made apps as completely or as per the requirement services. It can take the shape of web-based apps at times or traditional non-remote applications with Internet-based storage or other network interactions at other times.

Through a thin client interface, it enables users to access the provider's application. A cloud vendor's hosted software application is accessible to users on a pay-per-use basis.

Infrastructure-as-a-Service (IaaS): This service provides as per need pay and go hardware-related services like storage and virtual servers. The basic use of IaaS is that it always uses the most up-to-date technology for computer infrastructure, enabling users to receive speedier service. Without needless purchase and configuration delays, businesses may use IaaS to construct new versions of programmes or environments. IaaS is capable of handling any type of business thanks to on-demand scaling through resource virtualization and use-based charging. The multiple companies providing services of IaaS are Amazon, Rackspace, GoGrid, AT&T and IBM.

Platform-as-a-Service (PaaS): The facilities for application design, development, testing, deployment, and hosting may be included in PaaS offerings, as well as application services like team collaboration, database integration, web service integration and marshalling, security, scalability, storage, determination, state management, application variation, application instrumentation, and developer community facilitation. These services can be offered as a combined solution over the internet, offering a controlled higher-level software infrastructure that can be used to create specific kinds of applications and services.

Cloud Deployment Techniques

Cloud deployment refers to the way a cloud is set up to offer a specific service. It goes without saying that these deployment techniques will change depending on how a Cloud serves its users. Therefore, their deployment techniques are user-specific.

Public Cloud: Third-party providers dynamically provision the resources, which they subsequently distribute to the consumers and charge on a fine-grained utility computing basis. This is the typical, mainstream strategy for cloud deployment.

Private Cloud: In this method of cloud deployment, the computing infrastructure is completely devoted to a specific company or industry. Because they only belong to one particular company, these Clouds are more secure. Because their upkeep requires in-house knowledge, these Clouds are more expensive.

Hybrid Cloud: The advantages of both the Public Cloud and Private Cloud paradigms are combined in this deployment method. For example, in a hybrid cloud deployment, services that require high levels of security may be hosted on private clouds, while less important services may be hosted on public clouds. A service is classified into the Public or Private Cloud domain depending on how important, flexible, and scalable it needs to be. In the Hybrid domain, every Cloud maintains its individuality.

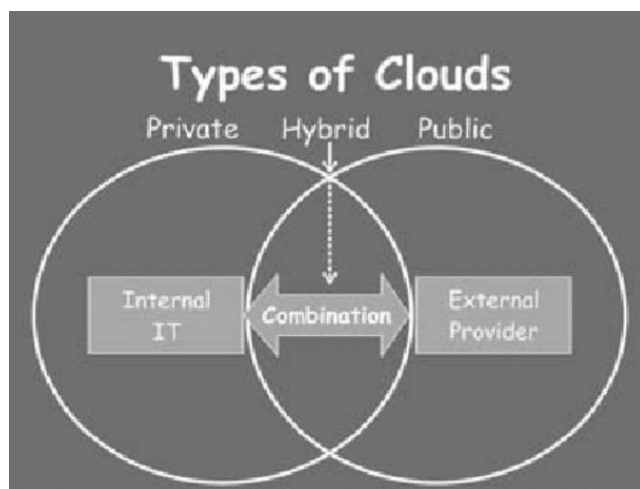


FIGURE 2. Types of Cloud Deployment

Research Methodology: Research methodology used in this research is the interview. Research question for this study is: How the cloud technology is used across the small scale automobile industry with their database management system and security and privacy policies of cloud? Protection of data in the cloud is difficult to manage, which has created distrust among users who are identified as system operators and system administrators (Bhardwaj et al., 2016). Following interview questions are for the cloud database managers who are responsible for whole system.

IQ1: Please share the experience of cloud data storage?

IQ2: Which service of cloud followed in organisation?

IQ3: Please elaborate which type of cloud is used?

IQ4: Please describe the cloud data security policies

IQ5: Please elaborate privacy is provided while using the cloud data.

IQ6: What are the challenges with cloud data management system?

Findings and Data analysis:

With the help of cloud database system we can keep whole organization data at particular location where user can execute database on the cloud, independently using a virtual machine. Databases available on cloud are SQL based and NoSQL data model. Most of the organizations use SQL based traditional database management system. Cloud web console enables users to launch database instances, create databases and monitor databases statistics and service API enables creating database instances, modifying the resources available to a database instances, deleting a database instance and restoring a database.

