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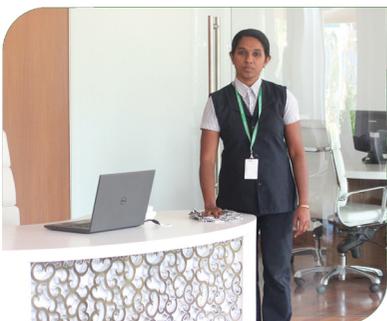
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Vaidakthya-2019

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“Crisis Management and Strategic Response”

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## Foreword

We are here at the fourth edition of '**Vaidakthya-2019**'. This year the theme for this edition is "**Crisis management and Strategic Response.**" The year 2018, was a crisis for the state of Kerala. The state witnessed the fury of nature due unplanned development and encroachments on mother earth. Similarly modern business and public institutions which are presently geared to a new millenium are also moving through different types of crises. Thus managing crisis is a paramount task. Identifying the potential crises and critically evaluating them to find strategic solutions are scenarios where all academicians and management practitioners should follow.

Organisations usually become chaotic on - what should be done in the moment of crisis, during, and after the crisis. To minimize risk and loss arising out of crisis, and in some cases even leveraging from crisis leads to business success. One of the main challenges of being affected by crisis is that you have no chance to 'undo' the past deftly. Only a carefully thought-out effective continuity plan will make coping in a crisis easier with minimum disruption. By creating an efficacious environment with stable and strong decisions, a proper crisis management tool can be easily prepared. Thus, as responsible academicians, and citizens, we need to be offering the importance of crisis management to our managers' of tomorrow and help them lead their way to assess and detach crises in the business and institutional scenarios.

Research is a fundamental element of academics. It is the foundation for knowledge, that makes possible the much-needed innovation and application which provides wider benefit to all the stakeholders of education. Research adds to the stock of knowledge and provides the source of new ideas, methods, techniques, and findings across a whole range of disciplinary and multi-disciplinary areas.

‘Vaidakthya’ has been focusing on addressing the developing areas of management. To document this intellectual vibrancy will always be the key aspect of Vaidakthya. We focus to promote knowledge and make the various academic developments in the world accessible to every section of society. The current conference proceedings is a hub of diverse ideas and innovative arguments in crisis management and approach to reach strategic responses faced by the business environment. Articles in Vaidakthya are peer-reviewed to achieve this goal ‘Vaidakthya-2019’ is a significant step in achieving our aims and principles.

**Editor - Vaidakthya 2019**

# Exploring the Impact of Store Environment on Consumer Buying Behaviour: An Empirical Study

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**Abstract**— We are in an era of digital explosion. There is a paradigm shift in consumer behaviour and the retailing world is taken by storm with the onset of the latest technologies and educated consumers. A comprehensive understanding of all the factors which impacts consumer perception of the in-store environment that leads to the buying behaviour of consumer is a cumbersome task. The paper is an attempt to describe the impact of store environment on consumer buying behaviour using six factors namely, perception of merchandise quality, perception of overall environment, perception of ambient music, perception of affability of salesperson, emotion (pleasure/arousal) and behaviour (approach/avoidance) of consumers which leads to the buying behaviour of consumers. Through the effective understanding and implementation of these factors helps the retailers to redefine and tailor the offerings in the store and which ignites the customer experience to the utmost level and helps to tune the customers itself as the advertisers of the brand, thereby it is possible to reduce the process in the consumer decision-making process.

**Keywords**— Consumer buying behaviour, Educated consumers, Consumer perception, Store environment, Ambient music, Affability of salesperson, Emotion

## I. INTRODUCTION

Competition and dynamicity are the main characteristics of present world. Everybody is busy with their own business. Nobody has a little time to waste by giving attention to unnecessary things. It can clearly understand by the change in response level of advertisements. As time passes the perception, level of knowledge, expectations and needs of the customers are changing. The per capita income in India doubled between 2000-01 to 2009-10, resulting in improved purchasing power. This has also changed the mindset of Indian customers. It is shifting from low cost to high value, better convenience and quality shopping experience. Retailing encompasses the business activities involved in selling goods and services to consumers for their personal, family, or household use. The field of retailing has experienced lots of changes and is very dynamic in the emerging markets, India being one of them (Grewal and Levy, 2007). At the same time many consumers are bored with

shopping for products or do not have much time for it and are spending more for experiences. Customer service expectations are high at a time when more retailers offer 1. Self-service, 2. Automated systems, 3. Omnichannel ordering and pick up services. Now it is the time for retailers to think A. how can they better serve their customers while earning a fair profit, B. how can they stand out in a highly competitive environment where consumers have so many choices, C. how can they better coordinate our merchandising, pricing and target segments differ across the channels, D. how can they grow their business while retaining a core of loyal customers (Barry Berman, Joel R and Srivastava, 2018). Retail decision makers need to address these questions and applying the basic principles of retailing in a well – structured, systematic and focused strategy. Now the marketer needs to give more importance in their critical role to create a superior experience in retail outlets by collaborating the store environment, ambience and all other standards. In this present scenario there is a huge demand for store unique insights and world-class expertise, the customers are okay with switching costs if their expectations are going to be fulfilled, so it is very crucial to provide long-lasting experiences in shopping time. The emerging retailing trends in India pose the need to understand how consumers derive value from atmospheric cues within retail settings and study their impact on human behaviour (Sir. M. Visvesveraya). In this paper is a description to get understand more about the preferred choices, expectations and needs of customers towards overall performance of retail stores exactly fits with the trend and minds of market and customers respectively by increasing the performance and effectiveness of the store which resulted in creating potential customers.

## II. LITERATURE REVIEW

### A. Introduction to consumer behaviour

The behaviour of consumer is considered to be the study of why, when, where and how people prefer or prefer not to buy a particular product. It takes into consideration and mix together the basics of their economic status, their psychology,

the society and the social anthropology. Aaker, David and George (1971) in the book "Consumerism: Search for the consumer Interest" makes an effort to evaluate influence on the buyer from their close group such as friends, reference groups, family as well as in general the society. The general definition of consumer behaviour is that one of the studies a marketer uses to understand a consumer better and forecast on how their behaviours change when coming to buying decisions. According to Schiffmann (1993) consumer behaviour is the sum of learned values, customs and beliefs that serve to direct the members of a specific society. According to Brian Mullen (2001) from the book "The Psychology of Consumer Behaviour" consumer behaviour is the decision maker or behaviour of the consumer in the market place of the services and goods. Consumer behaviour entails all activities of consumers linked with the use, buying and disposal of services and products including the mental, behavioural and emotional responses of consumers that determine, follow or precede these activities (Loudon and Della, 1988). According to Peter and Olsen et.al (2005) from the book "consumer behaviour and marketing strategy" consumer behaviour can also be referred as the physical activity and decision engaged in obtaining, evaluating, disposing or using of services and goods. Consumer behaviour is often goal oriented and purposeful. Each consumer is free to make an option with regard to the buying she or he is going to make. Consumer behaviour is the method which starts with the stimuli a consumer gains from his surroundings and ends with buying transaction.

Walter and Paul (1970) in the book "Consumer Behaviour: An Integrated Framework" has emphasized consumer behaviours the process whereby individuals decide whether what, when, where, how and from whom to purchase goods or services. " Behaviour at large is a sign of precise mannerism as well as technique. Consequently, consumer behaviour connotes consumer's expression or say attitude whilst purchasing the products. In further terminology consumer behaviour is the outcome of such purchase, at the same time as a consumer does on behalf of the contentment of his requirements. According to the Webster (1975)<sup>28</sup>; in his article "Determining the Characteristics of the Socially Conscious Consumer" expressed that the behaviour of buyer is all psychological, physical and social of potential customers as they become aware of evaluate purchase consume and tell other people about products and services. According to Hawkins, Mothersbaugh and Best, (2007)<sup>31</sup> in the book "Consumer Behaviour, Building Marketing Strategy" states that consumer behaviour is also the study of processes and consumers used to select, dispose and consume services and products. All decisions of marketing are concerned on consumer behaviour's knowledge and assumptions. Researching consumer behaviour is a critical process, but understanding consumer behaviour is difficult to marketers and the marketers can use it to: 1) target customers effectively; 2) offers customer satisfaction and value; 3) expand base of the knowledge in the marketing field; 4) create competitive benefit; 5) develop services and products; 6) develops company's value; 7) applies strategies of marketing towards positive effect on society and 8)

understand how customers look their rivalries products versus their products.

### *B. History of consumer behaviour*

The history of consumer behaviour seems to be highly twisted with the history of thought of marketing. The purpose of the history is to trace the historical allegiance and dependence of the consumer behaviour on the practice and discipline of marketing. Then the consumer behaviour attempts to estimate the evolving trends in the research and theory of consumer behaviour as a consequence of new and evolving schools of thought of marketing (Foxall 2005). Over the years, the marketing has shifted its dependence on other disciplines as well as in its focus of understanding. For example, the schools of classical of thought of marketing are depended on the social science such as anthropology, sociology and economics and focused the aggregated behaviour of market (Evans, 2003). This gives the way for the managerial schools of marketing to think in which focused on the understanding and attention shifted to the individual customers while the disciplines of social science continued to dominate the thinking of marketing. Even though the marketing kept its focus on the individual customers but started to borrow more from the behavioural sciences. More recently, marketing has started to shift its attention away from the individual customers and concentrate in the markets. In the growth process, the consumer behaviour is also depending less on the behavioural sciences and more on the traditional social sciences. So, the evolving trend is known as the adaptive schools of marketing thought (Shankar& Mahesh, 2006). It appears that each era of marketing motivated the particular types of research of consumer behaviour and thereby it shapes its history with respect to the research methodology, consistent body of knowledge as well as developmental theory. The below figure summarizes the parallel relationship between consumer behaviour and marketing. Fig.No.1: Relationship between consumer behaviour and marketing.

### *C. Consumer buying behaviour*

Purchasing attitudes are a manifestation of the procedure by which a consumer makes a choice and is a reference to the acts of people who are engaged in purchasing and marketing items. Customer purchasing conduct when undertaking an investigation related to the selection of a brand. As per (Lantz and Loeb, 1998), the consumer purchasing attitudes can be described as purchasing attitude of the final customer. It is crucial to be aware with hypotheses related to consumer purchasing conduct is based on which the meanings, outlook, penchants, attempt to interact and method of recognizing what the consumers have. Fig.2: Customer buying decision process.

### *D. Reasons for consumers' preference towards a particular product/ service*

The preferences of consumer are used mainly to refer to choose a choice that has the largest expected value among many choices by consumer to fulfil her or his desires or requirements. Preferences represent options among more valued or neutral choices available. Consumer preference is the outcome of their behaviour they indicate during buying, searching and destroying the products.

<p><b>1) Classical Marketing</b></p> <p>a) Demand theory b) Economic Geography c) Economic Anthropology</p> <p><b>Parallel Consumer behavior</b></p> <p>a) Consumption Economics b) Retail Patronage c) Self Service</p>	<p><b>2) Adaptive Marketing</b></p> <p>a) Global markets b) Environmental analysis c) Competitive structures</p> <p><b>Parallel Consumer Behavior</b></p> <p>a) Global Consumer Behavior b) Consumer as stakeholder c) Comparative consumer Behavior</p>
<p><b>3) Managerial Marketing</b></p> <p>a) Theory of the firm b) Diffusion of Innovations c) Social class</p> <p><b>Parallel Consumer behavior</b></p> <p>a) Brand loyalty b) Opinion leadership c) Demographics</p>	<p><b>4) Classical Marketing</b></p> <p>a) Behavioral theory of the firm b) Social Psychology c) Clinical Psychology</p> <p><b>Parallel Consumer behavior</b></p> <p>a) Organizational buying behavior b) Attitude research c) Motivation research</p>

Fig. 1: Relationship between consumer behaviour and marketing

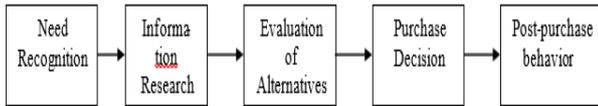


Fig.2: Customer buying decision process

A consumer is an individual who has the ability to pay for services and goods offered for sale by the institutions of market to satisfy the household or personal needs, desires and wants. A consumer is the important visitor on the premises. Consumer is not dependent on anybody. The sellers are only dependent on consumer. Consumer is not an outsider to business. Consumer is like the blood of business. Therefore, consumer is very important in business cycle. Most of the customers are obsessed with names of brand products. The companies are offering quality products which customer's values the most. The customers are satisfied when they get quality products worth the money they have spent (Zhang et al, 2007).

*E. Paradigm shift in customers perception*

Customer satisfaction and fulfillment of customer desires needs to be taken as the main motive or ultimate goal for every retailers or stores, which demands for core competencies and uniqueness of the particular brands. To update the customers with current trends and procedures there are many scales were already developed, it can be

defined as the techniques or theories derived to satisfy the customers in stores. An alternative approach to measurement procedures was proposed by Malhotra (1988) which reduces the data collection demands imposed on the respondents, as the popular preference measurement procedures developed in the advanced nations were found to be unsuitable for use in developing countries. Use of pictorial or visual stimuli which required input from the respondents assessed and found to be highly satisfactory. Mathwick *et al.* (2001) evaluated the psychometric properties of the Experiential Value Scale (EVS) in both samples of catalogue and Internet shoppers and tested the hypothesized hierarchical structure. Predictive modelling points to the value of the EVS as a measurement tool, useful in describing the perceived makeup of a retail value package and predicting differences in shopping preferences and patronage intent in multichannel retail systems. Boshoff (2007) did a research to subject the E-S-QUAL scale to a psychometric assessment. The results revealed that the scale is effective in capturing the essence of electronic service quality, but that both scholars and practitioners must assess the underlying factor structure of their data before drawing any conclusions from their study. Godey *et al.* (2009) introduced and validated a scale measuring the aesthetic style of consumers of luxury goods. Rolland and Freeman (2010) developed 'E-tail SQ', a 15-item scale to measure five key user values, namely, labelled ease of use, information content, fulfillment reliability, security/privacy and post-purchase customer service. Omar and Musa (2011) developed a reliable and valid scale for measuring the service quality of retail loyalty programs—Loyalty Program Service Quality (LPSQual) in the context of departmental stores and superstores in Malaysia. The proposed instrument (LPSQual) contains 26 attributes in seven dimensions: reward, tangibility, policy, information usefulness, courteousness/helpfulness, personalization, and communication. Bauer *et al.* (2011) derived the Grocery Assortment Perception (GAP) scale. Significant positive relationships between the GAP scale and customer satisfaction as well as loyalty intentions provided empirical support for the scale's predictive ability and nomological validity. Kwon and Lennon (2011) identified four brand association dimensions important to the US specialty apparel brands and proposed a reliable and valid procedure to develop a measurement that can be used for apparel companies to track their brand associations. In total, seven brand association themes were identified in the qualitative stage. Through a scale development and validation process, these themes were narrowed down to four brand association dimensions—self-relevance, service, merchandise, and store environment—represented in a brand association scale consisting of 14 items.

Atkins and Kim (2012) conducted a study to gain better conceptualization and measurement of smart shopping. The specific objectives were to: investigate consumers' perceptions of the term smart shopping; develop a measure of smart shopping; and validate the measure of smart shopping. The findings indicate that smart shopping includes consumers seeking to minimize the expenditure of time, money, or energy to gain hedonic or utilitarian value from the

experience. Singh and Sahay (2012) applied data reduction using Exploratory Factor Analysis (EFA) on a sample of 200 respondents drawn from four constituent urban clusters within the National Capital Region in India and condensed a set of 22 mall attributes into a list of five comprehensible factors, i.e., ambience, physical infrastructure, marketing focus, convenience, and safety and security. Brocato *et al.* (2012) developed a comprehensive scale that can be used to assess individuals' perceptions of other customers during commercial transactions. This study conceptualizes a three-dimension Other Customer Perception description to address this gap.

PROPOSED MODEL

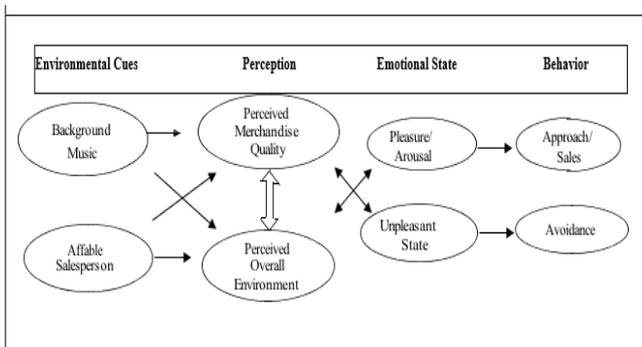


Fig. 3: Impact of store environment on consumer buying behaviour

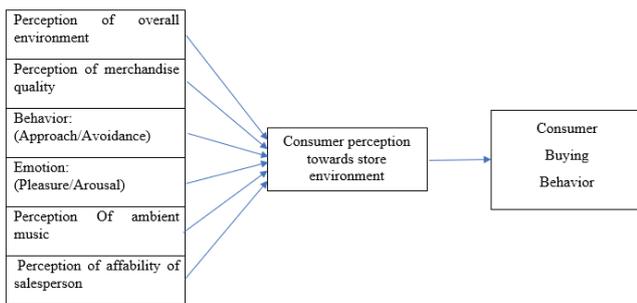


Fig.4. Factors affecting Consumer Perception towards store environment

This research paper discusses the ways in which a retailer needs to tune the store operations which improves the effectiveness of the store performance and reduction in the customer buying process with the effect of retail atmospherics—specifically music and affability of salesperson on consumer perception and thereby his buying behaviour. The available literature does not provide any consumer perception on these attributes in the Indian retailing context. This is a study to propose a consumer perception description in emerging market, which can be used for different types and formats of retail outlets. Atmospherics is the effort invested to create a desirable buying environment in order to induce specific emotional responses in consumers and ultimately increase their purchase probability (Kotler, 1973). Music can be a powerful primary element in creating or enhancing sensory experiences of shoppers (Schmitt, 1999) and serve as a powerful connection to our emotion. *The Journal of the American Medical Association* also recognizes

the influence of the right sound: “Music has long been recognized as a powerful communicative force that affects attitude, mood, emotions and behaviour.” It can influence the disposition of shoppers and manifest itself in choice of store, propensity to purchase, basket size and intent to patronage. A large number of researches have clearly established that right music brings positive returns to marketing efforts in terms of sales, purchase intentions, satisfaction, duration of stay, perceived waiting time, and store image (Milliman, 1982 and 1986; Bruner, 1990; Yalch and Spangenberg, 1990 and 1993; Areni and Kim, 1993; Herrington and Capella, 1994 and 1996; Oakes, 2000; Morrison, 2001; Areni, 2003; Garlin and Owen, 2006; Morin *et al.*, 2007; Oakes and North, 2008; and Soars, 2009). Thus, considering music as a significant retail atmospherics cue, myself incorporate the construct ‘perception of ambient music’, in the study. Affability of salesperson is the other environmental stimulus included in this paper. Social factor is another important component of retail atmospheric. Retailers of all types are paying more attention to customer service as a method of establishing a differential advantage. The number, appearance and behaviour of store employees may help shape a customer’s perception of the service level within a retail store (Baker, 1986). A retail store with high social environment (number and behaviour of salespersons) will increase the feelings of arousal that are likely to be more conducive to the customers and may lead them to stay longer in the store. Selling and salespeople are considered the strengths of a retail (Reynolds and Arnold, 2000). So, i include ‘perception of affability of salesperson’ as the other construct in the paper. In fact, impulse buying was maximized when the store environment was perceived as overstimulating, i.e., higher than desired in terms of excitement and stimulation (Mattila and Wirtz, 2008). The positive effect of a highly exciting store environment on unplanned purchases is consistent with research in psychology, suggesting that high arousal lessens people’s self-regulation (Baumeister *et al.*, 1998; and Baumeister, 2002). High arousal also tends to reduce people’s ability to think through their actions (Leith and Baumeister, 1996; and Tice *et al.*, 2001). Hence, it is not surprising that store excitement can influence consumers’ spending patterns. Therefore, adoption of the two constructs, ‘perception of merchandise quality’ and ‘perception of overall environment’ in the paper. Mehrabian and Russell (1974) state that a conditional interaction exists between pleasure and arousal in the determination of approach-avoidance behaviours, arousal amplifying approach behaviours in pleasant environments, and avoidance behaviours in their counterparts. According to their Pleasure, Arousal and Dominance (PAD) model, emotional states are induced by environmental stimuli and act as mediators. They lead to affective responses that generate approach or avoidance behaviour. The existence of such a relationship between positive emotions and approach, as well as between negative emotions and avoidance, has been well sustained by research (Russell and Mehrabian, 1978; and Donovan and Rossiter, 1982). Thus, the two constructs ‘emotion (pleasure/arousal)’ and ‘behaviour (approach/avoidance)’

inadvertently become constructs of the study to assess the impact of perception of the consumer due to atmospheric cues (see Figure 2).

### III. CONCLUSIONS

The consumer buying behaviour in a store environment has an impact on the environment cue of music and salesperson with the six dimensions of retailing. Here in this paper a description of impact of store environment in consumer buying behaviour using six factors namely, perception of merchandise quality, perception of overall environment, perception of ambient music, perception of affability of salesperson, emotion (pleasure/arousal) and behaviour (approach/avoidance) of consumers which leads to the buying behaviour of consumers is attempted. Now it is an overview that gives the guidance and reason for tuning the store operations which has a great impact on customer's perception. The current situation demands new methods for promotional activities that match with the attitudes of the present tastes of the target market which is essential to maintain the brand image, value and brand loyalty in potential customers. This paper gives an insight to the marketers a new technique that focusing on the content source of their potential customers (target market) and influences the content source thereby the customers get more interested about the product, which will increase the response level of the promotional activities. Another important thought emerged in this paper is that by implementing and maintaining the six factors in the stores will result in the changing of the consumer decision-making process. The model proposed propounds that if applied judiciously the

consumers will become self-advertisers of the brand and thereby creating a constellation of brand loyal customers.