To perform security on the cloud both customer and cloud service providers are responsible. There are Cloud Workload Protection Platforms (CWPPs) which protect workloads like virtual machines, host and applications. Cloud security posture management (CSPM) is the group of products and services that monitor the cloud security and response to threats posed to cloud infra. Infrastructure that is openly accessible to the Internet can be secured to a great extent with the simple discipline of using a secure password, changing that password periodically, and providing various passwords for different devices. In order to avoid the reality that people frequently select weak passwords, a large number of security mechanisms have been developed. Making sure that everyone has really strong passwords is the most secure way to combat this effect.

Use of private networking features is advised for any customer needing a multi-server environment. They add a second networking card to each server by attaching them to a virtual LAN. The public networking interface can then be turned off if essential. Users can create private networks within the cloud in this way that are inaccessible via a public IP address. In front of gateway servers, many customers set up private clusters. The idea is that the cloud will give users complete control to build and protect organisational infrastructure.

Conclusion

Database management system is widely used in cloud computing for the different type of data management. The management of such data seems to be a suitable fit for cloud databases. Also, no business can afford to set up an expensive server infrastructure for running and maintaining its own databases. There are numerous Cloud databases accessible to businesses. But, each has a distinct and special API, data model, database features, and query interface. This method has to be standardised for future improvements. The security requirements, trust boundaries, and threat profiles must be clearly understood by organisations. A complete strategy for how, why, and by whom data is accessed is part of database security. Cloud service providers must make sure that

all security measures, including those for the infrastructure, operating system, and database, are in place.

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DEVELOPING A STRATEGIC PLANNING FRAMEWORK FOR SMALL AND MEDIUM ENTERPRISES (SMES)

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Abstract

Albeit small and medium-sized organizations make huge commitments to a country's economy, they are portrayed by horrible showing and a high disappointment rate, which are regularly credited to an absence of assets including cash, land, and experienced work. Numerous business management specialists fight that some SMEs by the by fizzle for absence of strategic planning in any event, when such assets are free. This study looks into how Botswana's SMEs are doing with regard to strategic planning. The study looks into how SME owner managers view strategic planning, how much planning has been done, and what obstacles stand in the way of effective strategic planning. The study reveals that while SMEs do make an effort to implement strategic planning, most of these businesses only do so to a limited degree. This is based on semi-structured interviews with 36 small and medium-sized businesses chosen from a variety of industries. The paper also lists a number of barriers that strategic planning must overcome. For instance, the review reveals that the majority of SME proprietors and managers lack significant strategic planning expertise. Some asserted that due of the greatness of the firm, they don't design. In any case, others recognized that they actually think in a conventional manner, where most business choices are made exclusively on instinct. The aftereffects of this study have ramifications for directors of SME proprietors and the people who pursue strategy choices.

Keywords: Strategic planning, Small Enterprises, Medium Enterprises, Success Factors, Risk Management.

INTRODUCTION

Small and medium-sized organizations (SMEs) are perceived as significant drivers of business and financial development in the worldwide economy. SMEs' significance and social influence are now impossible to ignore. As a result, this study focuses on the SME sector because of how important SMEs are to the economy as major forces behind innovation, employment, and economic growth.

In the corporate world, the subject of methodology is very hot, and there has been a lot of discussion on how strategic planning could work on the exhibition of SMEs. Laying out long haul hierarchical objectives and making and executing intends to contact them are portions of strategic planning, which expects to support business execution and give an unmistakable internal compass. This implies that SMEs should make long haul arrangements and direct an intensive examination of both interior (the actual association) and outer (the cutthroat climate) factors. Since the introduction of the internet and cellphones, business conditions have undergone a significant change. These new circumstances and the quickly shifting corporate environment present managers with new problems that may have affected how they developed their strategy.

Small-to-medium-sized organizations (SMEs) are assuming an increasingly big part in the worldwide economy. For example, in the US, SMEs make up by far most of organizations and give near portion of the country's Gross domestic product. In the US, SMEs are answerable for the greater part of all innovation headways and 66% of every single new position. Like this, SMEs are the essential generator of new business prospects in most of arising countries. SMBs make up the greater part of enterprises in the nation and contribute altogether to work.

A few examinations have guaranteed that an inability to get ready by an association plays a huge part in business disappointment. As per an assertion, "A firm has no supportable reason for building and holding an upper hand in the commercial center without a plainly characterized procedure." A few observational examinations that show an association between strategic planning and business success agree with this perspective. In this way, research on strategic planning is pivotal to the exhibition of associations. Research have demonstrated that the absence of formal business planning adds to the high disappointment pace of small organizations, especially new companies.

LITERATURE REVIEW

In unfortunate countries like Botswana, research on strategic planning by SMEs is uncommon and compelled. Most of the writing on SMEs puts more accentuation on viewpoints that assist SMEs with getting by, including financing, than it improves comprehend the development interaction and make reasonable upper hand (Story, 1994). To decide if strategic planning is a critical consider SMEs' terrible presentation or destruction, this study expects to discover how much strategic planning among SMEs.

A few examinations underline how firmly related business venture and small business are since the last option esteems the management, who is often the proprietor. Research like those by Gunther and Menzel (2012), Burton et al. (2012), and Temtime and Pansiri (2006) were just worried about the attributes of proprietor supervisors and what those characteristics mean for procedure. This exploration can't be summed up on the grounds that proprietor director characteristics vary from one firm to another. By examining the role that owner managers play in strategic planning

as well as other factors that may have an impact on how procedures are developed, as the current analysis has done, we may be able to better manage the idea.

Once more, various exploration; zeroed in on specific industry areas, which diminishes the chance of making determinations that might be applied for the most part. The kind of industry the firm works in is very prone to affect the reactions, which would likewise affect the review. This study investigates a multi-sectoral technique to tackle this limitation, which would be useful to SMEs in numerous ventures as they might break down and utilize the outcomes as a self-observing device to enhance their deficiencies. For example, particular components that probably won't be available in the help or assembling enterprises, to give some examples, may drive strategic management in the development area. This study will look at every aspect since it would be interesting to see if there are differences in the level of strategic planning according to industry link.

Something else to consider is that sure examination, including those by Adendorff et al. (2011), Sharma (2011), and Polatoglu (2007), just incorporate one contextual analysis. At the point when different organization types are thought of, the qualification among functional and strategic planning could end up being more subtle. In view of the exercises of the association, it very well may be asserted that specific organizations require less strategic planning since they are more versatile and ready to rapidly acclimate to changes in their nearby climate more. To acquire bits of knowledge according to numerous viewpoints, the ongoing review researches various organizations as opposed to focusing on a solitary contextual investigation.

In the industrialized world, various examination on strategic planning were completed. For example, in the UK

(Falshaw et al., 2006), Germany (Gunther and Menzel, 2012), Slovenia (Antoncic and Skrt, 2004), Austria (Kraus et al., 2007), Turkey (Polatoglu, 2007), and Greece (Kraus et al., 2007), among others (Salavouetal, 2004). Due to the political, financial, and social variations between the created and creating universes, the aftereffects of these exploration are, by the by, of less importance and probably won't matter in emerging nations. The ends, for example, can't be applied to different countries with juvenile innovative progressions and businesses, like Botswana, on the grounds that the geographic regions where the investigations were done are described by mature advances and ventures.

RESEARCH METHODOLOGY

A blended procedure approach was utilized in this examination. This technique includes assembling, assessing, and joining quantitative and subjective information in a solitary report to address the examination issue. The essential thought that the work of both quantitative and subjective philosophies in blend gives a more noteworthy handle of the examination subject than every procedure alone affected the scientist's choice to utilize a blended strategy approach. It claims that a mixed method approach assures that there are no gaps in the data obtained and claims to provide answers to problems from many perspectives. Because the respondents are free to express themselves fully without being confined by prepared responses, the qualitative data allows for a comprehensive understanding of responses. This was especially helpful when attempting to understand how SME managers felt about strategy planning. Utilizing both subjective and quantitative techniques together assist with defeating the constraints of a solitary plan, particularly while tending to a composite thought like procedure. Subsequently, the scientist can address the hypothetical viewpoint at many levels. For

this examination, the blended technique approach was considered helpful. This strategy was judged fitting for this study in light of the fact that the goal was to evaluate proprietor/supervisor viewpoints, which still up in the air from quantitative information, as well as the degree of strategic planning.