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# Automation - Unemployment Crisis and strategies

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**Abstract**— Automation is the most recent technological advance in production. A reading of literature suggests that automation presents both optimistic as well as pessimistic scenarios. First, there always remain large classes of occupations not amenable to automation. Second, it is possible for the introduction of new tasks in which labor has a comparative advantage. Based on our review of available studies and empirical evidence the following statements can be made: (1) Increasing automation and robots adoption do not seem to cause loss of employment in the aggregate (2) Low skilled workers in routine jobs are more likely to suffer job losses.(3) There will be demand for new types of skilled workers or new specialization within occupations. The challenge is how to augment the supply of required skilled people with the right kind of education and training to match the demand for diversified skills in the near future. The McKinsey Global Institute recently released a report on a dozen major new technologies that it considers likely to be ‘disruptive,’ upsetting existing market and social arrangements. Although automation causes unemployment, by turning tasks that used to be performed by labour into tasks that are performed by machines, it might also ignite a mechanism that reduces this unemployment as well.

**Keywords**— structural change; employment; labour; automation; automatability; occupation; robotization; AI; computerization

## 1. INTRODUCTION

A new report predicts that by 2030, as many as 800 million jobs could be lost worldwide to automation. The study, compiled by the McKinsey Global Institute, says that advances in AI and robotics will have a drastic effect on everyday working lives, comparable to the shift away from agricultural societies during the Industrial Revolution. In the US alone, between 39 and 73 million jobs stand to be automated — making up around a third of the total workforce. The changes won’t hit everyone equally. Only 5 percent of current occupations stand to be completely automated if today’s cutting-edge technology is widely adopted, while in 60 percent of jobs, one-third of activities will be automated. The report stresses that the effects of automation on work will differ from country to country. Developed economies like the US and Germany are likely to be hit hardest by the coming changes, as higher average wages incentivizes automation. In America, the report predicts that employment in industries like health care will increase, as society copes with an aging population; while routine jobs that involve physical labor (machinist, cooks) or data processing (payroll clerks, data entry) are most at

risk of automation. In developed economies like the US, automation is also likely to lead to increased inequality. High-paying creative and cognitive jobs will be at a premium, while the demand for middle and low-skill occupations will decline.

In 1910, only 18 percent of children aged 14 to 17 went to high school; by 1940 this figure was 73 percent. The resulting increase in educated workers helped create a booming manufacturing industry and buoyant middle-class. A similar push is needed today, says McKinsey, yet over the last few decades, spending on labour force training and support has fallen. The conclusion of the report seems to be: automation doesn’t have to be a disaster, but only if governments keeps pace.

## II OBJECTIVES OF THE STUDY

The objectives of the study is to find out whether:

1. Whether automation can result in unemployment?
2. To understand as to what types of jobs can be affected by automation.
3. To recommend strategies to prevent unemployment due to automation.

The study is based on secondary data and published reports.

## III REVIEW OF LITERATURE

Mankind is on the brink of the Fourth Industrial Revolution in which breakthrough technologies such as artificial intelligence, robotics, data science, quantum computing, internet-of-things, etc. will enable advanced applications such as social robots, autonomous vehicles, virtual assistants, 3D printing and desktop manufacturing, etc (Acemoglu & Autor, 2011). There is a debate among labor economists whether the introduction of technology to increase automation bring about unemployment. There are literatures arguing that productivity-enhancing technology may exceed the pace at which mankind is able to find new uses for those becoming unemployed (Autor & Dorn, 2013) The word ‘Automation’ is derived from greek words “Auto”(self) and “Matos” (moving). Automation therefore is the mechanism for systems that “move by itself”. However, apart from this original sense of the word, automated systems also achieve significantly superior performance than what is possible with manual systems, in terms of power, precision and speed of operation.

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The classic aim of automation is to replace human manual control, planning and problem solving by automatic devices and computers. However, as Bibby and colleagues (1975) point out: "even highly automated systems, such as electric power networks, need human beings for supervision, adjustment, maintenance, expansion and improvement. Therefore one can draw the paradoxical conclusion that automated systems still are man-machine systems, for which both technical and human factors are important."

Automation is the conversion of a work process, a procedure, or equipment to automatic rather than human operation or control. Automation does not simply transfer human functions to machines, but involves a deep reorganization of the work process, during which both the human and the machine functions are redefined. Early automation relied on mechanical and electromechanical control devices; during the last 40 years, however, the computer gradually became the leading vehicle of automation. Modern automation is usually associated with computerization.

Automation has consequences for the organization of work, the type of jobs performed, skills required, and the tasks and working activities conducted. In general, automation (computerization, introduction of robots and AI) predominantly affects routinized work in stationary, predictable environments, typically found in the middle-skilled jobs (Belot, M., Kircher, P., and Muller, P. (2016). However, automation and computerization by means of the introduction of robots, advanced software, and AI thus substitute for the routine and "rule-based" tasks, yet complement the non-routine and cognitive tasks (Van den Berg, G. J. (2001).on computerization). The non-routine and cognitive tasks typically are executed by high-skilled employees with high wages, while the routine tasks generally are conducted by medium-skilled employees with medium wages. Consequently, jobs that are low-skilled, but are composed of non-routinized tasks in a dynamic and unpredictable environment cannot yet be robotized or computerized.

Jobs which require refined perception and physical dexterity, creative intelligence/improvisation, or social intelligence, regardless of whether they are low-skilled, are less at risk of replacement (Borowczyk-Martins, D., Jolivet, G., and Postel-Vinay, F. (2013). Although tasks using tacit knowledge or knowledge which is hard to codify cannot be automated (J. Breckling, 1989), if there is a sufficiently large amount of data, cognitive, knowledge-based tasks can also be taken over by AI (Cortes, G. M. and Gallipoli, G. (2017) and are, as such, subject to progressive automation and substitution as well (S. Zhang, C. Zhu, J. K. O. Sin, and P. K. T. Mo, 2017). Thus, technological substitution of jobs does not necessarily displace low-skilled work, but rather routinized work (Stops, M. (2014). As routinized work is often executed by medium-skilled workers, this substitution effectively "polarizes" (Stops, M. (2014)or "hollows out" the labor force, with fiercer competition and thereby wage stagnation, particular for middle and lower skilled work.

**Predicted Jobs Automation Will Create and Destroy**

When	Where	Jobs Destroyed	Jobs Created	Predictor
2016	worldwide		900,000 to 1,500,000	<a href="#">Metra Martech</a>
2018	US jobs	13,852,530*	3,078,340*	<a href="#">Forrester</a>
2020	worldwide		1,000,000-2,000,000	<a href="#">Metra Martech</a>
2020	worldwide	1,800,000	2,300,000	<a href="#">Gartner</a>
2020	sampling of 15 countries	7,100,000	2,000,000	<a href="#">World Economic Forum (WEF)</a>
2021	worldwide		1,900,000-3,500,000	<a href="#">The International Federation of Robotics</a>
2021	US jobs	9,108,900*		<a href="#">Forrester</a>

**Types of Automation:**

**FIXED AUTOMATION**

It is a system in which the sequence of processing (or assembly) operations is fixed by the equipment configuration. The operations in the sequence are usually simple. It is the integration and coordination of many such operations into one piece of equipment that makes the system complex. The typical features of fixed automation are:

- High initial investment for custom-Engineered equipment;
- High production rates; and
- Relatively inflexible in accommodating product changes.

The economic justification for fixed automation is found in products with very high demand rates and volumes. The high initial cost of the equipment can be spread over a very large number of units, thus making the unit cost attractive compared to alternative methods of production. Examples of fixed automation include mechanized assembly and machining transfer lines.

**PROGRAMMABLE AUTOMATION**

In this the production equipment is designed with the capability to change the sequence of operations to accommodate different product configurations. The operation sequence is controlled by a program, which is a set of instructions coded so that the system can read and interpret them. New programs can be prepared and entered into the equipment to produce new products. Some of the features that characterize programmable automation are:

- High investment in general-purpose equipment;
- Low production rates relative to fixed automation;

- Flexibility to deal with changes in product configuration; and  
Most suitable for batch production.

Automated production systems that are programmable are used in low and medium volume production. The parts or products are typically made in batches. To produce each new batch of a different product, the system must be reprogrammed with the set of machine instructions that correspond to the new product. The physical setup of the machine must also be changed over: Tools must be loaded, fixtures must be attached to the machine table also be changed machine settings must be entered. This changeover procedure takes time. Consequently, the typical cycle for given product includes a period during which the setup and reprogramming takes place, followed by a period in which the batch is produced. Examples of programmed automation include numerically controlled machine tools and industrial robots.

### **FLEXIBLE AUTOMATION**

It is an extension of programmable automation. A flexible automated system is one that is capable of producing a variety of products (or parts) with virtually no time lost for changeovers from one product to the next. There is no production time lost while reprogramming the system and altering the physical setup (tooling, fixtures, and machine setting). Consequently, the system can produce various combinations and schedules of products instead of requiring that they be made in separate batches. The features of flexible automation can be summarized as follows:

- High investment for a custom-engineered system.
- Continuous production of variable mixtures of products.
- Medium production rates.
- Flexibility to deal with product design variations.

The essential features that distinguish flexible automation from programmable automation are:

- the capacity to change part programs with no lost production time; and
- the capability to changeover the physical setup, again with no lost production time.

These features allow the automated production system to continue production without the downtime between batches that is characteristic of programmable automation. Changing the part programs is generally accomplished by preparing the programs off-line on a computer system and electronically transmitting the programs to the automated production system. Therefore, the time required to do the programming for the next job does not interrupt production on the current job. Advances in computer systems technology are largely responsible for this programming capability in flexible automation.

**SECTORS OF OCCUPATION:** There are three classes of occupations. The first class are existing occupations that are directly affected by technological substitution of (part of) the tasks. This class also contains occupations that are indirectly affected by changing demand or disposable

income of customers. This holds for occupations in the sectors developing and producing the focal technology or supplying products or services to robot or software builders. However, this also holds for occupations in sectors that are facilitating or inhibiting these changes, e.g., people need to be trained and educated in the new rather than old technology. The net effect of technological change is not immediately obvious: while jobs in the new technology are created (e.g., trainers, consultants), jobs related to old technology may be lost. Moreover, technological change also affects the disposable income, which has ramifications for spillover into the quaternary sectors.

The second class contains: (i) occupations in which, primarily, task content is adjusted to exploit new technology; and (ii) occupations that transform substantially by introducing complementary tasks to exploit the focal technology (e.g., maintaining or programming a robot). The latter may well require a skill upgrade. Arguably, it may be that the job title stays the same but new technology is used to change the input manageable, the processes available, or the output possible, and thereby the activities required

The third class contains emerging occupations that reap opportunities to provide innovative products or services using the focal technology, or extending and recombining technology. A substantial amount of employment growth takes place in jobs with new job titles [9]. Although the sector of application and existing occupations face substitution and hence job destruction, the employment in all the other sectors is either growing directly due to or affected (in)directly by the emergence of the new technology.

### **AUTOMATION PENETRATION ACROSS SECTORS**

Automation is starting to take hold in other sectors beyond manufacturing. Some well-known examples include kiosks and tablets to place orders and pay in restaurants, robots to process packages in warehouses, and self-driving trucks in transportation.

Until recently, automation displaced routine tasks that were predictable and could be easily programmed. This included assembly line robots in factories and computers to replace certain occupations such as switchboard operators. Today, advances in artificial intelligence and machine learning enable software to detect patterns in data, allowing some nonroutine tasks and judgmental decisions to be automated. Combined with advances in mobile robotics, machine learning can even permit nonroutine manual tasks to be automated—tasks that could only be performed by humans in the past.

Two recent major studies have attempted to identify which tasks are most susceptible to automation with current technology: "A Future That Works: Automation, Employment and Productivity," by the McKinsey Global Institute and "The Future of Employment: How Susceptible Are Jobs to Computerisation?" by Carl Frey and Michael Osborne at the University of Oxford.

**THE MCKINSEY STUDY**

The McKinsey study identified 2,000 distinct work activities. Each work activity requires some combination of 18 performance capabilities, which come from five groups: sensory perception, cognitive capabilities, natural language processing, social and emotional capabilities, and physical capabilities. For each occupation and activity, McKinsey determined which performance capabilities are demanded, and whether the required level of performance is below, at, or above a median level of human performance. McKinsey then rated the potential for existing technology to substitute for humans in each performance capability in each occupation and activity.

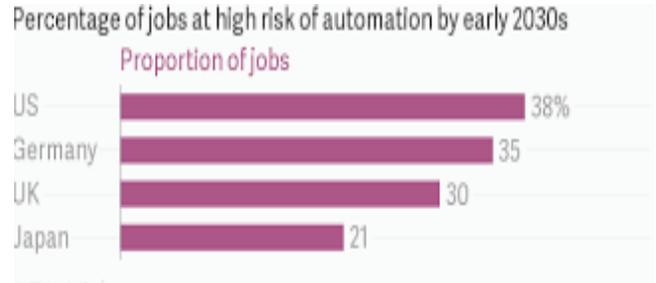
McKinsey aggregated its 2,000 work activities into seven broad categories. For example, a 69% automation potential for processing data means that over two-thirds of the time currently spent on this activity by human workers across all occupations might be saved by automation with existing technology.

McKinsey estimates that only 7% of time is spent managing and developing people, and that this is the work activity with the lowest automation potential of 9%. The next three work activities—applying expertise, interfacing, and performing unpredictable physical activities—make up 42% of time, with automation potentials ranging from 18% to 26%. The three remaining categories—collecting data, processing data, and performing predictable physical activities—comprise 51% of all work activities and have high automation potentials ranging from 64% to 81%.

**THE OXFORD STUDY**

The Oxford study is based on descriptions of specific tasks for 702 different occupations from the US Department of Labor. Using these descriptions and working with machine learning experts, authors Frey and Osborne identified 70 occupations that they consider to be either entirely automatable or entirely non-automatable. In doing so, they considered the degree to which each occupation requires any of three bottlenecks to automation: perception and manipulation, creative intelligence, and social intelligence. Perception and manipulation includes finger dexterity, manual dexterity, and awkward positions; creative intelligence includes originality and fine arts; and social intelligence includes social perceptiveness, negotiation, persuasion, and assisting and caring for others. Finally, using these 70 occupations as a basis, Frey and Osborne applied a classification algorithm to assign a degree of automation potential between zero and one to each of the remaining 632 occupations.

**JOB LOSSES ARISING OUT OF AUTOMATON** While it is hard to predict how unemployment happens, the McKinsey research provides some insights into the likely workforce transitions that should be expected and their implications. It is estimated that between 400 million and 800 million individuals could be displaced by automation and need to find new jobs by 2030 around the world.



Japan, the United States and Germany could face significant workforce displacement from automation by 2030. Germany’s workforce will decline by three million by 2030, and it will have more than enough labor demand to employ all workers.

**OCCUPATION WISE JOB LOSSES ARISING OUT OF AUTOMATION**

OCCUPATIONS WITH A 95% OR HIGHER PROBABILITY OF AUTOMATION

Occupation	NUMBER OF ANNUAL HOURS	LIFETIMES OF WORK
Cashiers	7,037,300,000	44,687
Office Clerks, General	5,879,740,000	37,336
Secretaries and Administrative Assistants (General)	4,567,420,000	29,003
Bookkeeping, Accounting, and Auditing Clerks	3,118,520,000	19,803
Cooks, Restaurant	2,423,560,000	15,390
Team Assemblers	2,216,760,000	14,076
Receptionists and Information Clerks	1,984,840,000	12,604
Landscaping and Groundskeeping Workers	1,802,900,000	11,448

Figure 2 focused on jobs that were 95% or more likely to be replaced by automation, along with the hours lost and their equivalent in working lifetimes.

**STRATEGIES TO PREVENT JOB LOSSES**

Over the next ten to 15 years, the adoption of automation and AI technologies will transform the workplace as people increasingly interact with ever-smarter machines. These technologies, and that human-machine interaction, will bring numerous benefits in the form of higher productivity, GDP growth, improved corporate performance, and new prosperity, but they will also change the skills required of human workers.

All technological skills, both advanced and basic, will see a substantial growth in demand. Advanced technologies require people who understand how they work and can innovate, develop, and adapt them. Our research suggests that through 2030, the time spent using advanced technological skills will increase by 50 percent in the United States and by 41 percent in Europe. We expect the fastest rise in the need for advanced IT and programming skills, which could grow as much as 90 percent between 2016 and 2030. People with these skills will inevitably be

a minority. However, there is also a significant need for everyone to develop basic digital skills for the new age of automation. We find that among 25 skills we analyzed, basic digital skills are the second-fastest-growing category, increasing by 69 percent in the United States and by 65 percent in Europe. The need for finely tuned social and emotional skills will rapidly grow. Accompanying the adoption of advanced technologies into the workplace will be an increase in the need for workers with finely tuned social and emotional skills—skills that machines are a long way from mastering. In aggregate, between 2016 and 2030, demand for social and emotional skills will grow across all industries by 26 percent in the United States and by 22 percent in Europe. While some of these skills, such as empathy, are innate, others, such as advanced communication, can be honed and taught. The rise in demand for entrepreneurship and initiative taking will be the fastest growing in this category, with a 33 percent increase in the United States and a 32 percent rise in Europe. The need for leadership and managing others will also grow strongly. There will be a shift in demand toward higher cognitive skills. Our research also finds a shift from activities that require only basic cognitive skills to those that use higher cognitive skills. Demand for higher cognitive skills, such as creativity, critical thinking, decision making, and complex information processing, will grow through 2030, by 19 percent in the United States and by 14 percent in Europe, from sizable bases today. However, work activities that require only basic cognitive skills, such as basic literacy and numeracy, will decline as automation advances. Basic data-input and -processing skills will be particularly affected by automation, falling by 19 percent in the United States and by 23 percent in Europe in the 2016 to 2030 period. The decline will be in nearly all sectors as machines increasingly take over straightforward data-input tasks. The need for most physical and manual skills will decline, but they will remain the largest category of workforce skills. The demand for physical and manual skills has been declining for 15 to 20 years, and this decline will continue with automation. Between 2016 and 2030, demand for these skills will fall by 11 percent overall in the United States and by 16 percent overall in Europe. The mix of physical and manual skills required in occupations will change depending on the extent to which work activities can be automated. For example, operating vehicles or stocking and packaging products are more susceptible to automation than are assisting patients in a hospital or some types of cleaning. Physical and manual skills will nonetheless continue to be the single largest category of skills (measured by time spent), shrinking from 31 percent of workers' time in 2016 to 25 percent in 2030 across the United States and Western Europe.

### Shifting skill requirements in five sectors

We looked at skill shifts in more detail in five sectors. This analysis highlights many similarities in changing patterns of skills requirements but also some variation. For example, while social and emotional skills will be in growing

demand across all five sectors, the need for basic cognitive skills will decline in banking and manufacturing, stay flat in healthcare, and only fall back slightly in retail.

### Banking and insurance

Financial services have been at the forefront of digital adoption, and the banking and insurance sector is likely to see significantly shifting demand for skills through 2030. The financial-services sector contains a range of potential uses for AI, especially in forecasting risk and personalizing the marketing of products to customers. The number of workers such as tellers, accountants, and brokerage clerks will decline as automation is adopted. The need for a workforce that uses only basic cognitive skills, such as data input and processing, basic literacy, and basic numeracy, will likely decline, while the number of technology experts and other professionals will grow, as will the number of occupations that require customer interaction and management. This increase will drive strong growth in the demand for social and emotional skills.

### Energy and mining

Automation and AI are enabling companies to tap into new reserves as well as increase extraction and production efficiency. Predictable manual work and administrative jobs that involve data manipulation, such as meter reading, will be susceptible to being displaced, while demand for technological jobs will be buoyant. The demand for physical and manual skills along with basic cognitive skills are expected to decrease, while demand for higher cognitive, social and emotional, and technological skills should grow.

### Healthcare

Automation and AI will change the interaction among patients and healthcare professionals. The demand for care providers, such as nurses, will continue to see growth, while the demand for office-support staff will see decreases because of automation of tasks related to record keeping and administration. Demand for advanced IT skills, basic digital skills, entrepreneurship, and adaptability will see the largest double-digit cumulative growth. However, demand for skills such as inspecting and monitoring patient vitals and medical equipment will stagnate, despite the overall growth in healthcare, as machines take over more routine tasks. Manufacturing the next wave of automation and AI in manufacturing will disrupt production functions in factories through better analytics and increased human-machine collaboration. It will also have an impact on product development and on marketing and sales.

The overall need for physical and manual skills in the sector is decreasing at more than twice the rate of that for the whole economy. The need for basic cognitive skills is also declining as office support functions are automated. The number of professionals such as sales representatives, engineers, managers, and executives are expected to grow. This will lead to growth in the need for social and emotional

skills, especially advanced communication and negotiation, leadership, management, and adaptability. The need for technological skills, both advanced IT skills and basic digital skills, will increase as more technology professionals are required. Demand for higher cognitive skills will grow, driven by the need for greater creativity and complex information processing.

### Retail

Smart automation and AI will continue to reshape the revenue and margins of retailers as self-checkout machines replace cashiers, robots restock shelves, machine learning improves prediction of customer demand, and sensors help inventory management. The share of predictable manual jobs, such as driving, packing, and shelf stocking, will substantially decline. Jobs that remain will tend to be concentrated in customer service, management, and technology deployment and maintenance. Demand for all physical and manual skills and for basic data input and processing will decline, while growth will be strong in demand for interpersonal skills, creativity, and empathy. Advanced IT skills and programming alongside complex information processing skills will also see a surge in demand.

### IV CONCLUSION

A well-trained workforce equipped with the skills required to adopt automation and AI technologies will ensure that our economies enjoy strengthened productivity growth and that the talents of all workers are harnessed. Failure to address the demands of shifting skills could exacerbate social tensions and lead to rising skill-and-wage bifurcation. The ability to ensure the former scenario—and ward off the latter—will depend in large part on how well the workforce is trained and how adaptable companies and workers will prove to be in the face of multiple new challenges from automation adoption..

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# IL & FS Crisis – A Case Study Analysis

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**Abstract—Liquidity crunch or crisis occurs when a solvent business or enterprises fails to honour the liabilities or do not have any liquid assets (i.e. cash) to meet its short term obligations such as to meet its vendor obligations, loan repayments, paying bills and its employee requirements. The liquidity crisis is an obstacle for any financial institutions for its growth and would be speed breaker for its book size and maturity of its portfolio. The crisis is not only resulted by the current economical situations, but depending upon every NBFC results of its day to day operations. Today many of NBFCs are in struggle in foreseeing the future, as the result, landing up with Larger NPAs and high cost of funds. Major activities of the NBFCs are to strive the balance of funds in current scenario with challenge of cheaper Cost of Funds with minimum risk. In case of any imbalance, it may lead to liquidity crunch and may even stop the business activities of the entities. The current raise of interbank rates has tightened the credit circles among the NBFCs and made it difficult for them to borrow further from other banks. As a result, these NBFCs are not any more sustainable to honour their current obligations, which has resulted in adverse cash crunch. The facts revealed of the IL&FS currently is not only a story at present, but a lesson on the solvency of the enterprise in the present economic situation, which will also show the face-off of other players in real time to reflect the future of the economy.**

**Keywords -- NBFC, IL & FS, Liquidity crisis, Commercial Paper.**

## I. INTRODUCTION

An NBFC is Non-Banking Finance Company. In simple words, it is not a 'Bank', but it is into the 'Finance' business. It does not have a full banking license and is not regulated as stringent as Banks are. They provide banking and financial services like loans, credit facilities, retirement planning, investing and stocking in money market. The NBFCs also known as the 'Shadow Bank' play a very important role in the Indian economy.

NBFCs are so important to our economy because while regular banks take deposits from people and cover a wide gamut of responsibilities including providing payment and settlement systems, savings accounts, cheques, credit lines etc. NBFCs (Non-Banking Finance Companies) specialize in particular fields. Mannapuram finance specializes in gold loans, Bajaj Finance in automobile loans and this specialization allows NBFCs to occupy a special place in the banking industry.

There is a difference between the way of operations of a 'Bank' and an 'NBFC'. The bank accepts deposits from its customers and then it uses this money for lending. It pays

interest to its customers on the deposits and it charges higher interest on the loan amount. However, this is not the case with NBFCs. They are companies which cannot accept deposits from general public. Hence, their way of raising money is a bit different.

India's financial markets have been reeling under high selling pressure in the recent months, triggering concerns about the risks in the country's shadow banking sector. The crisis has shaved off Rs. 8.48 lakh crore in investor wealth in the last few months and at the eye of the storm is the Mumbai-based Infrastructure Leasing & Financial Services (IL & FS).

## II. BACKGROUND INFORMATION

The three-decade-old infrastructure lending giant, IL & FS, is a 'shadow bank' and one of the largest infrastructure companies which manages infrastructure funding projects across India established in 1982. The IL&FS Ltd is an unlisted holding company — which is the parent corporation to at least 24 direct subsidiaries, 135 indirect subsidiaries, four associate companies and six joint ventures.

The major shareholders of IL&FS include state-backed Life Insurance Corp of India holding 25.3 percent stake, Housing Development Finance Corporation with 9.02 percent, Central Bank of India with 7.67 percent and State Bank of India with 6.42 percent.

Other key shareholders are the Japan's Orix Corp, holding 23 percent, and Abu Dhabi Investment Authority with 12.56 percent.

The journey of IL&FS into the Crisis mode during the last 4-5 months was through a series of incidents which were as follows:

- 1) IL&FS was having huge outstanding debt of Rs 91,000 Crores out of which Rs 57,000 Crores are to Public Sector Banks.
- 2) In Jul-18, IL&FS subsidiary IL&FS Transport has delayed Rs 450 Crores of repayment to SIDBI. This is where the IL&FS Crisis started.
- 3) ICRA and CARE started downgrading the ratings due to these payment defaults.
- 4) In Jul-18 end, its founder and Chairman Mr.Ravi Parthasarathy has stepped down citing health reasons. Mr.

Hemanth Bhargva, LIC MD joined as non-executive chairman during that time.

5) In Aug-18, it has again defaulted 2 commercial papers to mutual fund AMCs and then later paid in 2 days late.

6) In Early September, IL&FS defaulted Rs 1,000 Crores loan repayment to SIDBI. It has defaulted several times during September for various loan repayments.

7) ICRA, CARE and BWR has downgraded its ratings to “default” or “junk”. This is the worse of such ratings. RBI has initiated special audit about this company.

8) 15<sup>th</sup> September, Former LIC Chairman, Mr.SB Mathur has taken charge as Chairman of IL&FS.

9) SEBI has intervened very late in this case. Later it said that it would look into this matter and assess risk on various mutual fund schemes.

10) On 21<sup>st</sup> September DSP Mutual Fund has sold DHFL Commercial Papers as it cannot sell Government Bonds due to pressure from corporate clients.

11) During the last week of September, RBI has raised concerns about IL&FS company management and met its top shareholders.

12) On 1<sup>st</sup> October 2018, NCLT has allowed Government of India to take control of the company and its matter. Government of India has sacked its board. Its new board to consist of Uday Kotak, Former IAS officer & Tech Mahindra boss Vineet Nayar, Former SEBI Chief G N Bajpai, Former ICICI Bank chairman G C Chaturvedi, Former IAS officers Malini Shankar and Nanda Kishore.

### III. OBJECTIVES

- 1) To identify the reasons behind the failures that resulted in liquidity crisis with reference to the IL & FS Crisis.
- 2) To understand the repercussions of IL & FS Crisis.
- 3) To highlight the current steps undertaken by the Government and RBI to overcome the crisis.

### IV. REASONS FOR THE FAILURE OF IL & FS

#### *Lack of regulators*

**Rating Agencies** – The rating agencies gave IL & FS an AAA rating and this encouraged investment in the company but now they have changed the rating of IL & FS as junk.

**Shareholders** – Major shareholders failed to monitor the company that they invested in.

**Board of Directors** – All the senior officers have resigned from their posts. Its Founder and Chairman Mr. Ravi Parthasarathy stepped down citing health reasons.

**RBI** – The Reserve Bank of India considers itself as a regulator today but it could have monitored the situation before the crisis unfolded.

**Government of India** – It never properly assigned any regulator.

#### *Source and use of funds*

Increase in interest rates of short term borrowings.

Loans skewed in the long term – Most debts that IL & FS had to pay off were short term while the loans it had granted were majorly long term.

Lacking transparency in financial position and too many loans to own subsidiaries.

No clear distinctions were made between public & private projects.

#### *Complex company structure*

**Too many subsidiaries** – with more than 250 subsidiaries, the auditing and monitoring of the company is difficult for any auditing firm or regulator.

#### *Ethical issue*

**Crony capitalism** – there have been known cases where things were hidden deliberately & unviable projects were sanctioned to please the ruling parties.

## V. IMPLICATIONS OF THE IL & FS CRISIS

#### *On Investors:*

The IL & FS crisis lead to the loss of confidence of investors. The sequence of events have directly impacted investors, whereby their investments have significantly eroded in value. The main concern for investors is in case of commercial papers. The Commercial paper is a key component of money-market mutual funds, which have surged in popularity in response to low bank deposit rates in the last two years and persistent inflation. Banks, mutual funds, pension fund managers, insurers and individuals consider further erosion of their capital.

#### *On Mutual Funds:*

As per the latest reports, around 33 funds such as LIC Mutual Fund, Aditya Birla Sun Life, DSP, Kotak Mahindra, BoI Axa, and Principal Mutual Fund had exposure to IL&FS and its group companies.

The default rating of ‘D’ on short-term scrips of IL&FS from the rating of A4, led many mutual fund houses to mark down the value of the schemes which had invested in IL&FS.

The total value of holding by these mutual fund houses as disclosed by CRISIL (at the end of August 2018) stood at around 2,308 crores.

As per specified guidelines, mutual fund houses downgrade the value of securities as per their internal valuation norms, once the investment falls below the investment grade of BBB.

This eventually led to a drastic fall in the NAV (Net Asset Value) of these funds.

In some cases, the entire value of the fund has to be written down.

#### *Other After effects:*

Rumours broke out that Dewan Housing Finance Limited (DHFL) had defaulted on one of its debt obligation which took the market by surprise, thereby sparking a bloodbath.

The rumour started with the news that DSP Mutual Fund had on 19th September, 2018 sold AAA-rated paper of DHFL Ltd. at a yield of 11% (while the fund house wanted to sell the bonds at 9%-9.5%).

Yield of 11% is usually charged for bonds that have a lower credit quality.

As a result, DHFL shares tanked by more than 55%, which was the heaviest fall in 21 years.

The fall had a domino effect on other housing finance companies with the likes of India Bulls Housing Finance Limited plummeting by 16.77%, Can Finance Homes by 6.82% and LIC housing Finance came down by 14.1% that particular day.

#### VI. PRESENT ACTIONS OF RBI & THE GOVERNMENT OF INDIA TO OVERCOME THE LIQUIDITY CRUNCH

In the absence of a quick strategy by the regulator and the government, this crisis would translate into a solvency issue leading to a domestic credit crisis inflicting wounds on banks, mutual fund houses and other financial institutions.

Also, what's worse is that most of the group's assets include financial claims on infrastructure projects such as roads, tunnels, water treatment plants, and power stations, etc. which cannot be liquidated to escape the mess.

##### *Role of the company*

The company has identified nearly 25 projects which will be up for sale.

By selling these assets, it intends to bring down its debt by approximately Rs.30000 crore which is one-third of its total, but the process can take over a year.

##### *Role of the government*

Taking charge of the situation, the government has moved the National Company Law Tribunal (NCLT) to supersede the IL&FS board and change the company management. Many powerful players have a deep interest in preventing the group's collapse, including blue-chip companies and sovereign-backed shareholders. It is interesting to note here

that the parent company is categorized by the Reserve Bank of India as a 'systemically important institution'. Therefore, the government has taken active steps to curb further downfall and restore sanity.

A rescue-plan similar to the Satyam crisis is what the centre has gone for. It has proposed to appoint 10 nominee directors (including the likes of Mr Uday Kotak), who will report to the NCLT for relevant plans to resolve the issue. The National Company Law Appellate Tribunal (NCLT) on February 18<sup>th</sup> 2019, allowed 22 Indian subsidiaries of crisis-hit IL&FS group to service their debt obligations. The corporate affairs ministry submitted the debt resolution plan for IL&FS earlier this month. The entire resolution process would be based on the principles enunciated in the Insolvency and Bankruptcy Code, as per the ministry.

Under the plan, the government has categorised IL&FS group companies into green, amber and red based on their respective financial positions. Companies under the green category would be those that continue to meet their payment obligations. Amber category would be for those companies that would not be able to meet their obligations but can meet only operational payment obligations to senior secured financial creditors. Amber category entities "are permitted to make only payments necessary to maintain and preserve the going concern". "Companies falling in the red category are the entities which cannot meet their payment obligations towards even senior secured financial creditors," as per the plan. Such companies would be permitted to make payment necessary to maintain and preserve the going concern status.

#### VII. SUGGESTIONS AND RECOMMENDATIONS

**A Financial Blue Print is the Need of the Hour** - Even the government does not have a financial plan and this is very surprising. India must have a financial blue print for about 5-10 years. It need to be driven by the finance minister who should be assisted by a bench strength of market practitioners, economists, and politicians. In terms of fresh talent, lateral hires of youngsters who are fresh out of college and not yet defeated in terms of ideology could be preferred.

**Hard coded and measurable real-time data** - the lack of which is a big hurdle for the sector plagued by legacy issues. Training on which indicators market players need to look out for to judge the proper functioning of the markets will also be undertaken. When the liquidity crisis began in October, people remained in denial for at least two weeks. Many were reading economic data, to gauge if all was well in the sector. However, for liquidity the best indicator are bond yields and volumes in the debt market.

**Regulatory and Policy Bridges to be Built** - Deepen the debt markets to facilitate long-term availability of capital in projects. Persons with interest must not be included in key decision-making, involving their interest. Institute international levels of transparency. Improve information flow to inflation arbitrage (trade) particularly lower down the credit chain where the price is not reflected correctly making trade at these levels less risky. Raise the capital threshold

level for NBFCs so they can get greater access to credit of Rs.50 or Rs.100 crore. We need to set up a strong regulatory system for Alternate Investment Funds (AIF).

**For the Insurance sector** - we need to introduce Risk Based Solvency, RBS, based on risk as the name suggests, which will facilitate true comparison across insurance companies based on their financial strength.

**A Central Agency need to be set up** - We need to shore up offshore investors by designing ways of keeping their money invested in long-term projects in our market. An investment vehicle / route for this purpose must be attractive, viable, of good quality, and in a transparent framework. A central agency need to be set up to monitor these funds and direct the money to the right channels.

**Other solutions** - Simplifying the complex structure of IL&FS. Making stringent laws to deal with lack of transparency in both company's structure and finances as well as rating agencies. Minimizing red-tapism, reducing paper work to avoid stalling of projects. Board of directors should be held accountable for such major defaults and should be brought under regular audit mechanism. Auditing should be done by independent third party auditors appointed by the government in consultation with RBI and major shareholders. This will ensure greater transparency in auditing of financial records. Bringing IL&FS properly under the ambit of SEBI or RBI. Fast tracking land acquisition and environment clearances. The government can look at disinvestment of deteriorating assets rather than bailing them out from the tax payers money.

## VIII. CONCLUSION

NBFC in India or across the globe has same sample model of borrowing either from banks or capital markets in forms of NCD's or commercial papers, looking at the current scenario NBFC's as well as HFC's has to tone their growth rate with sharp increase of interest rate and thus can maintain only thin margins in their business. Model of Bailout plans by LIC and SBI for IL & FS can be an example for other NBFC's as one of the temporary strategy to sustain in current position and carefully strategise their Lending activity. Raise in NPA is a great concern for all NBFC's and Banks and Arresting of NPA's should be in warfoot basis

Due to Steep increase in interest rates in both NBFC's and HFC's is not able to achieve the profitability in one side and struggling to get new acquisitions to increase the book size and most of the institutional had slowed down their business .

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# Dynamic Pricing good or bad?

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**Abstract**— In the era [Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

of Big Data, online retailers’ pricing strategies are evolving towards an online dynamic pricing system, which consists in frequent modifications of the prices of goods and services in order to maximize sales and profits. This strategy raises important ethical questions, because consumers end up paying different prices for the same product. The aim of our article is to examine, from the consumer’s point of view, the ethical issues raised by online dynamic pricing.

**Keywords**— consumers’, perceived ethicality, price discrimination, online dynamic pricing, (un)fair price

## I. INTRODUCTION

### Fares go up after suspension of Bengaluru-Kochi flights - Times of India

BENGALURU: Flying between Bengaluru and Thiruvananthapuram in Kerala in the next few days will be expensive as the fares have gone up after flight operations at Cochin International Airport were suspended till Saturday in the wake of floods. The economy class tickets on direct flights between Bengaluru and Thiruvananthapuram for Thursday and Friday have been sold out. The economy fares for two stop flights from Bengaluru were between Rs.16, 000 and Rs 30,000 for Thursday. The cost of ticket for Friday was above Rs.23,000. Fares from Thiruvananthapuram has also recorded a steep hike. The fares are fluctuating and not many seats are available. July-September is considered off-peak season and fare to Thiruvananthapuram a day prior to the journey is usually Rs 6,000 to Rs 8,000, but sources say it has now skyrocketed in the wake of huge demand after the closure of services at Kochi airport. “Many Kochi-bound passengers opted for Thiruvananthapuram since it is closer than the other airport in Calicut,” said an official. Aswathy S, a resident, said: “I was planning to go to Kerala for Onam holidays and had booked a flight to Kochi. But my flight on Thursday got cancelled because of floods. I’m unable to book a ticket to Thiruvananthapuram as the airlines have hiked fares without considering the gravity of the situation. Many roads are in bad shape and the hike in air fares is a double whammy for those who want to visit their families in distress.

Day	Price
Sun, 19 Aug	₹21,170
Mon, 20 Aug	₹10,458
Tue, 21 Aug	₹10,458
Wed, 22 Aug	₹9,998

Departure	Duration	Price †
Vistara 10:00 - 13:25 3h 25m   non-stop	LEFT AT	₹13,011
SpiceJet 11:40 - 00:05 12h 25m   1 stop		₹23,422
Jet Airways 08:55 - 09:15 24h 20m   2 stops	LEFT AT	₹87,246

In the face of natural calamities, airlines should have taken a human approach.”

<https://timesofindia.indiatimes.com/city/bengaluru/fare-s-go-up-after-suspension-of-bengaluru-kochi-flights/articleshowprint/65418934.cms>

Dynamic pricing has garnered much interest among regulators and utilities, since it has the potential for lowering costs for society. Many marketers use dynamic pricing to maximize their profits. For example, Uber raises prices when there are high demands or the weather condition is bad. And hotels raise prices during Christmas or Spring break when many people have travel plans. For online retailers, it is really common that you see different prices of one product within a short period. Dynamic pricing is a pricing strategy wherein the price is not firmly set; instead it changes based on changing circumstances, such as increases in demand at certain times, type of customer being targeted or changing marketing conditions. Dynamic pricing, is an approach to price a product or service flexibly according to a host of factors. Dynamic pricing is based on the proverb “Make hay when the sunshines.” This means that you take advantage of the chance to do something while conditions are good. The goal of dynamic pricing is to allow a company that sells goods or services to price its products or services in

response to market demands. This sort of pricing is prevalent mostly in the e-commerce service sectors. Dynamic pricing is available in airline industry, hotels and hospitality industry, entertainment, retail, electricity, and public transport. E-Commerce companies like Amazon, Flipkart, Ebay and cab aggregators like Uber and Ola use dynamic pricing.

However, dynamic pricing can also cause ethical issues for consumers. Online retailers would charge different prices based on preferences or due to situations. This does not look fair for consumers, because they are not aware that they are charged different prices. Dynamic pricing could also be considered as discrimination when someone is charged much more in emergency or in rush hours. Dynamic pricing can also breach the trust which consumers already have regarding a company and this can erode the brand value or the organization. In the recent floods in Kerala, it was found that airlines utilized the opportunity to increase the prices as the Kochi airport was closed due to flooding. The prices soared to 8 times the usual fare and the Directorate General of Civil Aviation (DGCA) had to interfere and cap the prices. However, the damage was already done by that time.

## II. OBJECTIVES OF THE STUDY

1. To understand the factors which lead to dynamic pricing.
2. To understand whether dynamic pricing compromises ethics.

## III LITERATURE SURVEY

Dynamic pricing is a form of time-of-use (TOU) pricing where prices during the peak period on a limited number of days and can vary to reflect market conditions on a day-ahead or day-of basis (Forgacs, 2010). Dynamic pricing is a pricing strategy in which prices change in response to real-time supply and demand. Dynamic pricing strategies are aimed at increasing profits. While this isn't a brand new pricing strategy, it is currently taking ecommerce by storm. The initial development of dynamically adjusted pricing is often credited to American Airlines' Robert Crandall, as a response to the rise of discount airline People's Express in the early 1980s. Dynamic pricing is used by several airlines worldwide, including Southwest, Lufthansa, Emirates and Aeromexico. India almost all the low cost carriers like Indigo, SpiceJet, Vistara, AirAsia, GoAir, and Air Deccan use dynamic pricing. Dynamic pricing in airlines is based on the journey characteristics, traveller details and current market conditions. This type of pricing allows the airline to create personalized fares for customers in no time. Airlines use the IP of the customer and checks in the flight history and tailors and specific price for the customer. Thus travellers who travel to the same destination in the same flight may get two different fares.

A potential drawback of dynamic pricing is that it can make customers irritated or even angry if they discover that they have been subject to price discrimination. For example, if passengers on an airplane discuss how much

they paid for their tickets, a passenger might discover that he paid twice as much as another. This can make customers feel like they were duped or cheated.

**Less Customer Loyalty**

If customers become irritated or angry as a result of dynamic pricing, it can damage a company's brand loyalty. When customers trust a company, they tend to repeatedly buy its products and services and avoid shopping around and looking for deals elsewhere. If customers find out that a company is engaged in dynamic pricing, it gives them incentive to consider the products and services of competitors to ensure that they are not paying too much.

### Increased Competition

When customers are not loyal to any particular company, they won't hesitate to go wherever they can get the best deals. Internet shoppers can quickly compare prices for the same products and services at several different businesses. If a certain company prices a product lower than others due its dynamic pricing methods, it can force competitors to reduce their prices in order to compete. Increased competition can lead the bidding down of product prices and lower profit margins, which is bad for businesses but good for consumers.

### Dynamic pricing factors:

There is not one factor for dynamic pricing. It depends on a whole lot of factors which are there in the environment and in the personality of the person who decides on choosing the right pricing for his or her travel. Thus environmental factors and personality factors contribute to dynamic pricing and this is important to be identified. Let us look into the environmental factors.

### Factors for Dynamic pricing:

#### *The Market* :

If the market is prevailing under a condition of monopolistic competition, then naturally the product has a demand on its own. Since there are not several competitors, each brand will try to position itself on its niche market. Dynamic pricing may not work to a great extent in this context. Under monopolistic competition, the airlines firm has some freedom to fix the price i.e. because of differentiation a firm will not lose all customers when it increases its price. Here airline firms try to differentiate the product by giving offers like snacks, or a privilege seat to woo its customers.

#### *Product/Service demand:*

Product or Service demand is one of the most important factors. However they are dependent on the demand or being repeatedly considered.

#### *Seasonal changes:*

Researchers trace that prices change and seasonal fluctuations influence some goods more than others. The sector of style-and-fashion goods can be an example where at the end of the season old clothes collections are sold out at a low price. Besides, in food industry some goods are sold at a discount during holidays (Chevalier et al. (2003)).

#### *Elasticity of Demand:*

According to Warner and Barsky (1995) demand is more flexible (quickly adaptive) during the peak of demand,

what brings them to a conclusion that optimal markups are anti-cyclic. When customers look for goods during the period of high demand, they become very sensitive to price when demand is high, because they know much more about substitute goods prices than during the periods of small demand. When customers price sensitivity increases firms reduce prices holding down market segment.