➤ **Methods for Population and Sampling**

The proprietors or administrators of SMEs were the review's interest group. Proprietors of a business are either a solitary individual or an assortment of individuals; supervisors are the people who don't claim a firm yet are responsible for overseeing it consistently, like CEOs, overseeing chiefs, senior supervisors, and other senior leaders. They are firmly connected with the organizations' business strategic decisions, making them more qualified to answer requests about the business technique of the organization. According to Measurements Botswana's SME enrolment, the SMEs in that country are designated and displayed in Table 2, which also includes a summary of the test selection procedure.

Table1: An overview of the sample selection process

Population/Composition of all listed companies		
CODE	HEADING	
1	Central Administration	2
2	City Government	45
3	Parastatals	130
4	Exclusive Registered	1,980
5	Private Unauthorized	800
6	Multi-establishments	1020
7	Not certain	1023
	Total	5000

➤ **Sampling Procedures**

The scientists got an example populace for this concentrate by utilizing irregular testing and non-irregular inspecting. To lay out an experimental and authentic component of the populace, it determines arbitrary inspecting or likelihood examining as the essential technique. As a scientific speculation that empowers the review to find out about significant builds like convictions, mentalities, insights, and conduct of the populace test under review, non-haphazardness or non-likelihood was additionally depicted.

Although it is necessary to provide data that can be used to support inferences about how SMEs in Botswana would receive and implement strategy plans, irregular and non-arbitrary testing is not totally settled to be suitable for the review. Comfort inspecting is portrayed as a kind of non-irregular choice that is utilized to choose test populaces from those whose information are finished, accessible, and furthermore. The review utilized a non-irregular example technique to oblige SMEs who are effectively open, endlessly ready to take part in the review. Advantageously Tests Populace of Botswana SMEs, Table 1's SME populace test, shows that specific SME enterprises need sufficient documentation. For example, some SMEs come up short on following fundamental data: institutional sort, exact contact data, and certain addresses are presently not legitimate. Thus, these associations are avoided from the example since they might will generally slant the factual and scientific generalizability of the exploration discoveries. This concentrate exclusively viewed at secretly enrolled organizations subsequently. Since the concentrate exclusively centered around small and medium enterprises, miniature firms (those with under 6

workers) were likewise excluded from the review. Because of time and monetary imperatives, organizations with areas beyond Gaborone were additionally precluded. Table 2, Advantageously Tested Populace of Botswana SMEs, records the helpfully inspected populace.

Table 2: Businesses with a conveniently sampled population

The entire population		5000
Less		
Every type of institution expects private enrolled businesses	1000	
Employment size >5 and <260	1272	
Location: not in Gaborone	125	
		3750
Firms available for sampling		1250

250 enterprises made up the last populace that could be tested. The last example was drawn from this populace involving delineated irregular testing to get data for all review subjects. Any method used to choose or segment the research population into smaller groups that are comparatively homogeneous in terms of one or more criteria is known as stratified random sampling. In order to create the stratum for this study, we chose SMEs that were identified to provide services or goods in the core areas of services, agribusiness, retail, and construction. A sample of 60 firms was then formed by randomly choosing ten (15) companies from each stratum. Table 3, separated inspected populace of Botswana SMEs, sums up the reaction rate by industry.

Table 3: Separated examined populace SMEs

Industry	In each industry, a sample	Responses
Services	20	4
Agriculture	20	10
Manufacturing	20	8
Construction	20	8
Retail	20	8
Missing		2
Total	100	40

A sum of 100 small and medium-sized firms filled in as the review's subjects. Unfortunately, just 40 people showed up for their appointments, resulting in a 75% response rate. The sample consisted of privately held, duly registered businesses with between 5 and 260 employees.

DATA ANALYSIS

Quantitative information investigation utilized illustrative and inferential insights. Many undertakings make up information examination, including checking the review interviews for exactness and culmination, coding and entering information into a data set, and breaking down illustrative reactions. For quantitative information, investigation was done involving the Measurable Bundle for Sociologies (SPSS) after the poll reactions were coded. Segment data was inspected utilizing unmistakable insights. For simplicity of understanding and examination, factual portrayals of quantitative information were made utilizing diagrams, tables, and graphs. The relationship between firm factors and the reception of strategic planning

was analyzed utilizing cross organizations and the chi-square decency of fit test.