#### **Disadvantages of Dynamic Pricing:**

Disadvantages of Dynamic Pricing are, it is something that customers hate with a passion. Customers aren't opposed to something other than a fixed-price strategy. They just don't like it when they are targeted by a dynamic pricing strategy. Even though it can be used to save money, it is often used to boost the margins of the business instead. That means customers feel like they're being overcharged for what they need and there isn't anything they can do about it. For that reason, a pricing strategy should always match a company's brand identity. It may lead to customer alienation. Customers hate it when they discover that someone else paid a lot less for the same item they purchased. Many businesses which employ dynamic pricing have customers come back to them, demanding a refund for the difference in what they paid compared to someone else. Even if that refund is provided, there is still a greater chance that the consumer will create negative content for the business which may affect future customers.

It may lead to the loss of a sale. With internet saturation levels increasing every year, many customers are researching the products or services they want in advance of a purchase. They may even know what the MSRP of certain goods are when they contact a business to make a purchase. If the product is priced higher than what they expect, then they'll go somewhere else to make their purchase. Many won't even say anything. They'll just leave your business or website and potentially never come back again. It reduces customer loyalty. When consumers become upset about the pricing strategy of a business, their desire to return to that business in the future is greatly reduced. Trust leads to repetitive purchases of goods and services. If your pricing strategy is dynamic, you're encouraging those consumers to look for better prices elsewhere. If they happen to find a better price, the reduced loyalty they experienced will increase the chance that a business will lose that potential sale. It increases industry competition. Although customers want to be loyal to a specific brand if they find it to be valuable, dynamic pricing changes the value proposition being offered. It communicates that a business is more focused on their profits instead of providing something for the customer. When that happens, competition increases in the industry because more brands believe that they can create a disruptive influence.

#### **Ethical perspective and perceived fairness:**

Cox (2001) viewed with the popular increase to dynamic pricing there has also been an increase in consumer complaints in perceived price unfairness. Other authors (Kannan & Kopalle, 2001; Suter & Hardesty, 2005) added

that these perceived perceptions of price unfairness lead to negative outcome: consumer dissatisfaction; the spread of negative information; loss of relationship; and deteriorating trust in sellers. As such, to help overcome such responses by consumer due to the dynamic pricing, Kung et al. (2002) recommended businesses to pay closer attention to the issue of price fairness. A similar view by Reinartz (2001) is observed which indicated that the most important condition that must be upheld for the operational ability of dynamic pricing is attention to consumer perceived fairness.

#### **IV CONCLUSIONS**

Ecommerce is growing and information technology is becoming more robust. As a result, some innovative pricing strategies have come into play. Dynamic pricing is one that has been applied more broadly across a variety of industries, and its usage is growing among retailers. However, ethical issues exist with some price discrimination policies. Even though dynamic pricing is good, especially based on consumer history and profiling. It should not be done at the cost of sacrificing the consumer trust.

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# The Role of Social Media in Education

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**Abstract**— Social networking has become one of the most popular communication tools to have evolved over the past decade, making it a powerful new information sharing resource in society. To date realising the potential of Social Networking Sites (SNSs) beyond their leisure uses has been severely restricted in a number of areas. This paper focuses on the application of SNSs in a learning environment and the impact this could have on academic practices. While undoubtedly, due to the very casual nature of social networking, there are serious concerns over how it could be integrated in a learning environment; the potential positive outcomes are many and varied. As a communication tool, its effectiveness is already manifesting in the millions who use these networks to communicate on a daily basis. So it is conceivable that educators should be able to create a learnscape - an environment for formal and informal learning - that adheres to educational guidelines, but also harnesses the social support system of these on-line communities..

**Keywords**— Social media, learning process, higher education.

## I INTRODUCTION

Social Media plays an important role in every student's life. It has gained credibility over the years as a trusted source of information and platform where students can interact with a large audience. We can see that the education institutions adapting these developments into their systems and relying on group resources and mechanisms to improve the student life. Social media acts as a guide to students which helps them to get more useful information, connect with learning groups and other educational systems that make education convenient. There are many valuable information and knowledge to be gained through social media such as analytics and insights on various topics or issues for study purposes. Social media is a platform for the students to showcase their knowledge and skills to get a huge reach over the world. But as an educational institution, it is crucial to be active in many social platforms possible; this helps create better student training strategies and shapes student culture. It is also a medium where students can establish beneficial connections for their careers.

Students usually used social site for many reason such as for study purpose, for entertainment purpose as social media provides any data you want very easily and quickly within a fraction of seconds. Usage of social media depends upon person to person as it has good as well as negative impact on the society i.e. on the students. Social Media had become a major distraction to students, causing the overall performance of students to decline, especially the ones who tend to check their Facebook and twitter while studying. They are extremely busy in accessing number of sites other than

educational site for long hours which create a very negative impact on their mind as well as creates ample of health issues and also creating slit in the family. Students, who attempt to multi-task, checking social media sites while studying, show reduced academic performance. Their ability to concentrate on the task at hand is significantly reduced by the distractions that are brought about by YouTube, Facebook or Twitter.

## II OBJECTIVES

- To identify the most frequently used social media applications by students.
- To find the social media applications used by the students for their education.
- To understand how the social media app is being used by the students in their education.

## III. REVIEW OF LITERATURE

“Social networks have become thoroughly rooted in modern culture. People have woven these networks into their daily routines, using Facebook, Twitter, LinkedIn, online gaming environments, and other tools. Social networking makes kids more peer-based. Young people are motivated to learn from their peers online. They interact and receive feedback from one another. They are motivated to learn more from each other than from adults. Teachers and adults are no longer the only sources of knowledge. It makes kids more networked than ever. It is easier for kids to make friends with people all over the world, most of whom they will Social media helps the students to connect with experts who have very good knowledge in the student's field of interest and subjects. Also the educational institutions can communicate with their students through social medias like Facebook, Google plus, Gmail, etc.

Social media applications therefore allow users to converse and interact with each other; to create, edit and share new forms of textual, visual and audio content. Social media applications are seen to be open rather than closed, bottom-up rather than top-down.

### *Learning with Social Media*

It's no secret that most students and teachers have smartphones and have used social media in education. In fact, there are apps and web tools that offer social media in an educational context. With faculty using a variety of software tools and free web applications to enhance learning, communication, and engagement, the use of social media is on the rise in higher education classrooms. Compared to traditional learning method that provide few opportunities for learners to develop

and maintain their own learning activities, learning platforms based on social media place the control of learning into the hands of learners themselves.

A growing number of research efforts have been made to support teaching and learning using a variety of social media tools. Social networking site for college students are being developed aiming at enhancing both collaborative study and social interaction. The research tells that making social media tools a part of traditional learning is attractive to students and can motivate their participation in the learning process. E-Learning, the social network sites handled the big problem by providing information to the educators in the recent period. However, Social networks have helped to resolve some of these problems, by adding interactive side with a student, and make the participation of the students in the educational process which leads to an increase to attract them toward e-learning and to clarify the reason behind the attraction educated about social network sites.

### *How Social Media offers help to students?*

Social media not only helps to acquire knowledge but also establishing enduring relationships with their colleagues and teachers. A Twitter account can provide a shy student with information about events that facilitates face-to-face encounters with other students. Such personal interactions are vital to creating and sustaining a sense of belonging. Using technology to accommodate students' different learning styles is not novel. The strength of social media applications is that they offer an assortment of tools that learners can mix and match to best suit their individual learning styles and increase their academic success. Social networking sites also can help students develop leadership skills, from low-level planning and organizing to activities that promote social change and democratic engagement. Social media tools and networking sites encourage students to engage with each other and to express and share their creativity. Such personal interactions are vital to creating and sustaining a sense of belonging. As there are positive effects of social media there are some negative effects also

#### *A. Connecting with experts on topic*

The benefit about using social media is that you can soon learn who the experts are in particular fields and subjects. When you start following these experts you learn more and gain useful content from them which empowers you to produce great results. Social media has the power to broaden your perspective towards various subjects and gives informative, instant content that is new. You can engage experts to find solutions on topics that you may need help in.

#### *B. Educational Institution communicate with students*

Learning colleges have the ability to connect with students through social Medias like Facebook, YouTube, Instagram and Google plus groups. These channels can be used to communicate campus news, make announcements and provide students with useful information. This helps the college and students to build engagements which makes to tackle many student issues through the group interactions. Institutions can share videos that inspire the students and help them in their

course subjects. They can also share supportive and positive posts that reach all students that are connected to the networks and pages. Institutions initiate hashtags on social media to engage students and help them to do online discussions. It is advisable to be selective about which social platforms to use for the best practice.

There are several researches conducted on the study of the role of social media. One is the research study of Paul A. Tess entitled "The role of social media in higher education classes (real and virtual)". This study talks about the learning pattern of students in their higher studies. They were able to find that the social media was increasingly visible to technology to mediate and enhance their instruction as well as promote active learning for students. Also many scholars argue for the purposeful integration of social media as an educational tool. Another study was conducted by Kalpana Chauhan and Anandan Pillai on the title: Role of content strategy in social media brand communities: a case of higher education institutes in India. They were able to find out the impact of content strategy variables which were manifest variables for customer engagement. The methodology they used in this study was netnography method by collecting data from brand communities on social networking websites. From this study they understood the content type and agility had an impact on number of likes and comments.

Yingxia Cao, Haya Ajjan and Paul Hong (2013) with a research study entitled: Using social media applications for educational outcomes in college teaching: A structural equation analysis. They received quantitative responses of faculty members using social media in teaching. Through partial least squares (PLS) analysis they identified that social media has got positive effect on student's learning outcomes and their satisfaction. A model was proposed that provides educators with a depiction of how social media educational use delivers higher performance in the classroom.

In connection with Christine Greenhow research and Cathy Lewin (2015), investigated the role of social media and education: reconceptualization the boundaries of formal and informal learning. They used two contrasting case studies to apply their models together with social constructivism and connectivism as theoretical lenses through which to tease out the complexities of learning in various setting and came into a conclusion that their model could reveal new understandings of social media in education, and outline future research directions.

According to Vasileios Paliktzoglou, Tasos Stylianou and Jarkko Suhonen (2015), they investigated that students engaged in using Google educational applications as educational social media tools to support teamwork. Their research study entitled: "Google educational apps as a collaborative learning tool among computer science learners". They collected data through pre- and post-Google educational collaborative applications experience questionnaires and an interview. Based on their findings, it is evident that Google Educational Applications, can support social-constructivist models of pedagogy and that have the potential to play an important role in the future of learning environments.

Some of the best social media for teachers and students are:  
**1. Edmodo:** Edmodo acts as a playground for teaching and

learning with a place for posts, calendars, and general communication for teachers and students. Linking to students becomes simpler and more efficient as well as more effective when students enjoy the presentation of it. It makes it easy to share valuable apps with students.

**2. TedEd:** TedEd offers a variation of TED Talks with shorter, often-animated clips of subjects such as science, technology, social studies, literature, language, art, health, psychology, and business and economics. With communities and clubs, the site also makes it effortless for collaboration.

**3. Google+:** Google+ takes teachers to their students with circles that make managing virtual communication an art. Students might need to know more about a particular lesson because they didn't quite get it the first time. Pull them into a circle of their own with just the right tools to connect them to their path to understanding and learning.

**4. Facebook:** The great part about Facebook is that everyone is on it. Students love connecting with their friends and family with Facebook so telling them to check out the page where you post only makes sense. However, it's very important to stay professional and have a separate personal account.

**5. Twitter:** The best way to use Twitter for teaching is as a reminder to students that they need to complete an assignment for a particular due date or that they have an exam coming up soon so study this or that. Sometimes teachers even use it for inspiration by sending a famous quote.

**6. Instagram:** Students love Instagram for so many reasons but mainly for the photos and effects available to them. Teachers can create assignments that tap into the need to Instagram such as photo essays where students take photos, upload, and add captions or students can even create campaigns for certain organizations or just for a lesson.

**7. WordPress:** With so many themes to choose from, WordPress has become a popular way for teachers to set up a web of communication and lessons with their students. Chalkboard is an educational theme that prepares students for learning and helps teachers outline goals and objectives while still providing great visuals. Teachers can also use it to inspire students to write more by having them create their own blogs and meet the WordPress Challenges.

**8. Blogger:** Like WordPress, Blogger connects teachers to students using unique themes as well as diary-style writing. With access to teachers' posted links, lessons, and thoughts students become more successful and comfortable with the teacher when learning online.

**9. YouTube:** Educators of any level can click on the education category within YouTube and find several subcategories such as university, science, business, and engineering. YouTube even has a special section dedicated to teachers and how to teach with it. But, even if teachers never visited that section, they could teach using all the great videos available according to subjects or searches.

**10. Academia.edu:** For academics whose main goal is to share research papers, Academia.edu draws a crowd of over five million visitors. Academics can monitor the effect of their research and keep tabs on the research of the other academics that they follow. It's a great tool for anyone needing data and information on various subjects and interests.

**11. LinkedIn:** While acting as a professional social forum for

employers to connect with applicants or search for potential employees, LinkedIn is used for so much more than that. Having students post professional resumes there and then contacting them about the job market and the business world around them keeps them in touch with reality and the endless possibilities through a targeted education.

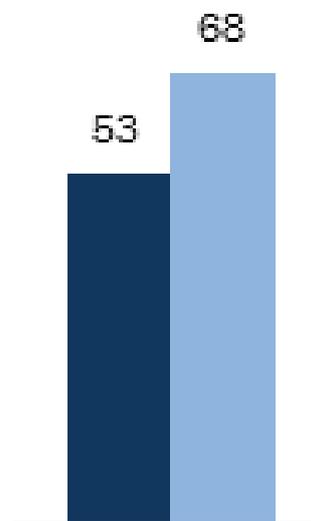
**12. ResearchGate:** Ijad Madisch founded ResearchGate, which is similar to LabRoots bringing scientists together for collaboration. The difference really lies with the mission and the creators who are scientists working to give visibility to the dedicated researchers all over the world.

IV. METHODOLOGY

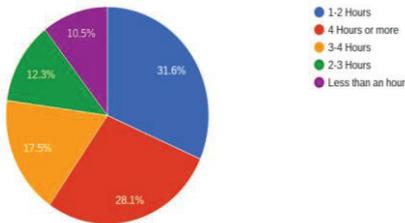
In this study, we used primary source of data collection. The data collected was through survey method. A questionnaire was prepared on the basis of the objectives of this study. Through this data we were able to find solutions for each objective. It has gained popularity over the years because of a great deal of valuable information on what people think about on certain issues, policies, products or events. This technique helps us to get almost accurate information that helps us to guide towards the right path. In addition, it is most common to use questionnaires because it yields information that is more systematic from all participants.

V. DATA ANALYSIS & FINDINGS

A survey was done among students to find out the role of social media apps in education. A total of 60 responses were collected. The details are given below. Majority of students responded that social media apps are very effective tool for education and most of them use more than one social media app daily.

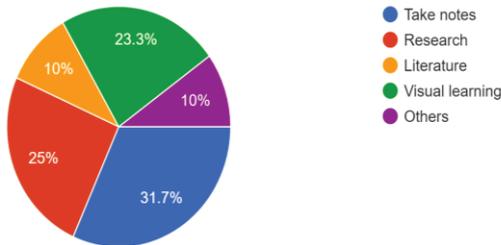


1. Most frequently used social media apps used by the students.
2. Social Media gender-wise. 58% of men students use social media, while 68% of women students use social media for learning.
3. How much time do students spend their time of Social media per day?



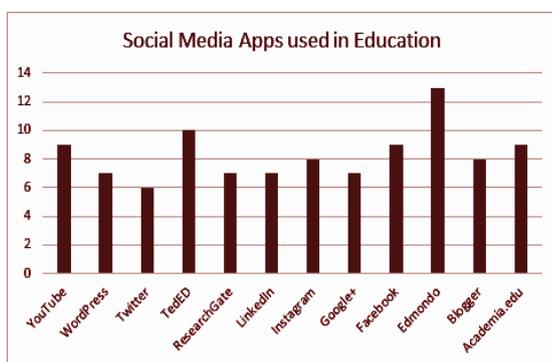
31.8% use it for 1-2 hours, 28% 4 hours or more, 17% use it for 3-4 hours, 12.3% use it for 2 to 3 hours and 10.5% use it for less than half hour daily.

4. How are social media apps being used by the students in their education.



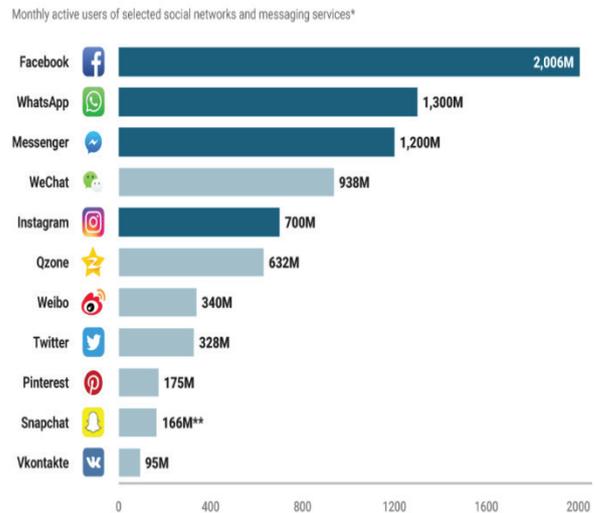
31.7% use it for notes preparation, 25% for research, 23.3% for visual learning, 10% each for literature and other uses.

5. Social media apps used in Education.



Edmodo tops the list TedED, and other sites follow. All education sites get acceptance

### FACEBOOK DOMINATES THE SOCIAL MEDIA LANDSCAPE



### VI. CONCLUSION

Gone are the days when Social media is just limited to posting pictures about holidays online. Social media has grown and has gained credibility over the years as a source of information and a platform for educational institutions to interact with students. Educational institutions are increasingly adopting Social media into their system. Incorporating social media in education provides students with the ability to get more useful information, to connect with learning groups and other educational systems that make education convenient among students. Social media platforms like Facebook, Google Plus, YouTube enable colleges to connect with the students. Educational institutions use social media channels to provide students with useful information for their academic improvements. Social media also helps students to compile and produce useful content for research. Social media learning in Learning Management System (LMS) can include instant chat functions, video, forums to share info and other lesson resources to help students.

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# A Study on Relevance of Behavioural Finance Theories on Investor Decision Making

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**Abstract**— The stock market is one the key indicator of measuring the economic development. Investing in stock market is the biggest investment avenue available. The risk and return in this investment avenue various from person to person based on their risk-taking ability and the return expected by them. The uses the most behavioural theories are being used in this study which is (Regret, Anchor and Herding Theories). This study identifies to study the relationship between those investment strategies being adopted by the investors has any impact on the behavioural theories which is being adopted by them. A survey of 165 investors being taken through the questioners and the responses were measured in order to compare it with those theories by forming hypotheses for each of those theories. To identify the internal consistency among the questioner which was used there was Cronbach Alpha test was used and got significant results on it. The study identifies that there is no significant relationship to be found in this situation since all the regression test gave a significant level which is higher than (0.05), hence had to accept the null hypotheses.

**Keywords:** Behavioural Finance, Stock Market, Investment Strategies, Behavioural Financial Theories.

## I. INTRODUCTION

Stock market is the key indicator of any economic measurement. As good as the stock market is good there economic conditions are also performing well. In India we have such two major stock market indicators which are Bombay Stock Exchange (BSE) and National Stock Exchange (NSE).

In this practical word investing in capital market and other forms of investment avenues is a investing in stock market is made much easier these days in order to give investors an easier platform for trading on. Investing has become so easy that people with no complete knowledge are also seeing investing in capital market as one of the most reliable avenue of investment. On the other hand people with a good knowledge are getting a higher chances making increasing their return. Here investors with lesser knowledge tend to make a wrong decision and chances of losing their capital are higher. This kind of decision making can be easily followed by using behaviour financial theories.

Decision making could be a complicated method which might be outlined as a method of selecting a selected different among variety of potential courses of actions when careful analysis of every. most vital challenges to investors is to create investment call, having a distinction in their profile, like demographic factors, socioeconomic factors, instructional levels, age, gender, and race.

The present study is also related to the concept of behavioural finance on how the individual take a stand on

making decision in the stock market and his behaviour is classified according to different his physiological behaviour in many theories

And also in this study, knowing the controversial relevance on this theories keeping inverters strategies in mind. Behavioural finance is a frame work of mainly four topics Market Impact, Emotion, Framing and Heuristics. Behavioural finance approach makes an attempt to elucidate and increase understanding of reasoning patterns of investors, together with the emotional methods concerned and degree to that they influence the choice creating process. Basically, it tries to elucidate the what, why and the way finance and finance, form human perspective. These facilitate investors to reduce or eliminate the psychological biases in investment choices.

## II. STATEMENT OF PROBLEM

Behavioural theories are seen as a relatively new phenomenon in the security markets. Therefore, examining the subject is essential in order to understand the changing world of investments.

Current technology enhances fast trade between individual investors. The concept of investing is seen as trendy. Therefore, people tend to make illogical decisions not based on true knowledge or information of a certain investment object. These decisions are explained via several behavioural finance theories. The outcome of poor knowledge is that investors allow these theories to effect on their decision-making process, thus resulting in major losses.

## III. REVIEW OF LITERATURE

It is always seen that investors seems to be unhappy and take decision of not investing when the stock price if the firm falls on a single trading day. According to De Bondt and Thaler (1985) while investigating the possible psychological basis for investor behavior, argue that mean reversion in stock prices is an evidence of investor over reaction where investors over emphasize recent firm performance in forming future expectations.

Designing portfolio for a client is much more than merely picking up securities for investment. The portfolio manager needs to understand the psyche of his client while designing his portfolio. According to Gupta L C. (1991) investors in India regard equity, debentures and company deposits as being in more or less the same risk category and consider including all mutual funds, including all equity funds, almost as safe as bank deposits.

Investment belongs to all the age group people. Age does not matter in the investment decision taking pattern, but it all depends on the ability to take up the risk and expected

return. According to Meenakshi Chaturvedi, Shruti Khare (2012) proclaimed that the age of investor cannot be taken to influence their level of awareness and it is very clear from the results that the gender of the investor has no effect or influence on his or level of awareness about any investment channel.

Mutual Funds is one of the avenue of investment which is being widely adopted since mutual funds are the consolidated basket of different stocks in it. According to Rao (2011) Conducted study on “Analysis of individual investor behavior towards Mutual Fund Scheme”. In this study author presents mutual fund investor awareness and adoption of different schemes with educational level. The research findings showed that with increased level of education is linked with greater risk tolerance. This tends to support the hypothesis developed in previous researches i.e. positive relationship exists between educational attainment and financial risk tolerance.

IV. RESEARCH GAP

The major gaps in the research in the area of interpreting the effect of behavioural finance models on investors applying a certain type of investment strategy.

V. NEED FOR STUDY

The concept of behavioural finance theories is relatively new and complex. The amount of existing studies is limited. However, behavioural finance has a major impact on peoples' everyday decisions regarding their purchasing habits. In the field of investments, the direct and indirect implications of behavioural finance are remarkably strong. Therefore, examining investor behaviour in order to understand the fluctuations of money markets is essential.

VI. OBJECTIVES OF THE STUDY

- To study the attribute of investment decision based on the behavioral theories.
- To study the correlations of major stock investment strategies and the most common behavioral finance models effecting on investor behavior.
- To study the main issues of individual stock investors and examine whether they may be explained with the four behavioral finance theories mentioned above.

VII. HYPOTHESIS

H<sub>0</sub>1: There is no Significant Relation between Losses Incurred and Investment Strategy's is being adopted.

H'1: There is a Significant Relation between Losses Incurred and Investment Strategy's is being adopted.

H<sub>0</sub>2: There is no significant relation between herding Behaviour with the period of investment.

H'2: There is a significant relation between herding Behaviour with the period of investment.

H<sub>0</sub>3: There is no relation between Core values of the company with the age of the Investor.

H'3: There is no relation between Core values of the company with the age of the Investor.

VIII. METHODOLOGY

1. Type of data: Quantitative data Collected through questioner
2. Sources of data: The entire study is based on the Primary data method. Where the Investors in stock market thought “Angel Broking Ltd” were interview.
3. Tools for analysis of data: Several Statistical tools were being used in analysis of such as CronBach Alpha and regression test for testing Hypotheses.
4. Research Design: The methodology adopted for this study is related to the findings of the reviewed literature. A model relating to the findings is applied to carry out the research on Behavioural Finance. The study follows an approach which is further characterized through an empirical model. The empirical model is further used to test various hypotheses which determines the relationship between different the Behavioural Financial Theory with the Investment Strategy.

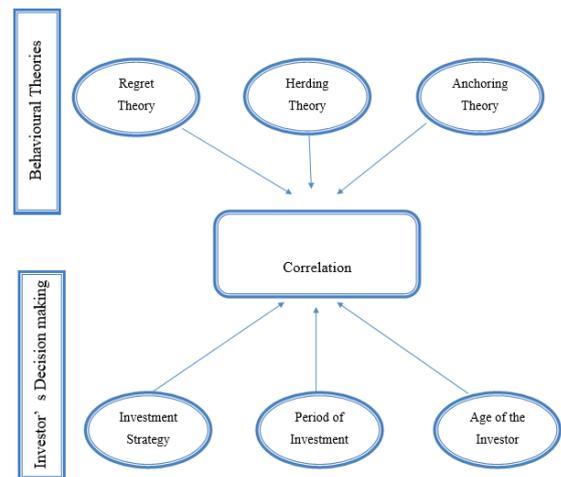


Fig 1: Research Methodology being used in the research

IX. DATA ANALYSIS AND INTERPRETATION

The Questioner reliability was being tested with the Cronbach Alpha through SPSS value's and its shows a positively reliability among them. The entire Questioner had a total of 16 Questions including Social-Demography and investors behavioural based questions. To get the result of Cronbach Alpha Above 0.7 only the questions related to the investors behavioural was taken.

Reliability Statistics result.		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of questions
.708	.704	9

Table 1: Shows the Cronbach’s alpha value

1. Regret Theory.

H<sub>0</sub>1: There is no Significant Relation between Losses Incurred and Investment Strategy’s is being adopted.

H’1: There is a Significant Relation between Losses Incurred and Investment Strategy’s is being adopted.

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.242	2	0.621	0.605	0.547
	Residual	163.258	159	1.027		
Total		164.500	161			

Table 2: Regression result for first hypothesis

In the above table 2 since the Significant is greater than 0.05 at 95 per cent Confident Level there is no impact of independent variable on the dependent variable. Hence, accept the Null Hypothesis. Therefore we conclude that “There is no significant relation between losses incurred and Investment strategy’s being adopted”.

2. Herding Theory.

H<sub>0</sub>2: There is no significant relation between herding Behaviour with the period of investment.

H’2: There is a significant relation between herding Behaviour with the period of investment.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.304	4	1.076	2.005	0.97
	Residual	83.190	155	0.537		
Total		87.494	159			

Table 3: Regression result for second hypothesis

The table 3 shows that the significant level of this regression is higher than 0.05 at 95 per cent Confident Level which means that there is no impact of independent variable on the dependent variable. Hence, accept the null Hypothesis “There is no significant relation between herding Behaviour with the period of investment”.

3. Anchoring Theory

H<sub>0</sub>3: There is no relation between Core values of the company with the age of the Investor.

H’3: There is no relation between Core values of the company with the age of the Investor.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.018	3	2.006	2.356	0.74
	Residual	133.671	157	0.851		
Total		139.689	160			

Table 4: Regression result of third hypothesis

The table 4 shows that the significant level of the test is 0.74 which is higher than 0.05 at 95 percent confident level. This implies that there is no impact of independent variables on dependent variable. Hence, accept the null hypothesis “There is no relation between Core values of the company with the age of the Investor”

X. CONCLUSION

The regression analysis gave a model summary for the study. The study is based on testing of three hypotheses where the result of first hypotheses which is based on regret theory proves that there is no Significant Relation between Losses Incurred and Investment Strategy’s is being adopted with a significant level of 0.05. Investment strategy talks about set of rules, behaviors or procedures, designed to guide an investor's selection of investment portfolio and the study shows it can be one factor but there are many other factors which lead to incur loss. Second hypotheses is based on herding theory which has a significant level of 0.05 resulting in no significant relation between herding Behavior with the period of investment. Investors at the initial stage might go for opinion from a large group of traders but then once they are aware on how to play with shares they come up with their own strategies. And the third hypothesis which is on anchoring shows a significant level of 0.74 showing that there is no relation between Core values of the company with the age of the Investor.

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# Role of HRM in Disaster Management

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**Abstract**— When natural disaster occurs, it will affect all essential services like health care, electricity, sewage, transportation and communication. Natural disasters will have long lasting effect on people, industries and economies too. In today’s world of changing climatic conditions Human resources should form practices and policies to face such conditions.

**Keywords**— Disaster management, role of HRM in disaster management, green HR

## I INTRODUCTION

The United Nations defines disaster as a serious disruption of the functioning of community or a society. Disaster involves widespread human, material, economic and environmental impacts.

The Red Cross and Red Crescent societies define disaster management as the organisation and management of resources and responsibilities for dealing with all humanitarian aspect of emergencies, in particular preparedness response and recovery in order to lessen the impact of disasters\*.

## II . Objective:

1. To understand Impact of flood over various industries in Kerala.
2. To understand unemployment status of different industries in flood affected areas.
3. To study significance of HR in an organisation which is affected by natural disaster

## III. Research Methodology:

Methodology is based on secondary data obtained from websites. Literature for this topic is collected from various sites and a systematic review is done

## IV. Literature Review

The after effect Kerala flood on selected industries and Kerala economy is stated below

1. Plantation sector and tourist segment would be impacted the most in terms of contribution to GDSP. A lower spending level during Onam season has affected consumer durable industry, auto and gold due to their contribution to GDSP. Growth in GDSP will be affected up to 1%.

2. Bank NPAs will be pressurised through the impact .The old private banks will be affected most
3. Growth in credit of Kerala Business i.e in state of Kerala will increase from an average 14% to 1721% as households and small units borrow more for rebuilding their homes and businesses this growth will be shared with NBFCs.
4. Infrastructure losses would be high for roads, airports and housing.
5. Growth in revenue will be adversely affected due to reduced production. Government deficit will be under pressure due to spending on relief work.

Unemployment- status after flood (Economic and industrial impact of Kerala flood report by CARE Ratings)

Mostly affected 5 Districts are Idukki, Ernakulum, Kollam, Kottayam and Pathanamthitta, have an estimated population of 11.09<sup>1</sup> million which accounts for nearly 30% states total population employment of 4.13<sup>2</sup> million individuals of these Districts have been affected on account of flood

Sectors	Iddu kki	Erna kulum	Kollam	Kottayam	Pathanamthitta	Total
Agriculture	268.0	132.4	161.8	122.8	105.3	790.5
House Industry	7.4	26.1	23.4	20.1	12.0	89.1
Other workers	285.7	1,199.6	806.2	656.7	309.7	3,258.1
Total	561.3	1,358.1	991.4	799.8	427.0	4,137.7

Table 1: Estimate - Occupation wise individuals that are affected in the 5 most affected districts (‘000)

1. Based on 2010-11 census and an annual average growth of 1.2%
  - 2 Based on 2011 census data for district wise and working age population which has been adjusted for incremental growth up to 2018
- Of the total working age population in the 5 districts, around 19% comprise agriculture workers and household industry

workers account only 2%. Labours in Ernakulum is mostly affected followed by labours in Kollam and Kottayam a wage loss of around Rs. 4,000 crs for the month of Aug'18 (based on the average wage rate of Rs. 400/- per day for Kerala as per the data from the annual report for 2017-18 of the Ministry of Labour). The wage loss is in addition to the property, vehicle and consumer durable losses would weigh on incomes and consumption of the population here

When a disaster struck Kerala more than 30% employed people (out of total employed population of these 5 Dists) lost their job, which is a matter of deep concern Loss of resources both men and machine may adversely affect developmental process.

With lose of resources potential to develop goods and services will be effected due increase in cost of product and services. Income loss due to loss of production will be having a negative impact on purchasing power of consumers. Due to flood, where crops are damaged it will effect exporting as other countries exporting same products will capture market share. Such circumstances will lead to low economic growth and will stagnate all developmental as well as investment plans

In the past industries were concentrating more on increasing production but now due to increase in number of natural disasters protection of environment and sustainable development is gaining importance

#### V. Significance of HRM in disaster management

During natural disasters HR Managers or person in charge of handling HR functions should prepared to protect the life of employees, family and self.

1. In individual perspective employee has to face several issues during natural disaster, loss of home, furniture, house hold articles, loss of the life of close relatives, friends and neighbors, caring of kids and aged parents after such occurrences all these issues will affect the mental condition of employee. HR can always form employee Assistance programme (EAP) to help employees to come out of such situations.
2. When a disaster occurs first and foremost challenge is to establish communication with employee, for that a database with primary and secondary contact numbers should be maintained, employee should be provided with a toll free number to understand condition of organization.
3. Regarding salary and allowances to be paid during such time. Is company ready to pay advance salary or allowances or it will be processed as usual should be made clear.
4. HR can also keep medical insurance related details ready to be circulated among staff so that they avail treatment without cash.

5. HR should be well equipped with an alternate location to carry out operation if organization got affected with natural disaster.
6. Leave policy should be drafted with care covering leaves during disaster days so that employees can take paid leaves. Otherwise there should be an option to advance leave.
7. As there is a chance for employees resigning and joining easily recoverable industries from a flood affected industry HR should always keep a data base ready of for all positions.

#### VI. CONCLUSION

In this world of changing climatic conditions, it is the need of the hour to frame policies that will foresee the steps to be taken in HR perspective when a disaster strikes. In organization HR has a major role to play in this as such policies cannot be implemented without the support of human resource. A detailed study is required to the various consequences and ways to develop and Implement HR practices which will support organization and employees as well to face natural disaster.

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# Impact of Social media on Academic Performance

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**Abstract—** The purpose of this article is to understand the impact of social media on academic performance of selected college students. In this article, the authors raise the actual impact of daily communication of youth in social media. Descriptive research design was utilized to gain accurate profile of situation. Sixty (60) Master of Business Administration Students who are actively using social media are the respondents of the study. Summing-up, social networks becomes an integral part of the students' full life, took up most of their free time. Undoubtedly, in social networks, there are also things useful for the development of the students. In addition, communication with peers through social networks can help a student socialize, find new friends, discuss with them issues related to studies. Thus, it can be concluded that social media have a dual impact on student achievement, and it is necessary to approach adolescents' use of social networks with ultimate responsibilities.

## I. INTRODUCTION

Social media are web-based services that enables each and bounded system in order to connect people for sharing information, files, videos and it helps to create blogs and spread knowledge. Social media plays a major role among the students. Social media is the source which influences the studying behaviour of students. Social media is the future of communication. It includes an array of internet-based tools and platforms that increase and enhance the experience of sharing information. The platform is all about community-based inputs, contact, content-sharing, and alliance. There are various social networks like Facebook, Twitter, Whatsapp, byju's learning app etc. Social media are online technology platforms that help to connect people together far and near. It is used to build relationship among people. With their help, we can communicate with each other, even on different continents, listen to music, read books, look at photos and much more. Social media have greatly simplified our lives and tightly tied to ourselves. During the time spent discovering individuals for acquaintances, youngsters go into different connections and get the chance to speak with a relatively boundless number of individuals and premium gatherings, with a wide range of identities, take in a considerable measure of stories, can trade suppositions and talk about issues important to them. Therefore, users of social networks, in most cases, are a representative of the younger generation.

Distance learning models have an edge over campus- based counterparts. They are the main future new technology based new innovations. They are playing a large and influential role in decision making on the academics of students globally. The students must be aware about usage.

## II. LITERATURE REVIEW

### A. Positive impacts on studies

Students' academic life has moved to a different dimension since the introduction of these social media networks and several studies have affirmed that social media plays an important role on students in higher education including the study conducted by Wheeler, Yeomans and Wheeler, (2008); Rifkin, Longnecker, Leach and Ortia, (2009). In their study, they recognized four (4) major advantages of social media usage by students in higher education which included; enhancing relationship, improving learning motivation, offering personalized course material, and developing collaborative abilities. Indeed, social media has contributed greatly to facilitating learning in the 21st century. It is shown that a greater percentage of students including those at the PhD level commonly use social media to ameliorate their studies (Khan, 2010). The answers to the causes of flexible studies today across the globe might not be far-fetched from the great contribution that social media platforms are providing when used judiciously. Even though, there have been other school of thought that states that social media is a nuisance to students' academic life such as Kuppuswamy and Shankar (2010), who argued in their study that social networks distracts the attention and concentration of the students toward learning and converts it towards non educational activities such as useless and unnecessary chatting, there have been several studies conducted afterwards whose findings are contrary to this claim. For instance, the study conducted by Jain, Verma, Verma and Tiwari (2012), titled "the impact of social networking in promoting education" revealed that students on. It is clear and indisputable from these studies that social media usage in the educational sector cannot be underestimated since its introduction. Students can benefit from chatting with other students, teachers and external sources to acquire knowledge. Also, Yunus and Salehi (2012), argued in the same direction that students gained more vocabulary, improved their writing skills and reduced their spelling mistakes through social media usage. In fact, as an educational tool, social media enriches learning by giving both students and teachers the opportunity to connect in new and very exciting ways thereby encouraging flexible mode of learning. It is stated that flexible learning expands the choice on what, when and how people learn. It supports different styles of learning including E-learning which is highly patronized across the globe (Pappas, 2013). Other scholars; O'keeffe and Clake-pearson (2011), in their study also revealed that social media benefits

students by connecting them to one another on assignments and class projects. It is further buttressed in the study of Arquero and Esteban, (2013) and Selwyn, (2007) whose conclusions were that social media undoubtedly generate new opportunities to engage students in higher education as they are remarkably effective at connecting people and facilitating the exchange of information.

### *B. Negative effects of social media on students' academic life*

Davies and Cranston (2008), enumerated some of the risks associated with social media which included criminal activities such as identity theft and fake contacts which is prevalent today, sexual abuse or harassment and unsuitable advertising. On the same subject O'keeffe and Clapepearson (2011), also mentioned cyberbullying, online harassment, sexting, Facebook depression, and privacy concerns as some of the challenges associated with social networking.

**1. Cyberbullying:** cyberbullying is a category of bullying that occurs in the digital realm or medium of electronic text. "It is any behavior performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others" (Tokunaga, 2010). Cyberbullying is one the serious threat in the social media environment and has called for several studies to determine its causes. The causes of cyberbullying according to Calvete, Orue, Estevez, Villardon and Padilla (2010), was significantly related with the use of proactive aggression, justification of violence, exposure to violence and less perceived social support of friends.

**2. Privacy concerns:** this is another concern that everyone involved in social networking is faced with. The rate at which people post or share fake information calls for alarm and it is difficult to ascertain that, what people say, and post are truly who they are. Individuals' private information are publicly displayed on some of these social networks and malicious people take advantage and perpetrate all kinds of harassment. It is also argued that the privacy options offered by most social networking sites (SNSs) do not provide users with the flexibility needed to handle conflicts with individuals who have different conceptions of privacy (Preibusch, Hoser, Gurses and Berendt, 2007). Aside these effects, other studies conducted by scholars have also proved that social media can be detrimental to students' academic life if caution is not taken in its usage. For instance, the study conducted by Obi, Bulus, Adamu and Sala'at (2012), titled "The need for safety consciousness among Youths on social Networking Sites" concluded that social media affects students use of English. They use short-handwriting when chatting with friends and unconsciously get used to it thereby replicating same errors during examinations. Even though one may argue that these are minor challenges, it is important to acknowledge the increasing rate at which these errors are replicated in the education sector and if care is not taken future generation may see it as a norm. Indeed a number of studies including but not limited to the study of Kuppuswamy

and Shankar (2010), Osharive (2015), Maya (2015), among others have revealed unequivocally that social media can be problematic to students' academic life if caution is not taken in its usage.

### *C. Social media and academic performance*

Gwenn Schurigin O'Keeffe and Katheleen Clarke-Pearson believe that there are negative impacts caused by social media, which include accessing inappropriate content and not "understanding online privacy". They also say that, there is an online harassment and cyberbullying, which is mostly caused by risk of peer topeer engagement.

Sanzar Naizabekov concluded that social media causes procrastination as a result of its distracting nature. It would take an individual who uses social media much more time than it would take an individual who uses social media much more time than it would take a focused individual finish a task. Through procrastination emerges the second negative, which is lack of motivation, because using social media with studying develops negative attitude towards their individual work at school.

## III. STATEMENT OF PROBLEM

The internet is today the most important source of information and the growing dimensions of the use of social media by students cannot be underestimated. It has been observed that students devote more attention and time to social media than they do for their studies and they cannot pass their examinations well if they do not learn (Osharive, 2015). Also, the study conducted by Maya (2015), revealed that media use contributes to lower academic performance, low self-perceptions and less interest in college-oriented carriers. Academic excellence plays an important role in an individual's life; be it in the family, at social gatherings, at workplace, in an institution or even among peers. Much emphasis is placed on academic excellence because of the role it plays in an individual's life as far as a successful life and respect is concerned in every part of the world. Due to this, many people are concerned with the ways that they can improve their academic performance (Kyoshaba, 2009). Studies have also revealed that social media affects students' use of English. They tend to use short- handwriting to chat with friends and get used to it thereby replicating the same errors during examinations (Obi, Bulus, Adamu and Sala'at, 2012). Today students at all levels especially tertiary level have been engaged in the use of social networking sites (SNSs). This research therefore seeks to investigate the level of engagement of students of Kerala into social networking sites and determine the effect of their use on the academic work.

## IV. RESEARCH METHODOLOGY

Initially, literature review was conducted to study the role of social media among students. A well-constructed and self-developed questionnaire titled "Social Media and Academic Performance of Students Questionnaire (SMAAPOS)" was

used to get the desired information from the students. The questionnaire was divided into two sections (A and B). Section A was for collection of information on personal data of respondents while Section B consisted of questions that elicited responses from the respondents with response options: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The scale items were validated during questionnaire designing. Structured questionnaire was framed, and respondents were found out from student community to analyse the impact. Out of which were retained after filtering the initial set of questions.

V. ANALYSIS AND INTERPRETATION

**Table 1: Negative impacts of social media**

Statements	Strongly agree	agree	neutral	disagree	Strongly agree	Total
Notifications tempt you to play	18.2%	20.8%	49.9%	8.6%	2.5%	100%
Any health issues suffered	34.2%	15%	28.1%	14.2%	8.5%	100%
Lead to poor writing skills	20.2%	30.8%	7.5%	27.4%	14.1%	100%

**Table 2: Positive impacts of social media**

Statements	Strongly agree	Agree	neutral	Disagree	Strongly disagree	total
Platforms to be used by lectures to interact with students on course related matters	23.7%	14%	36.7%	16.3%	9.3%	100%
University sites are beneficial for studies	15.4%	20.7%	13.7%	36.2%	14%	100%
Social media can be used as an effective educational tool for studies	30.8%	26.7%	20.9%	15.6%	6%	100%
It improves connectivity between people	24.3%	33.6%	15.7%	13.5%	12.9%	100%

*A. Impact of social media on student's academic performance*

According to the results of the survey, it was found out that seventy two (72.6%) strongly agreed that social media has negative effect on their academic performance. It was revealed on interview with the respondents that sometimes they don't have time to make assignment or study because they had long been on social media; fifty (50.2%) did not face such problem; fifty seven(57.2%) answered neutral; and twenty five (25.1%) revealed that they don't encounter any problem due to social media usage. In terms of positive effect of social media, respondents revealed the following: ninety-four (94.2%) strongly agree of the positive effect; ninety-five (95%) agreed; eighty-seven (87%) claimed that it neutral

neither positive nor negative; and eighty one (81.6%) disagree of the positive effect. Summing up, it turned out that the internet occupies a specific place in the life of student respondents. Majority of the respondents cannot leave their phone even during the class session. Majority of them performs homework through the internet, watch the series every day, but it does not interfere with their educational process.