Content examination was utilized to dissect the subjective information accumulated through semi-organized interviews. A systematic analysis of text is how content analysis is described. It is a method whereby hidden concepts and meanings are made clear by examining textual patterns. To make observations on the message being delivered, the researcher uses this method to develop a coding system and code text based on it. Finding examples and familiar words is important for this.

The meetings were deciphered, normal subjects or issues were tracked down in the reactions, and these were used to make classifications. Then, the recurrence of each topic was counted. This was finished for each inquiry, and afterward the setting was deciphered. In a summative substance examination, watchwords or different snippets of data are counted and looked at, and afterward the setting is deciphered. For this examination, a customary substance investigation and a coordinated methodology were changed. From the reactions, classes of information were inferred, and these classifications matched the hypothetical system.

DISCUSSION AND FINDINGS

The segment information for the 40 respondents who partook is given in this segment. Respondents' Orientation: Respondents were asked to demonstrate their orientation, and the results are shown in figure 1.

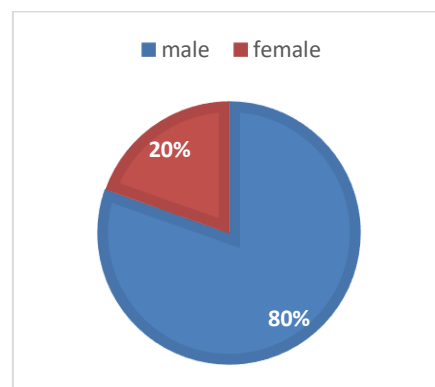


Figure 1: Respondents' gender

Figure 1's depiction of the study's male to female ratio demonstrates that the study's gender representation is not equal. Males predominate over females in terms of population. Men made up about 80% of the respondents, while women made up the remaining 20%, which may be a clue that men control a majority of SME management.

Figure 2 (Level of Training) shows engaging measurements about the respondents from SMEs' instructive foundations. Figure 2's discoveries show that youthful grown-ups with preparing make up most of SME directors. It very well might be anticipated that SMEs drove by individuals with some degree of preparing will participate in formal strategic planning, as proven by the respondents' degree of schooling. The results are not what was expected. The administrative capacities, schooling, and preparing of the supervisor are credited with the success of small organizations. However, in this occasion, it shows that regardless of whether there is preparing of any sort, it can't be good to go management.

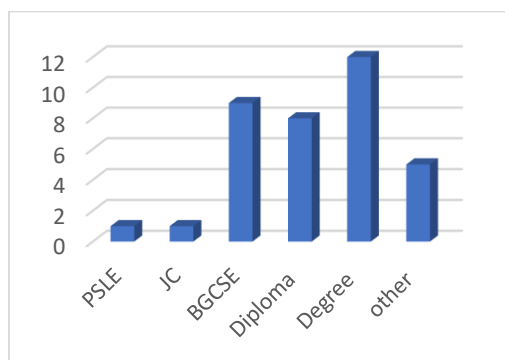


Figure 2: Level of Training

Figure 6 likewise shows that most of SME supervisors and proprietors normally have some type of tutoring. As per other expert certificates, the class "other" shows some expert capability. Twelve respondents hold degrees, trailed by nine who hold General Declarations of Optional Schooling (BGCSE), and eight who hold confirmations. Just two respondents, each with a Lesser Declaration and a Grade School Leaving Assessment Endorsement (PSLE), had the least degree of instruction. In general, the outcomes show that most SME directors and proprietors have had formal preparation, subsequently it makes sense that they know about and effectively engaged with business procedure planning.

➤ Strategic Planning in SMEs

As a rule, the review's discoveries show that main a minuscule level of SMEs take part in strategic planning exercises, and that commitment is just moderate. For example, just 45.5% of respondents (Table 10. Accessibility of vision, mission, and long-haul targets) had each of the three strategic planning parts, i.e., vision, mission, and long-haul goals, though 56.5% had a couple of the parts. Around 18% of the respondents didn't have a dream explanation, statement of purpose, or long-haul goals. The review's discoveries show that only one organization had a mission-just technique, though 23% of the example SMEs had only one of the three strategic planning parts.