VI. FINDINGS

The primary motives for using social networks for them are the search for friends, classmates and communication with them. The time spent on informal organizations enables most respondents to compose their own relaxation time, and in addition get ready for exams. Most students spend around 20% of their time using social media. Almost half of those surveyed admit that using the social network helped them in their personal lives and communicating with friends, organizing leisure and in search of interest groups, some argue that social networks did not affect their way of life in any way, and only a few acknowledged that social networks had influenced on their free time, 10% caused addiction. Summing up, it should be noted that social networks, becoming an integral part of the students' full life, took up most of their free time. Having superseded the methods for correspondence, they replaced the understudies' leisure activities and verbal correspondence. The informal organization, and not the course book and the instructor, moved toward becoming for them the main colleague in anticipation of exams. Often the student does not have time to absorb the information received in the lessons. After all, in the phone or tablet screen, there are things much more interesting - correspondence with peers, news tapes, all kinds of social networks, and, of course, YouTube videos. Also, all the free time a student can spend on the Internet. Instead of doing sports, reading a book, chatting with their peers "live," preparing for lessons or just walking, he will spend time on social networks. Of course, this negatively affects their physical and intellectual development. Undoubtedly, in social networks, there are also things useful for the development of the student - a lot of educational groups on Facebook and educational videos from YouTube. In addition, communication with peers through social networks can help a student socialize, find new friends, discuss with them issues related to studies. In addition, in social networks, a child can relax for a while and get distracted from the everyday college routine.

*A. Recommendations*

In the light of the findings, the following recommendations are made;

- 1) Seminars should be organized in the various schools or faculties to enlighten students more about the possible implications of social media usage on their academic performance.
- 2) Students should make sure that they use these social networking sites judiciously to ensure that they do not become detrimental to their academics.
- 3) Teachers/lecturers can adopt new strategies by channeling assignments or discussion on social media

platforms to help inculcate the habit of using these sites for academic work.

- 4) Students must minimize the time they spend on social media to avoid being obsessed by these sites for unnecessary chatting.
- 5) The university authority should also restrict access to certain social media sites that may be prone of distracting students' attention during school hours as a means of minimizing their use.

## VII. CONCLUSION AND DIRECTION FOR FUTURE RESEARCH

Based on the findings, social media becomes an integral part of the student's full life, took up most of his spare time. The time spend by the respondents on social media stressed that the impact on their academic performance ends up negative. So, the social media, which also has a familiar name as a social networks or web, chooses students as its potential victims. All kinds of computer technologies, mobile phones have significantly expanded the scope of both positive and negative factors of the spiritual and intellectual development of the younger generation. Thus, it can be concluded that social media have a dual impact on student achievement, and it is necessary to approach adolescents' use of social networks with ultimate responsibility. In no case should we forget about the negative consequences that excessive social infatuation could have. It is without doubt that social media is and will remain tool in human life as far communication is concerned. Today mankind is harvesting tremendously from its existence not only in mere communication point of view but also scholarly activities. Different forms of education including distance education has been widely patronized and facilitated to some degree through these social media networks. Acquiring information both locally and internationally from friends, lectures or experts is no longer a struggle as compared to the olden days and the internet is the ultimate master behind the success. "social media is a useful servant but a dangerous master" and can also be described as "double edged sword" and as such users especially students must be alert about its dangers and be prudent in its utilization. . Based on the finding and conclusions drawn, the following recommendations are hereby offered: Institutions should focus on making pleasant things useful - promoting social networks as a tool not only for communication and entertainment but also for learning. Social networks should allow their users to voluntarily restrict attendance on certain days, for example, to students during a session. Finally, students themselves must realize all the potential harm from excessive use of social networks, and responsibly approach the learning process and academic results.

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# Crisis Management Strategies - Lessons from the old Testament of the Bible

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**Abstract**— We live in a world plagued with crisis situations. As we read the newspaper, watch television, or talk to a friend, we are experiencing feelings of anxiety, depression, and crises. The author has brought in examples from the Bible on how men of God have handled crisis. The article speaks about three cases of crises. Leadership crisis handled by Moses, food crisis rising out of famine, handled by Joseph and personal crisis handled by Daniel. These men of God have been able to take things forward by relying on the word of God. These crisis management strategies are integrated problem-solving approaches which can promote effective crisis resolution and lead to peace and prosperity. These strategies are relevant in the current context and should be utilized by leaders to solve crises plaguing them.

**Keywords**— delegation, Strategic planning, Jethro principle, Crisis economics.

## I. INTRODUCTION

The Bible is the most comprehensive book on the topic of management available anywhere. It offers in-depth coverage of the entire range of essential topics for today's managers and supervisors—from beginners to seasoned veterans—and includes practical, effective solutions for the everyday problems every manager faces. In addition, the Bible also includes proven tips and tactics that help managers grow into more effective, efficient leaders. The Bible reveals everything that one needs to know to keep up with today's rapidly changing business environment, including topics such as leadership, recruitment, training, motivating, developing, coaching, delegating, communicating, teamwork, and much more.

Crisis management involves dealing with crises in a manner that minimizes damage and allows the affected organization to recover quickly. Dealing properly with a crisis can be especially important for a company's public relations. Crises come in several forms and it is recommended in all cases that a company be prepared ahead of time with a crisis management plan.

To counter any looming crisis, a proper process and plan must be used for effective crisis management. A crisis management plan is a documented outline of a process to follow for an organization to respond effectively to a crisis.

Crisis management planning will focus mainly on building infrastructures that help the company negate possibly risks and how to respond to crises should they occur. It also involves the organization workforce and the

crisis management team in testing the methods and having regular internal training on the processes.

Crisis intervention through Bible helps an individual to go through a difficult state by relying on the Bible and God. The biblical crisis intervention is not static. Moses, Joseph and Daniel have overcome crisis's through different approaches however, the key method was relying on the word of God. God and His word was a counsellor for them and they were able to overcome the crisis in their personal and professional lives.

## II. REVIEW OF LITERATURE

Crisis is a critical event or point of decision which, if not handled in an appropriate and timely manner (or if not handled at all), may turn into a disaster or catastrophe (Business Dictionary).

Management professionals consider crisis to be a situation which creates impact on management thinking process and enforces new strategy development. Successful business houses and business leaders perceive crisis as an opportunity available for improving the market share, creating a background for change, introducing new systems and work culture, practicing innovations and introduction of new business models, new products, new concepts etc. Thus, crisis management approach depends upon the crisis, which needs to be addressed on priority. A major crisis will affect the entire organization and may lead to collapse. Thus, managers must act quickly to recognize its source, contain it and resolve the crisis with least amount of damage.

Crises can be in the external or internal environment of business. Crises in the external business environment include:

- Industry specific changes in business like change in government policy, legal environment, fiscal and monetary policies of government.
- Price control mechanisms imposed by government
- Economic and market forces

Crises in the internal environment include:

- Self-inflicted crises, or
- Breakdown in internal systems, leadership crisis, resources crises and creates change.

Leadership in times of crisis is particularly demanding. Although companies cannot fully plan for crises they can, and many do, use numerous scientifically based management processes to install crisis management

routines into operations. These include potential risk and vulnerability assessments into strategy debates and planning process. In these processes roles of leaders need to be given special emphasis and consideration for various reasons. Usually, the leader is not the member of crisis management team but a decision maker who only makes the decisions based on assessment and proposals of the team. Yet, he or she, nevertheless, remains the most important individual in the times of crises, very much exposed to the global exchange of information in new media and social networks that the company cannot control. Being in the spotlight, the leader cannot be a solo player. He or she is not only the most responsible manager on the board of a company in crisis, he or she is very often the most visible symbol of the company with all the long-term implications. For all these reasons, crisis management should include effective crisis leadership foreseen in various aspects so that the crisis ultimately could be turned into an additional opportunity.

#### **Moses the leader:**

Moses is the single most famous leader in the Old Testament and is respected by Jews, Christians and Muslims alike. He was born a Hebrew slave, adopted by an Egyptian princess, raised as a prince of Egypt, exiled at age 40 after killing an Egyptian who beat a Hebrew slave. Fleeing to the tribe of Midian in the Sinai desert, Moses married, started a family, and became a shepherd, an occupation loathsome to the Egyptians, especially a prince. He was as low as a former prince of Egypt could go.

At age 80, when Moses probably felt that his life was nearly over, God met Moses on the slope of Mt. Sinai. God told Moses to return to Egypt and lead the Israelites, God's chosen people, out of slavery to the Egyptians. The rest of Moses life was a tremendous example of faithfulness to the commands of God and skill in building a nation as he led His people into their Promised Land.

Politics was a major portion of Moses' training and as a prince in Egypt he undoubtedly had long experience in uniting disparate opinions and keeping everyone happy. As a shepherd, he had spent thousands of hours caring for his sheep, and certainly realized the striking resemblance between people and sheep (*The lord is my shepherd: Psalm 23*). These skills, focused and directed by a strong relationship with God, made Moses a model leader of people.

#### **Handling crisis through delegation:**

Exodus 18:17-26 "13 *The next day Moses took his seat to serve as judge for the people, and they stood around him from morning till evening. 14 When his father-in-law saw all that Moses was doing for the people, he said, "What is this you are doing for the people? Why do you alone sit as judge, while all these people stand around you from morning till evening?"*

15 *Moses answered him, "Because the people come to me to seek God's will. 16 Whenever they have a dispute, it is brought to me, and I decide between the parties and inform them of God's decrees and instructions."*

17 *Moses' father-in-law replied, "What you are doing is not good. 18 You and these people who come to you will only wear yourselves out. The work is too heavy for you; you cannot handle it alone. 19 Listen now to me and I will give you some advice, and may God be with you. You must be the people's representative before God and bring their disputes to him. 20 Teach them his decrees and instructions and show them the way they are to live and how they are to behave. 21 But select capable men from all the people—men who fear God, trustworthy men who hate dishonest gain—and appoint them as officials over thousands, hundreds, fifties and tens. 22 Have them serve as judges for the people at all times but have them bring every difficult case to you; the simple cases they can decide themselves. That will make your load lighter, because they will share it with you. 23 If you do this and God so commands, you will be able to stand the strain, and all these people will go home satisfied."*

24 *Moses listened to his father-in-law and did everything he said. 25 He chose capable men from all Israel and made them leaders of the people, officials over thousands, hundreds, fifties and tens. 26 They served as judges for the people at all times. The difficult cases they brought to Moses, but the simple ones they decided themselves.*

As a manager, Moses understood the power of delegation but also acknowledged that positions should match the abilities of the incumbents. Consequently, he gave leaders those tasks that related specifically to their talents and personalities. Following guidance from Jethro, Moses appointed and mentored specially selected people to deal with certain issues and groups.

Where these 'deputy managers' were unable to deal with a given situation, Moses would take over the matter and seek to resolve it. Academics assert that Moses possessed skills that were in line with what the community required. In fact, the practices reported during the Exodus form the basics of modern-day human resource management. This is known as a Jethro principle.

#### **Jethro Principle:**

1. **Select capable men from all the people—men who fear God, trustworthy men who hate dishonest gain—and appoint them as officials.** Jethro skirts scientific recruitment of F. W. Taylor, hiring "able men" and, thereafter, re-echoes the earlier mentioned moral high grounds before introducing an organizational hierarchy and effective delegation of authority. Selecting people with right quality ensures better transparency, responsibility and accountability.
2. **Appoint them as officials over thousands, hundreds, fifties and tens.** Create an organizational structure for hierarchical arrangement so that the roles, power and responsibilities are assigned, controlled, and coordinated, between different levels of management. This helped Moses for coordinating communication during the Exodus to Canaan.

3. **“Teach them the statutes and the laws”:** This calls for the education of the Israelites in the letters of the law. This also means that the leaders should understand the rules and regulations that govern the operation of the system and work relationships etc.
4. **“Show them the way in which they must walk”:** The impartation of high moral standards and value judgment to ensure good behaviour is the focus here. Leaders of the people should be able to discern and choose between right and wrong and therefore walk upright in society.
5. **“Show them...the work they must do.** “Simply, this addresses the management function of training for effectiveness and specialization and consequently enhanced productivity. In other words, it calls for adequate training of the workforce in their respective duties, the functions they must perform and the jobs they must do.

### Joseph Principle and Crisis Economics:

Joseph was really the first recorded strategic planner in the Bible. In Genesis 41, Joseph functions as a strategic planner. He helped Pharaoh identify a coming crisis to the entire country. He recommended the path forward to Pharaoh for a policy of storing the harvest in plentiful years and set procedures for distributions from the stores in the drought. The plan was long-range and involved nearly 15 years of planning and execution. He assessed current resources and developed a strategy for managing those resources during the lean years.

**Gen 41: 29-31:** *Seven years of great abundance are coming throughout the land of Egypt, 30 but seven years of famine will follow them. Then all the abundance in Egypt will be forgotten, and the famine will ravage the land. 31 The abundance in the land will not be remembered, because the famine that follows it will be so severe.*

**Gen 41:** *Then Pharaoh said to Joseph, “Since God has made all this known to you, there is no one so discerning and wise as you. 40 You shall be in charge of my palace, and all my people are to submit to your orders. Only with respect to the throne will I be greater than you.”*

**Gen 41: 46-49:** *And Joseph went out from Pharaoh’s presence and travelled throughout Egypt. 47 During the seven years of abundance the land produced plentifully. 48 Joseph collected all the food produced in those seven years of abundance in Egypt and stored it in the cities. In each city he put the food grown in the fields surrounding it. 49 Joseph stored up huge quantities of grain, like the sand of the sea; it was so much that he stopped keeping records because it was beyond measure.*

**Gen 41: 53** *The seven years of abundance in Egypt came to an end, 54 and the seven years of famine began, just as Joseph had said. There was famine in all the other lands, but in the whole land of Egypt there was food. 55 When all Egypt began to feel the*

*famine, the people cried to Pharaoh for food. Then Pharaoh told all the Egyptians, “Go to Joseph and do what he tells you.”*

*56 When the famine had spread over the whole country, Joseph opened all the storehouses and sold grain to the Egyptians, for the famine was severe throughout Egypt. 57 And all the world came to Egypt to buy grain from Joseph, because the famine was severe everywhere.*

**Gen 47: 13-24:** *There was no food, however, in the whole region because the famine was severe; both Egypt and Canaan wasted away because of the famine. 14 Joseph collected all the money that was to be found in Egypt and Canaan in payment for the grain they were buying, and he brought it to Pharaoh’s palace. 15 When the money of the people of Egypt and Canaan was gone, all Egypt came to Joseph and said, “Give us food. Why should we die before your eyes? Our money is all gone.”*

*16 “Then bring your livestock,” said Joseph. “I will sell you food in exchange for your livestock, since your money is gone.” 17 So they brought their livestock to Joseph, and he gave them food in exchange for their horses, their sheep and goats, their cattle and donkeys. And he brought them through that year with food in exchange for all their livestock.*

*18 When that year was over, they came to him the following year and said, “We cannot hide from our lord the fact that since our money is gone and our livestock belongs to you, there is nothing left for our lord except our bodies and our land. 19 Why should we perish before your eyes—we and our land as well? Buy us and our land in exchange for food, and we with our land will be in bondage to Pharaoh. Give us seed so that we may live and not die, and that the land may not become desolate.”*

*20 So Joseph bought all the land in Egypt for Pharaoh. The Egyptians, one and all, sold their fields, because the famine was too severe for them. The land became Pharaoh’s, 21 and Joseph reduced the people to servitude, [c] from one end of Egypt to the other. 22 However, he did not buy the land of the priests, because they received a regular allotment from Pharaoh and had food enough from the allotment Pharaoh gave them. That is why they did not sell their land.*

*23 Joseph said to the people, “Now that I have bought you and your land today for Pharaoh, here is seed for you so you can plant the ground. 24 But when the crop comes in, give a fifth of it to Pharaoh. The other four-fifths you may keep as seed for the fields and as food for yourselves and your households and your children.”*

**The Joseph Principle and Crisis Economics:** Joseph’s strategy of handling the famine is an excellent example of “Crisis Economics”

Strategy implemented by Joseph to tackle the famine:

1. The first act of Joseph was to visit the land of Egypt on an inspection tour (Genesis 41:46). This was to familiarize the people who managed agriculture, locations and conditions of the fields, transport systems available and establish contacts with main farmers and their managers.
2. Joseph build granaries in the seven good years to store enough surplus grain to feed the Egyptian people.
3. He set up points from where grains could be dispensed. This could have been the first Public Distribution System (PDS), by any monarchy in the world.
4. In the next seven years of famine, Joseph dispensed the grain to the Egyptians and other people who were affected with widespread famine. This is where we find Joseph as a great administrator.
5. After the people ran out of money, Joseph dispensed grain through barter system. He gave them grain for their livestock. Through this he was able to collect horses, sheep, goats, cattle and donkeys (Gen. 47:15-17). He would have had to determine the value of these animals and establish an equitable system for exchange.
6. When all the livestock has been traded, people willingly worked for Pharaoh and also sold their land to Pharaoh. Thus, during the reign of Joseph, he was able to set up a central control in which land and labour belonged to the government. Joseph would have seen that this land was valued correctly in exchanged (Gen. 47:23). This is the first revenue department, land registration department, employment department and the agriculture department in the world. In order to manage the revenue, he would also have created a surveillance system to monitor and enforce the people's compliance with the law.
7. Later he enacted a law that people return 20 per cent of the harvest to Pharaoh. This is as a part of royalty to the Pharaoh for the seeds provided for starting agriculture. He would also be able to reassess the land and start agriculture based on the food requirement of the country.
8. However, he did not charge the priests and their families from selling the land. He supplied them with a fixed allotment of food to meet their needs adequately (Gen. 47:22,26).

**Application of Joseph Principle in India:** In India it has been estimated that about 65% of the total produce of grains and fruits are stored in a crude and unscientific method. The post-harvest losses in India amount to 12 to 16 million metric tons of food grains each year, an amount that the World Bank stipulates could feed one-third of India's poor. A grain saved is a grain produced. These golden words remain as a mere proverb, when one visualises the quantum of post-harvest wastages and losses of agricultural produce due to inefficient supply chain management. The reason for such huge post-harvest losses mainly attributes to lack of scientific storage facilities and improper transportation, poor front-end infrastructure, such as inadequate warehousing facilities, redundant food processing technology and farmers' inaccessibility to

value-added services. The government buys food grains from the farmers but does not have the space to store it. The Food Corporation of India (FCI) has insufficient number of grain silos (modern storage facilities), and covered godowns with adequate storage capacities. Hence grains are stored in outdoors under CAP storage (Cover and Plinth) across the country. This makes grains prone to rodents, moisture, birds and pests. Unexpected rainstorms and weather make matters worse. Every year tonnes of food grains go waste because of inadequate storage and infrastructure facilities. The wastage of fruits and vegetables is even higher than grains. Therefore, India needs huge investment in providing proper storage facilities. Storage infrastructure is necessary for carrying over the agricultural produce from production periods to the rest of the year and to prevent distress sales.

### **Daniel: Learning to Lean on God in a Crisis**

Daniel, the Prophet, had exhibited some of the best management principles during his lifetime.

The first management principle demonstrated by Daniel was *leading a pure and blameless life*. He also adds introspection, combined with self-correction will lead to a happy life.

The second principle of Management demonstrated by him was *industriousness i.e. he was diligent in his work* and distinguished himself above all the other young men and finally become the advisor of the King. Industriousness is the act of working hard no matter the task has given.

The third biblical principles demonstrated by the Prophet, Daniel was **360<sup>0</sup> leadership**. 360<sup>0</sup> leadership is the art of influencing members in all part of the organisation whether they are under you, equal to you, or over you. Daniel showed this great ability to give important and timely feed back to the Kings in Babylon and Persia as well as his ability to persuade others to follow his suggestions.

The fourth principle of management was refusal to compromise his moral and ethical convictions in spite of the extremely high situations he faced. Daniel's life was seemingly filled with one crisis after another. We see this play out in his life from the time we are introduced to him as a teenager until well into his eighty. Daniel is a man whose life proves his faith.

**Crisis 1:** Daniel 1: 8- 14

*But Daniel resolved not to defile himself with the royal food and wine, and he asked the chief official for permission not to defile himself this way. 9 Now God had caused the official to show favour and compassion to Daniel,*

*At the end of the ten days they looked healthier and better nourished than any of the young men who ate the royal food. 16 So the guard took away their choice food and the wine they were to drink and gave them vegetables instead.*

### **Daniel displayed commitment and convictions:**

Daniel Chose Commitment When trouble came Daniel displayed beliefs and convictions. Daniel's decision was spiritual. It was a commitment that God honoured in Daniel's life.

**Crisis 2: Daniel 6: 1-6**

*It pleased Darius to appoint 120 satraps (ministers) to rule throughout the kingdom, 2 with three administrators over them, one of whom was Daniel. The satraps were made accountable to them so that the king might not suffer loss. 3 Now Daniel so distinguished himself among the administrators and the satraps by his exceptional qualities that the king planned to set him over the whole kingdom. 4 At this, the administrators and the satraps tried to find grounds for charges against Daniel in his conduct of government affairs, but they were unable to do so. They could find no corruption in him, because he was trustworthy and neither corrupt nor negligent. 5 Finally these men said, "We will never find any basis for charges against this man Daniel unless it has something to do with the law of his God."*

**Consistent integrity and Positive outlook:**

Daniel is a wonderful example of the appeal to stay Positive. He had a positive pleasant attitude about life and his job. The second basis of his greatest is his consistent integrity. The last part of verse four says that when his enemies tried to find fault with him "... they could find no charge or fault,

because he was faithful; nor was there any error or fault found in him." He saw his job as a platform upon which he could demonstrate his faith in God. Twice in the King's words to Daniel he remarked how he served God with, "whom you serve continually" (vv. 16, 20). No matter how hard they tried they just could not scrape up any dirt on Daniel. Yet it is those very character qualities that brought him into conflict with his contemporaries. Daniel's godliness was a threat to the other officials because they used their positions to enrich themselves at the king's expense. They knew that Daniel could not be bought nor could he be expected to be silent on issues of injustice. His enemies first scrutinized his professional life, then they scrutinized his personal life, and their conclusion was that no charge could be brought against Daniel.

Daniel stood strong in his crisis in personal as well as official responsibilities and is a perfect example of how to be truthful and sincere in the secular contest.

**III. CONCLUSIONS**

Great leaders in history have a number of traits and intrinsic worth. They possess keen managerial sense founded on ethical precepts to do the 'right thing' with a future vision that is strategically orientated. Over the centuries a great deal has been made of inter alia the leadership style and principles Moses, Joseph and Daniel.

The trio were great leaders who had distinctive capacities and exhibited leadership which is relevant to current management practices. A permeating approach in the theory of ethics stresses the prominence of developing emotional/social understanding, which leads to empathy and compassion which is what Moses shows us through his leadership style. His ethics essentially came from his God and religion as well as his conscience and intuition and the example provided by his father-in-law Jethro. The story of Joseph portrays a complete picture of all those statuses: from being the favorite heir of a rich and respected clan, ended in prison for being honest and faithful to both his master and his God, but achieved the highest and the most powerful man of the most powerful country, a prime minister- the head of the government or the CEO of the country and implemented a crisis management strategy to rescue the country from famine. Daniel's experience also showed different stages of human status from a captive into a young scholar/trainee, who was later promoted to be the Kings' counselor. The fact that Daniel and his friends decided to remain faithful in the early stages of the process of selection and recruitment proved them not only as competent human resources but also men of character.

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# A Study on Financial Distress among Public and Private Sector Banks

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**Abstract—** Financial distress occurs when an organization is unable to pay its creditors and lenders. This condition is more likely when a business is highly leveraged, its per-unit profit level is low, its breakeven point is high, or its sales are sensitive to economic declines. Bank crisis cause adverse effect on the economy and health of financial sector. The main aim of this study is to identify the possibility of bankruptcy situation with respect to banks. The data for the last five years used to analyze the model and the trend of NPA and Book to price ratio is also considered to impact the effect of prices in the stock market.

**Keywords:** Financial Distress, NPA, Book to price Ratio, Bankruptcy, Bank crisis.

## I. INTRODUCTION

Financial distress occurs when an organization is unable to pay its creditors and lenders. This condition is more likely when a business is highly leveraged, its per-unit profit level is low, its breakeven point is high, or its sales are sensitive to economic declines. Bank crisis cause adverse effect on the economy and health of financial sector. Generally, Financial distress is a situation in which a firm or company is not in position to pay its monetary obligation and debts and financial crisis start in the unit. When a bank is facing financial distress, at that time its market value of share is reduced, and customers avoid dealings with that bank. If a bank is facing crucial situation of distress, people loss their faith in entire banking system and avoid dealings. There are mainly two type of failure:

- 1) Economic failure is a situation, where revenues are less than the cost of its operations.
- 2) Financial failure is a situation, where firm has operating profit but unable to meet out its debt to its customers. Financial distress cost includes the cost of the bankruptcy, distressed assets, sale of distressed assets, higher cost of capital and conflicts of interest.

To check out the distress Altman 'Score model is used. It is widely used model for distress and bankruptcy in banking sector as well as in corporate sector. Altman Z-Score model is published in 1968 by Edward I. Altman 'Z Score' model is a composition of different ratios into a single score. It uses the profitability, solvency, liquidity, leverage and activity ratios to measures the insolvency or bankruptcy of any company or any bank.

Altman Z Score for non-manufacturers is divided into three risk ranges as follows:

Z score greater than 2.9 is deemed "safe"

Z score between 1.23 to 2.9 is the grey area,  
The range of score less than 1.1 is viewed as Distress Zone

## II. LITERATURE REVIEW

Rijeka, T.et. al. (2014) examined the level of distress with the help of Altman Z-Score model and CA-Score model. In this paper researcher analyse the bankruptcy of navratna enterprises in India. Out of the 14 navratna companies 8 companies were found financially weak for some years.

Lai, HuiYind et.al. (2014) conducted a study on the impact of 2008 global financial crises on public listed construction companies. A sample of 32 public listed companies is taken out of 60000 construction companies. Altman Z-Score was used in present study for analysis. The study elucidate that financial crises has direct impact on profitability.

Kumar and Gulati (2008) evaluating the technical efficiency of 27 public sector banks operating in India. Data Envelopment Analysis Model and Anderson and Petersen's Super Efficiency Model are used to measure the technical efficiency. Results of the present study reveals that only 7 banks out of 27 were technical efficient.

Das and Ghosh (2007) used Keynesian macro model to analyse the impact of direct lending on the profitability and solvency of banks. The study found that under certain conditions a program of direct credit helped to raise the banks' profitability but in some other instances it led to low level of bank profit and threatened the solvency of banks in the long time period.

## III. OBJECTIVES OF THE STUDY

- H1: There is significance difference in financial distress among banks.
- H2: There is significance difference in NPA of banks.
- H3: There is significance difference in Valuation of banks.

## IV. SCOPE OF THE STUDY

Under this study we assess the level of financial distress and profitability of five public and private sector banks. The time period of the present study would be ranging from 2014-15 to 2018-19. Under this study secondary data of both banks is used to assess the level of distress by using Altman Z Score model. NPA is an inevitable part in crisis a trend of NPA and the price to book share is also considered in the study to know the implication of price of shares in stock.

V. RESEARCH METHODOLOGY

- RESEARCH DESIGN: Analytical Research Design
- SOURCE OF DATA: Secondary Source for the last five years from the BSE & money control.com
- TOOLS OF ANALYSIS: Altman Z score, Trend of NPA and Book to price Ratio

VI. LIMITATIONS OF THE STUDY

1. Time constraints
2. The last five years data is taken for study.

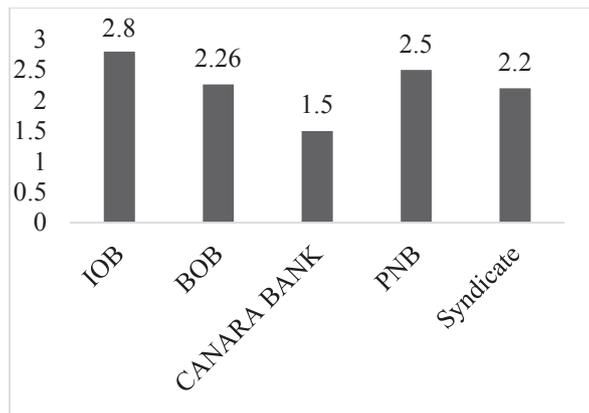
VII. DATA ANALYSIS AND INTERPRETATIONS

Table Showing the Z score of Five Public and Private Sector Banks.

Public Sector Bank	Z Score	Area	Private Sector	Area	Z Score
IOB	2.8	Grey	HDFC	Safe	5
BOB	2.26	Gray	ICICI	Safe	4.17
CANARA BANK	1.5	Grey	AXIS	Safe	3.7
PNB	2.5	Grey	INDUSBAN	Safe	3
Syndicate Bank	2.2	Grey	KOTAK	Grey	2

(Source: Primary Data)

**Z Score, Public sector banks**



**Z Score, Private sector banks**

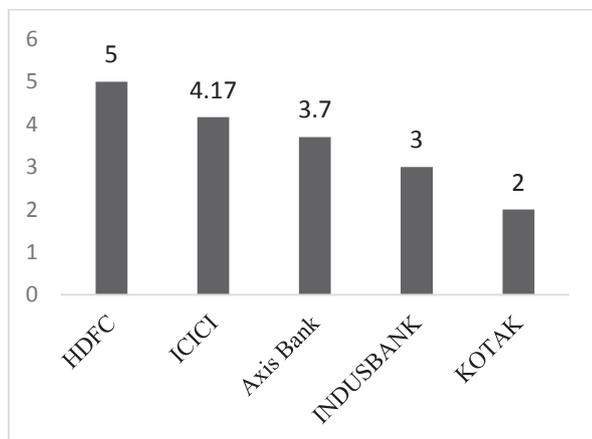


Table showing Price to Book Ratio Public Sector

Bank	2014-15	2015-16	2016-17	2017-18	2018-19
IOB	0.44	0.38	0.41	0.57	0.64
BOB	0.86	0.91	0.85	0.99	0.87
CANARA BANK	0.51	0.66	0.39	0.64	0.67
PNB	0.71	0.47	0.84	0.7	0.64
Syndicate Bank	0.55		0.44	0.51	0.59

Chart showing Price to Book Ratio Public Sector

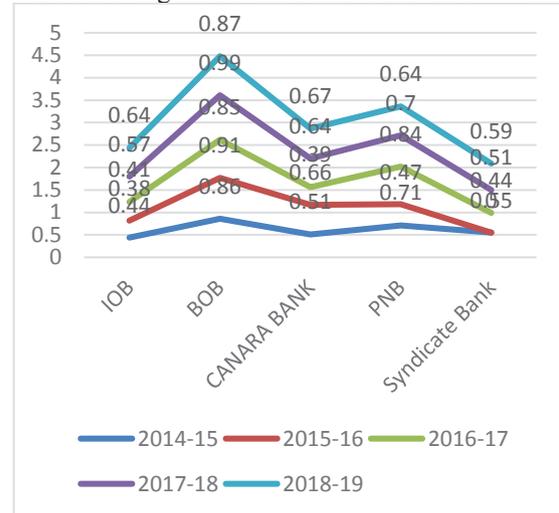
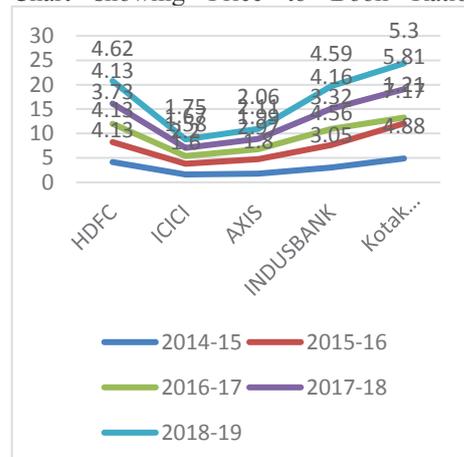


Table showing Price to Book Ratio Private Sector

PRIVATE BANK	2014-15	2015-16	2016-17	2017-18	2018-19
HDFC	4.13	4.13	3.73	4.13	4.62
ICICI	1.6	2.2	1.58	1.67	1.75
AXIS	1.8	2.97	1.99	2.11	2.06
INDUSBAN	3.05	4.56	3.32	4.16	4.59
Kotak Mahindra	4.88	7.17	1.21	5.81	5.3

(Source: Primary data)

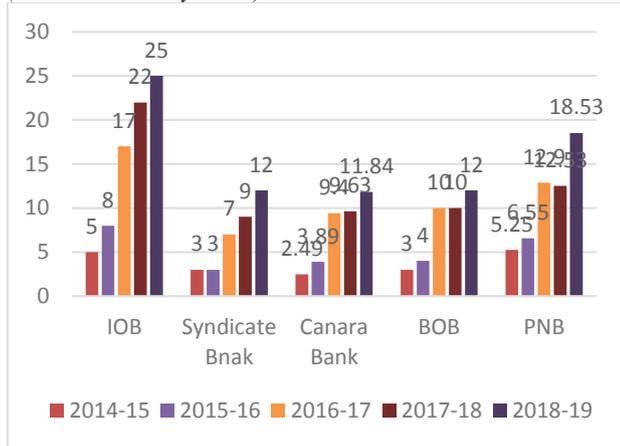
Chart showing Price to Book Ratio, Private Sector



**NPA Graph of Public Sector Banks**

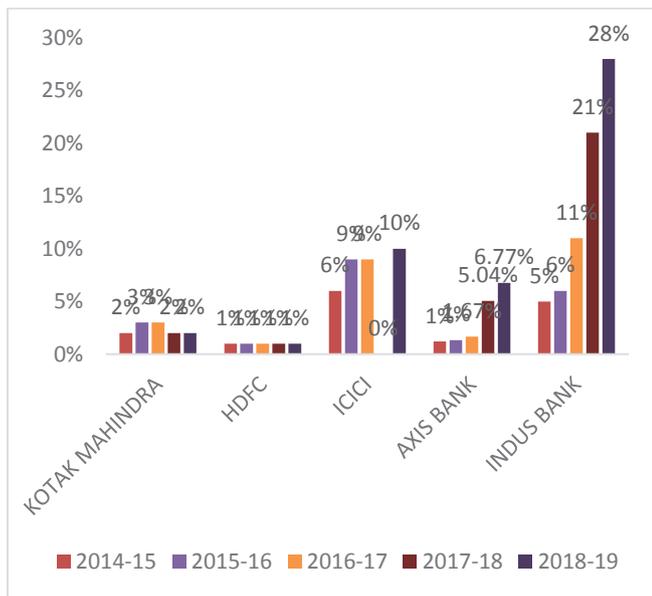
IOB	% of gross	Syndicate Bank	% of gross	Canara bank	% of gross	BOB	% of gross	PNB	% of gross
2014-15	5	2014-15	3	2014-15	2.49	2014-15	3	2014-15	5.25
2015-16	8	2015-16	3	2015-16	3.89	2015-16	4	2015-16	6.55
2016-17	17	2016-17	7	2016-17	9.4	2016-17	10	2016-17	12.9
2017-18	22	2017-18	9	2017-18	9.63	2017-18	10	2017-18	12.53

(Source: Primary Data)



**NPA Graph of Private Sector Banks**

KOTAK	% of gross	HDFC	% of gross	ICICI	% of gross	AXIS	% of gross	INDUS BANK	% of gross
2014-15	2	2014-15	1	2014-15	6	2014-15	1.22	2014-15	5
2015-16	3	2015-16	1	2015-16	9	2015-16	1.34	2015-16	6
2016-17	3	2016-17	1	2016-17	9	2016-17	1.67	2016-17	11
2017-18	2	2017-18	1	2017-18	0	2017-18	5.04	2017-18	21
2018-19	2	2018-19	1	2018-19	10	2018-19	6.77	2018-19	28



VIII. FINDINGS

NPA of the public sector banks is more than private sector banks. HDFC bank has the least NPA among the private sector banks. Indus bank shows the highest NPA of 28%.

A P/B ratio less than one means that the stock is trading at less than its book value, or the stock is undervalued and therefore a good buy. All the stocks of public sector have the value less than one.

All the private sector banks have the Z Score greater than 2.6 it shows greater safety as per Altman Z score model possibility of bank going bankrupt is very low.

IX. CONCLUSION

The study was concluding that the financial distress with respect to the banks is less based on the indicator of Altman Z Score model. But the chances of financial distress are less in private sector banks as compared to public sector banks due to the less NPA in the private sector banks.

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# ONLINE FOOD ORDERING AND DELIVERY SERVICES

## A perception study among consumers in Cochin City

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**Abstract:** The mobile application era has tossed open another pathway for today's marketing. The portable application has made every single customary method of business obsolete and produced stunning new conceivable outcomes in business. Mobile application is a combination of marketing acumen and technology – uses the Internet as a medium to advertise and sell services and goods. Today, more people are getting connected through mobile application and they are ready to trade through it. It also affects the operation of companies and organizations. Companies have changed their traditional business strategies into online marketing to suit customer needs and taste at any time. This research paper aims to discuss the consumer's perception towards the online food ordering and delivery services in Cochin. The research is focused on the study and analysis of data collected from all those users who are already using the online food delivery services. The purpose is to know what are the influencing factors, their perceptions, needs, positioning of various attributes of different online portals in their mind and overall satisfaction towards online food delivery services. To achieve the objective, data from different areas of Cochin have been collected and also visited restaurants to know their point of view. Six parameters are taken under consideration for analysis using perceptual mapping.

**Keywords-** Online food delivery service, consumer perception, consumer preferences, mobile applications.

### I. INTRODUCTION

India continues to be the 'land of promise' for the food service market. The industry is one of the most vibrant service industries. Although predominantly unorganised, with the advent of foreign and Indian restaurant chains, the organised market is likely to expand quite rapidly. In a largely mixed environment of growth in retail markets across the world, India continues to be a bright spot.

However, with an obvious potential and promise held by the sector, the last two years have been inspiring, with growth reaching double digits. The rise of digital technology is reshaping the industries. With the increased use of technology, the number of people engaging into the digital sector are rapidly increasing. Even Consumers are accustomed to shopping or even ordering online through apps or websites, with maximum convenience and transparency,

expecting the same experience that they would get from the outlet itself. To match up with the consumer's expectations apps are providing increased facilities and services to the customers. This scenario doesn't exist only in one country but all across the globe. Being up to date with the customers' expectations helps firm retain customers to a greater extent. Convenience is the prime factor to the consumers, as to place an order is as simple as few clicks on any mobile devices. Technological dependency, convenience and less time taken for the food to be delivered aids as a good reason for the consumers to choose the services offered by the online food ordering and delivery service portals. The popularity of online food ordering and delivering services is steadily growing, expectations of the users are also increasing. This research paper is aimed to investigate consumers 'views about the services they receive from different portals'. This paper will help the service providers to understand the consumers' perception, needs and views on the basis of the result of a survey. To start this discussion, a look at the relevant literature, particularly in relation to the online food ordering and delivering services has been described below. The survey and its results, followed by findings and conclusion on how the consumers perceive the services can be used by the online food delivery service businesses to develop better strategies to market their mobile applications successfully.

### II. LITERATURE REVIEW

**Sheryl E. Kimes (2011)** found that perceived control and perceived convenience associated with the online food ordering services were important for both users and non-users. Non-users need more personal interaction and also had higher technology anxiety to use the services.

**Serhat Murat Alagoz & Haluk Hekimoglu (2012)** states that, e-commerce is exponentially growing worldwide, the food industry is also showing a steady growth. Haulk and Sherat used the Technology Acceptance Model (TAM) as a basis to study the acceptance of online food ordering system. Their data analysis revealed that the attitude towards online food ordering vary according to the ease and usefulness of

online food ordering process and also vary according to their innovativeness against information technology, their trust in online retailers and various external influences.

As per **Varsha Chavan, et al, (2015)**, the use of smart device based interface for customers to view, order and navigate has helped the restaurants in managing orders from customers immediately. The capabilities of wireless communication and smart phone technology in fulfilling and improving business management and service delivery. Their analysis states that this system is convenient, effective and easy to use, which is expected to improve the overall restaurant business in coming times.

**Bhavya Saini & H.S. Sethu (2016)**, their aim was to investigate the student's perception, behaviour and satisfaction of online food ordering and delivery services. Their study reveals that online food purchasing services help the students in managing their time better. It is also found that ease of availability of their desired food at any time and at the same time easy access to internet are the prime reasons for using the services.

According to **Leong Wai Hong (2016)**, the technological advancement in many industries have changed the business model to grow. Efficient systems can help improve the productivity and profitability of a restaurant. The use of online food delivery system is believed that it can lead the restaurant's business grow from time to time and will help the restaurants to facilitate major business online.

**Hong Lan, et al, (2016)**, propounded that online food delivery market is immature yet; there are some obvious problems that can be seen from consumers' negative comments. In order to solve these problems, we can neither rely merely on the self-discipline of online food delivery restaurants nor the supervision and management of online food delivery platforms. Only by taking laws as the criterion, with the joined efforts of the online food delivery platforms and restaurants, the government departments concerned, consumers and all parties in the society, can these problems be solved and a good online takeaway environment can be created.

According to a recent sectoral report published by IBEF (Indian Brand Equity Foundation), food has been one of the largest segments in India's retail sector, valued at \$490 billion in 2013. The Indian food retail market is expected to reach Rs 61 lakh crore (\$894.98 billion) by 2020. The Indian food processing industry accounts for 32 percent of the country's total food market, one of the largest industries in India and ranked fifth in terms of production, consumption, export and expected growth. The online food ordering business in India is in its nascent stage, but witnessing exponential growth. The organised food business in India is worth \$ 48 billion, of which food delivery is valued at \$15 billion. Investment in food startups, which mainly include food ordering apps, has increased by 93 percent to \$130.3 million, comprising 17 deals till September 2015, as against only five deals in 2014.

#### *Brands under study*

- Zomato
- Swiggy
- UberEats

The above online food ordering and delivery services were chosen for study because they are the most prominent players in the market.

#### *Factors under study*

Based on the literature by Bhavya Saini & H.S. Sethu (2016), the following factors were considered for this study.

1. Ease & Convenience
2. Cost Effectiveness
3. 24x7 Availability
4. Easy Mode of Payment
5. Doorstep Delivery
6. Choice of Restaurants

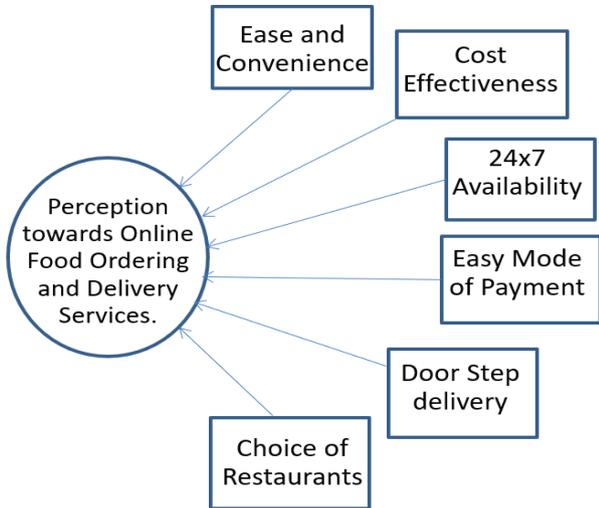
### III. OBJECTIVES

- 1) To study how online food delivery services are perceived by the consumers.
- 2) To analyse what are the various factors that influences the consumers to choose online food delivery services.
- 3) To analyse the most preferred online food delivery service portal by consumers. To know what are the factors that hinders consumers to use online food delivery services.

### IV. SCOPE OF THE STUDY

The study is essentially directed to know how consumers perceive the online food delivery services. The perception of customers may change under various conditions. From this study, we can have a better comprehension of the 'Online Food Delivery Service Market'. We will know about the consumer perception regarding the services they provide in Cochin area and will get to know the variables affecting their perception. Therefore, these findings may help the service providers to work upon on these variables to fill up the gaps in the mindset of consumers.