Table 4: The presence of the vision, purpose, and long-term goals

	Frequency	Percent
Vision	2	9.4
Mission	2	1.5
Long-term objectives	5	10.0
The entire list	15	45.5
2 and 3	3	6.3
3 and 4	2	9.2
Not the aforementioned	8	18.1
Total	38	100.0

The results of this study are consistent with those of earlier studies (Piest, 1994; Ghobadian and O'Regan, 2002; Arasa and konyo, 2012; Antoncic and Skrt, 2004) that found some, if modest, strategic planning attempts among SMEs. Conclusion: SMEs frequently include their purpose, vision, and long-term ambitions in their profiles for formality or to keep up with the crowd. These elements' importance to the company's daily operations is underappreciated. According to George et al. (2012), the mission, vision, and objectives are a crucial component of the strategic management process because they clearly and succinctly outline a company's long-term goals and aspirations. These statements can be used to inspire and motivate a company's workforce by showing them where the organization is headed.

In order to ensure that the expectations of the stakeholders are satisfied, reputation management, according to Ling and Wang (2007), entails making sure that a firm's purpose, values, and goals are reflected in its policies and activities. The study's findings thus imply that SMEs in Botswana are not concerned about their reputations

because the majority of them lack formal plans and those that have do not apply them to their everyday operations. A firm that is not concerned with its reputation will not successfully design and implement its strategy, as is the case with SMEs in Botswana. Ling and Wang (2007) go on to further prove that reputation is the cornerstone of successful strategy execution.

These results are in line with Balasundaram's (2009) assertion that strategic planning in SMEs is unorganized, ad hoc, and informal. According to information gained from the interviews, the majority of respondents have strategies in mind but have not written them down. They may not adhere to their goals in part due to a lack of documentation. The formality of strategic planning, according to Ghobadian & O'Regan (2002) and Stewart (2002), as well as Veskaisri et al. (2007), also entails the creation, execution, and ongoing revision of a written business plan. The results of this study are consistent with previous literature in that they show the existence of strategic components but no action plan for achieving them, as well as no formalization or documentation of the same. This suggests that strategic planning is informal and only minimally practiced by SMEs in Botswana.

CONCLUSION

By zeroing in on the strategic planning of these organizations in an emerging country, this study adds to the collection of information currently accessible on SMEs. The review's significant decisions show that strategic planning isn't generally rehearsed in SMEs. The concentrate likewise recognizes casual and undocumented strategic plans in Organizations in Botswana. Monetary examination is the most frequently involved strategic planning technique in

most of associations, which regularly plan for one to three years. However, the report distinguishes a couple of hindrances keeping Organizations from participating in strategic planning exercises. The size of the firm and absence of comprehension of the planning system are the two primary factors that affect planning. SMEs accepted that since they are ordinarily limited activities, they are versatile and focus on functional errands instead of tedious strategic plans. This shows that proprietor supervisors of SMEs come up short on enterprising or business management capacities important to comprehend the meaning of development exercises like strategic planning. These outcomes are reliable with speculation that organizations that esteem strategic planning will utilize a proper way to deal with it. Contrasted with organizations that utilization casual planning, these organizations are bound to investigate likely obstructions, guarantee the creators effectively. Since SMEs assume an imperative part in the country's economy, it is vital for advance pioneering preparing and training to give SME proprietor chiefs the abilities they need to take part in planning exercises that will get the area's endurance and development.

In general, this study has significant ramifications for SMEs, organizations that support business ventures, and the Botswana government. The findings of this study indicate that SMEs only partially engage in strategic planning, in spite of the way that earlier examinations have shown the significant advantages of strategic planning for SMEs. This shows that fostering a system is troublesome, and that particular instructive stages should be worked to assist with showing SME proprietor/supervisors how to create and really carry out their objectives.

FUTURE WORK

Future exploration ought to choose an example of SMEs from around the country to decide if area impacts how enterprises

take part in strategic planning. We also recommend that future studies attempt to quantify each strategic aspect, whether they are internal or external, in order to determine how they affect strategic planning.

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