VII. DATA ANALYSIS



V. HYPOTHESIS

- H1:** Perception towards online Food Ordering and Delivery Services is positively related to Ease & Convenience
- H2:** Perception towards online Food Ordering and Delivery Services is positively related to Cost Effectiveness
- H3:** Perception towards Online Food Ordering and Delivery Services is positively related to 24 x 7 Availability
- H4:** Perception towards online Food Ordering and Delivery Services is positively related to Easy Mode of Payment
- H5:** Perception towards online Food Ordering and Delivery services is positively related to Doorstep Delivery
- H6:** Perception towards Online Food Ordering and Delivery Services is positively related to Choice of Restaurants

VI. RESEARCH METHODOLOGY

Initially, literature review was conducted to identify the **Perception of Online Food Ordering and Delivery Services** among consumers of cochin city. The study is based on the collection of primary data. Quantitative research method was used in this research so as to investigate and observe the collected data with the help of statistical, mathematical and computational techniques. The scale items were identified from the literature. The scale items were validated during questionnaire designing. Structured questionnaire was framed. Under non-probability technique, convenience sampling method was used. The population consist of the students, self-employed, homemaker, private company employee and business owners of different areas in Cochin. For all variables used in the study, multi-item scales (5-point, Likert Type) ranging from strongly agree (5) to strongly disagree (1) were used.

Demographic Profile

Category	Number	Percentage
<b>Age</b>		
10-20yrs	2	5.60%
21-30yrs	33	91.60%
31-40yrs	1	2.80%
Total	36	100%
<b>Gender</b>		
Male	18	50.00%
Female	18	50.00%
Total	36	100%
<b>Education</b>		
SSLC	1	2.80%
Plus Two	1	2.80%
Under Graduate	28	77.70%
Post Graduate	6	16.70%
Total	36	100.00%
<b>Work status</b>		
Student	24	66.60%
Business	1	2.80%
Employee	5	13.90%
Professional	5	13.90%
Unemployed	1	2.80%
Total	36	100.00%
<b>Personal monthly income</b>		
Less than 10000	18	50.00%
10001-30000	11	30.50%
30001-60000	4	11.10%
60001-80000	0	0.00%
80001-1 lakh	1	2.80%
1 lakh and above	2	5.60%
Total	36	100.00%

Source: Primary Data Collected by the researcher.

*Correlations*

**Correlation between Perception towards Online Food Ordering and Delivery Services and Ease & Convenience** was computed and it was found that there is a moderate positive correlation of 0.440 between Perception and Ease & Convenience. Hence H1: Perception towards Online Food Ordering and Delivery Services is positively related to Ease & Convenience is accepted.

	APER	AEC
Pearson Correlation	1	.440**
APER Sig. (2-tailed)		.007
N	36	36
Pearson Correlation	.440**	1
AEC Sig. (2-tailed)	.007	
N	36	36

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

**Correlation between Perception towards Online Food Ordering and Delivery Services and Cost Effectiveness** was computed and it was found that there is a moderate positive correlation of 0.547 between Perception and Cost Effectiveness. Hence H2: Perception towards Online Food Ordering and Delivery Services is positively related to Cost Effectiveness is accepted.

	APER	ACE
Pearson Correlation	1	.547**
APER Sig. (2-tailed)		.001
N	36	36
Pearson Correlation	.547**	1
ACE Sig. (2-tailed)	.001	
N	36	36

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

**Correlation between Perception towards Online Food Ordering and Delivery Services and 24x7 Availability** was computed and it was found that there is a moderate high positive correlation of 0.620 between Perception and Time Availability. Hence H3: Perception towards Online Food Ordering and Delivery Services is positively related to 24x7 Availability is accepted.

	APER	ATA
Pearson Correlation	1	.620**
APER Sig. (2-tailed)		.000
N	36	36
Pearson Correlation	.620**	1
ATA Sig. (2-tailed)	.000	
N	36	36

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

**Correlation between Perception towards Online Food Ordering and Delivery Services and Easy Mode of Payment** was computed and it was found that there is a moderate positive correlation of 0.475 between Perception and Easy Mode of Payment. Hence H4: Perception towards Online Food Ordering and Delivery Services is positively related to Easy Mode of Payment is accepted.

	APER	AEP
Pearson Correlation	1	.475**
APER Sig. (2-tailed)		.003
N	36	36
Pearson Correlation	.475**	1
AEP Sig. (2-tailed)	.003	
N	36	36

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

**Correlation between Perception towards Online Food Ordering and Delivery Services and Doorstep Delivery** was computed and it was found that there is a moderate positive correlation of 0.476 between perception and Doorstep Delivery. Hence H5: Perception towards Online Food Ordering and Delivery Services is positively related to Doorstep Delivery is accepted

	APER	ADD
Pearson Correlation	1	.476**
APER Sig. (2-tailed)		.003
N	36	36
Pearson Correlation	.476**	1
ADD Sig. (2-tailed)	.003	
N	36	36

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

**Correlation between Perception towards Online Food Ordering and Delivery Services and Choice of Restaurants** was computed and it was found that there is a moderate positive correlation of 0.513 between Perception and Choice of Restaurants. Hence H6: Perception towards Online Food Ordering and Delivery Services is positively related to Choice and Restaurants is accepted.

	APER	ACR
Pearson Correlation	1	.513**
APER Sig. (2-tailed)		.001
N	36	36
Pearson Correlation	.513**	1
ACR Sig. (2-tailed)	.001	
N	36	36

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

**Regression Analysis**

In table 7, which depicts the model summary, the R value represents the simple correlation and is 0.753 which indicates a high degree of correlation. The R square value indicates the extend to which the total variation in the dependent variable, Perception towards Online Food Ordering and Delivery Services, can be explained by the independent variables, Ease & Convenience, Cost Effectiveness, 24x7 Availability, Easy Mode of Payment, Doorstep Delivery, Choice of Restaurants. In this case, 50% can be explained, which is reasonably high and thereby indicates the model fit

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.753 <sup>a</sup>	.567	.477	.32074

a. Predictors: (Constant), ACR, AEC, AEP, ADD, ATA, ACE

Table 8 indicates that the regression model predicts the dependent variable significantly well. This indicates the statistical significance of the regression model. Here, p is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data)

**ANOVA<sup>d</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3.906	6	.651	6.328	.000 <sup>b</sup>
Residual	2.983	29	.103		
Total	6.889	35			

a. Dependent Variable: APER

b. Predictors: (Constant), ACR, AEC, AEP, ADD, ATA, ACE

Table 9 provides us with the necessary information to predict Perception towards Online Food Ordering and Delivery Services from independent variables, Ease & Convenience, Cost Effectiveness, 24x7 Availability, Easy Mode of Payment, Doorstep Delivery, Choice of Restaurants and also it determines whether income contributes statistically significantly to the model, as the p value is less than 0.05. We see that 24x7 Availability is the factor which is of highly related to Perception towards Online Food Ordering and Delivery Services and followed by Cost Effectiveness.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.490	.252		1.942	.002
AEC	.050	.098	.080	.506	.015
ACE	.208	.142	.253	1.460	.001
ATA	.225	.096	.374	2.336	.027
AEP	.005	.115	.008	.044	.019
ADD	.124	.103	.179	1.210	.000
ACR	.098	.112	.142	.873	.000

a. Dependent Variable: APER

**VIII. CONCLUSION**

The study throws light on the major factors contributing to the online food ordering and delivery services. Customers opine that the strongest factor for them to opt for the online food delivery service is 24x7 availability, similarity they also value the discounts and cost effectiveness of the service. There is a tight fight between these apps on many Selling prepositions but, these services should focus more on cost effectiveness and attractive discounts to lure the customers. The consumer’s perception on online food ordering varies from individual to individual and the perception is limited to a certain extent with the availability of the proper connectivity and the exposure to the online food services. The perception of the consumer varies according to various similarities and difference based on their personal opinions. The study reveals that mostly the youngsters are attached to the online food ordering and hence the elder people don’t use these online services much as compared to the younger ones. The study highlights the fact that youngsters are mostly poised to use online food ordering services. The study also reveals that the price of the products, discounts and special offers have the most influencing factor on online food ordering. The study highlights that respondents often prefer to order on weekly basis, the type of meals which were mainly preferred to order was the snacks followed by dinner. Fast food was fancied by most of the respondents in their choice of cuisines. The study also revealed that a major proportion of respondents uses either Uber eats or Zomato to order their food online. It was also observed that a less percentage of respondents were inclined towards the use of Swiggy. In a nutshell, through this study, it is found that majority of students of Cochin city are well aware of the online food ordering and most of them have used online food ordering services which indicates the growing popularity of the online food ordering within the youngsters. Transformation in the trends of food ordering is occurring because of the changing lifestyle of the consumers in India and expansion in online activity.

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# Role of Social Media on Crisis Management Special Focus on Nestle Maggi Noodles

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**Abstract:** A crisis can strike any company anytime, anywhere. Advanced planning is the key to survival. In the present study Role of Social Media on Crisis management – A Special Focus on nestle Maggi noodles invented the role and support provided by the social media to Nestle to bring back their two-minute instant noodles in to the market again. Through smart use of social media during the crisis, the brand limited further damage by reassuring and informing customers to encourage them to continue buying the noodles in the future and capture 60% of market share after its relaunch. The study shows that majority of the consumers want Maggi to be in the market and they are willing to buy the same in the future when they proved that there is no harmful ingredients included in the Maggi after its relaunch.

**Keywords:** Crisis Management, Maggi Crisis, Social Media, Customers' Attitude, Customers' Acceptance

## 1. INTRODUCTION

There are a lot of uncertainties in the world. One minute your life may be running smoothly, and the next minute there can be a major crisis where operations come to a screeching halt. Crisis affects an individual, group, organization or society on the whole. As an employer, it's crucial that you're prepared for whatever comes your way and have a plan of action to handle an emergency crisis. A crisis can strike any company anytime, anywhere. Advanced planning is the key to survival. Crisis management is the process by which an organization deals with a disruptive and unexpected event that threatens to harm the organization or its stakeholders. Crisis management is the application of strategies designed to help an organization deal with a sudden and significant negative event.

Social media together with still growing social media communities has become a powerful and promising solution in crisis and emergency management. Social media can be characterized as dynamical and ad hoc changing communication channel where variety of information is exchanged. Since the 2004 Tsunami, the different major crisis all over the world (Haiti, Japan earthquakes, Haiyan typhoon) have illustrated a trend towards an increasing use of social have illustrated a trend towards an increasing use of social media in crisis situations. Citizens have started to use social media for seeking information and communication purposes. Social media are already used to some extent by public authorities – although they face problems such as lack of appropriate procedures, or lack of capabilities for

processing high volume of data. Social media is one of the most important channels of communications. Be sure to establish a social media team to monitor post and react to social media activity throughout the crisis. Managers must develop viable business strategies to prevent, manage or turn a crisis in to an opportunity. Previous crisis management events such as Johnson and Johnson and coca cola have proved that social media used by citizens (widely) and public services (to some extent) have contributed to the post-crisis relief efforts.

The present study is intended to understand the role of social media in crisis management – a special focus on Nestle Maggi Noodles. Maggi seems to be just that perfect quick-snack between meals and is so easy to make. At the end of May 2015, India's Food safety administration (FDA) ordered Nestle India to recall its popular Maggi noodles after tests showed that the product contained high levels of lead and MSG. Hence, the 2-minutes ready Maggi Noodles ban in India was declared. However, through smart use of social media during the crisis, the brand limited further damage by reassuring and informing customers to encourage them to continue buying the noodles in the future.

### 1.1 Statement of the problem

Social media enable increased communication and collaboration among online users, and they have become a ubiquitous part of everyday life for many. The most common social media platforms attract a large number of users (Christian Reuter a, Amanda Lee Hughes, and Marc-André Kaufholda, 2018). Social media has brought multiple opportunities but also challenges for organizations in their image construction process. It has offered organizations a new channel and tool for building their image and improving it. Social media allows organizations to have one to-one, one-to-many, and many-to-many conversations with people. (Sonja Vistbacka, 2017). The present study examines the role of social media in crisis management. The study tried to find out the answer for research questions such as how Nestle Maggi used social media for crisis management after it was banned in India, what is the impact of ban of Maggi noodles on the current sales volume, what is the growth level of substitute products after the crisis faced by Maggi and the attitude and acceptance level of the customers towards Maggi noodles after its relaunch.

## 1.2 Significance of the study

The study provides a small description about the role played by the social media for managing crisis and maintaining reputation in Maggi noodles. The study also made an analysis of customers' attitude and acceptance towards Maggi noodles after its relaunch. The present study is helpful for future researchers, readers and society.

## II. Review of Literature

**Christian Reuter, Amanda Lee Hughesb, and Marc-André Kaufholda (2018)** conducted a study on "Social Media in Crisis Management: An Evaluation and Analysis of Crisis Informatics Research". The main purpose of the study is to evaluate and analyze crisis informatics research by looking at case studies of social media use in emergencies, outlining the types of research found in crisis informatics, and expounding upon the forms of interaction that have been researched. Finally, it is summarize the achievements from a human– computer interaction perspective and outline trends and challenges for future research.

**A Sivakumar and S. Shyamala (2017)** in their study on "Brand image of Maggi noodles before and after relaunch with special reference to Coimbatore City" focuses on perceptions of Brand Image of Maggi Noodles before and after Re-Launch. The primary data for the study has been collected from the 200 responded from structured questionnaire. The study conclude that , It is expected to have more than 50 per cent of the consumers will be back on consuming Maggi Noodles after being re-launched with approval from FSSAI as the addiction continues because of greater impact on the consumers.

**Rahul M. Mhabde and Rajeshri Soni (2017)** in their Analytical study on Consumer behavior towards "Maggi Instant noodle" in Mumbai –A post ban Scenario" focuses on perception of consumers post ban towards Maggi instant noodles. For the purpose of data collection 50 sample size of age group of 15 and above has taken in to consideration. Research is conducted in city of Mumbai using convenience sampling method. The study deals with consumer behavior towards Maggi in post ban scenario is interlinked with wellness and health industry as ban was due to hazardous content in the Maggi.

**Harpreet Singh, and Madhvi Arora (2016)** in their study entitled "Crisis Management: A Study of Nestle India Limited with Reference to Maggi Noodles" investigated how Nestle managed to come back to shelves and the company officials managed to resolve the crisis after its ban in 2015. The study focused on ethical responsibility in building the perception of consumers towards a brand and providing long term success to the organizations. The officials acted promptly in managing the crisis by spreading awareness at all levels, within organisation and outside organisation.

**Dabarati Bhattacharya (2016)** conducted a study on "Crisis Management and Image Restoration through Social Networking: Analysis of Maggi Crisis". The main aim of the

study is to understand how social networking sites have become an important tool in enabling immediate crisis communication. In this case study role played by the Twitter and Facebook, possibilities and limitations provided by social networking sites at the time of crisis are take in to consideration for the purpose of analysis. The paper concludes that through the adoption of strategies in the right way the company could control the damage to a great extent.

**Naushadul Haque Mullick (2016)** in his study on "Crisis at Maggi -: A Wakeup Call for all Multinationals" investigated the role of social media in spreading the higher inclusion of lead and monosodium glutamate (MSG) than the permissible limits in Maggi noodles in the world wide. The study investigated that The Company did not issue any definitive statement to address the concerns of regulators or consumers and also had to incur a cost of Rs 320 Crore in recalling its product from all around the country. It was later visualized that the way it was tested in India especially in most parts of the country had errors. So, who is guilty, the company authorities who could not visualize the surging tide against them or the testing authorities who tested the wrong way.

**Rita, Anupreet Kaur, Kanupriya (2016)** in their study entitled "The Impact of Controversy of "Nestlé's Maggi" on Consumers and The Company" tried to investigated the impact of controversy on consumer mind set , on the company sales and profit and whether the move with Snap deal is the smart move to regain the market. It was concluded from the study that Maggi is the most preferred noodle brand among noodle consumers as people still trust Maggi beside all the adulteration and controversy face by the Maggi brand.

**Shabista Booshan & Rittika Das (2016)**, in their study on "A Research Paper on The Maggi Muddle Case and its Impact on the Psyche of the Indian Consumers (18 To 24 Years)" covers the massacre that Maggi went through in 2015. It studies the effects of the crisis on the psyche of its target audience, specifically falling in the age group of 18-24 years, and the change in their buying behaviour. Reports say that after relaunch Maggi is leading the Instant Noodles Category, but whether it will be able to capture back its old market share of atleast75% (with respect to the above mentioned target group) is what this research work aims to find.

## III. Objectives of the Study

1. To understand the role of social media in crisis management – a special focus on Nestle Maggi Noodles.
2. To examine the impact of ban of Maggi noodles on the current sales volume.
3. To analyse the growth level of substitute products during the crisis faced by Maggi noodles.
4. To understand the attitude and acceptance level of the customers after the relaunch of Maggi noodles.
5. To know the influence of socioeconomic profile of the respondents in their brand choices.

## 1 Hypothesis

1. There is a significant association between Age and Customers’ brand choices
2. There is a significant association between educational qualification and Customers’ brand choices.
3. There is a significant relationship between customers’ attitude and customers’ acceptance

IV. Research Methodology

**Type of study** - The present study is both descriptive and explanatory in nature.

**Area of Study** – Trissur District

**Sample size** – N= 100 respondents

**Sample process** – Convenient sampling technique was used for the purpose of the study.

**Data Type** – Both primary as well as secondary data was used. The primary data were collected from users Maggi noodles before its ban.

**Data collection tools:** For the purpose of collection of primary data structured Questionnaire was used. The questionnaire consists of the socio economic profile of the Maggi uses and for analysing the objectives formulated for the study. Secondary data was obtained from research journals, books, and websites and published records.

**Tools used for Analysis of Data:** The collected data were tabulated and analysed with the help of SPSS 21.0. The statistical techniques used for analysis include simple percentage, Chi-square test and Correlation.

V. Data Analysis and Interpretation

5.1 Management of crisis through social media

At the end of May 2015, India’s Food safety administration (FDA) ordered Nestle India to recall its popular Maggi noodles after tests showed that the product contained high levels of lead and MSG. Hence, the 2-minutes ready Maggi Noodles ban in India was declared.

Initially, the company rejected the accusation that the noodles were unsafe and said on their website and social media accounts that there had been no order to recall any products. A statement on their website said “The quality and safety of our products are the top priorities for our Company”.

Nestle continued to keep its customers up to date on the investigation into the safety of Maggi noodles in India. Nestle stated on the official Maggi Noodles Facebook page, Twitter and website, that extensive testing revealed no excess lead in Maggi Noodles. Company is working closely with authorities in India to resolve the issue. Nestle used its Twitter and Facebook accounts to answer customers questions about the levels of MSG and lead found in their noodles. The

company continued to re-assure customers that the noodles are safe and that they are a transparent.



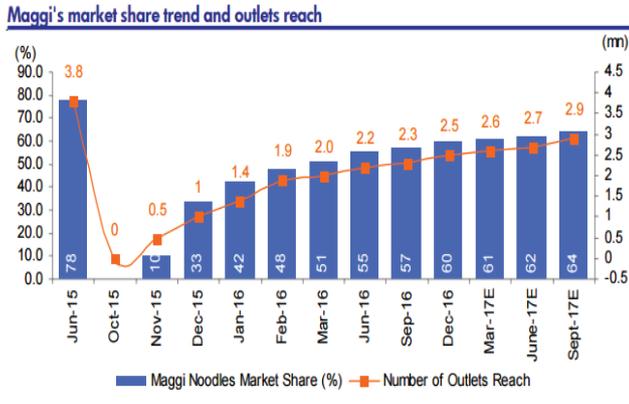
Maggi used the best use of social media to connect the masses. Maggi India Twitter account makes an impressive effort to respond to every tweet from customers on this issue with a pre-prepared statement explaining that lead occurs naturally in soil and water.

5.2 Maggi’s sale volume and market share - pre and post ban Era.



(Source: Shabista Booshan & Rittika Das, 2016)

Soon after the ban on Maggi, Nestlé (India) saw its profits drop to a negative level. At the end of quarter 2 of the financial year (i.e. 30th June, 2015), Nestlé incurred a net loss amounting to Rs 64.40 below. That was the first time Nestlé had faced such a lost in a quarter in the last 17 years. Maggi holds 20% of Nestlé’s product portfolio (SHABISTA BOOSHANI & RITTIKA DAS, 2016).<sup>2</sup>



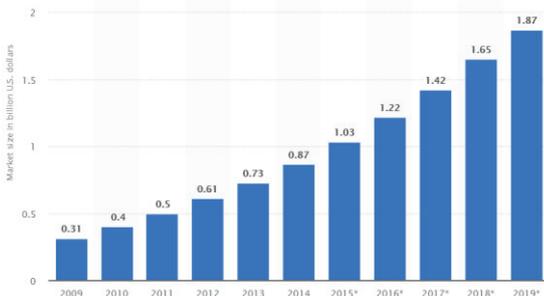
Source: Company, Industry Reports, Antique

(Source: Taniya Mirza, 2018)

Since its comeback in 2016, Maggi noodles has clawed back to its position and now holds 60% of the instant noodles market as against 80% before the ban. However, Maggi noodles' growth rate is now slowing. Between January to March of 2017, Nestle India's net profit rose 6.76% to Rs 306.76 crore, while total sales were up nearly 10%, at Rs 2,591.90 crore.

Nestle India Ltd's popular instant noodles brand Maggi has attained 60% market share and has almost made its way back to the pre-crisis level in terms of value, as mentioned by a top company official. However, when it comes to volume, Maggi still has some ground to cover. The instant noodles known for its cooking time of 2 minutes used to dominate the market with 75% market share before its ban in 2015. Nestle India had in 2017 crossed the Rs 10,000-crore sales mark.

The diagram shows the tremendous increasing trend and outlet reach of Maggi noodles after its relaunch. From 55% market share in June 2016, Maggi has managed to grow to 60% by end of calendar year 2016. Antique Broking expects that by end of September 2017, Maggi's market share will reach 64%. By analyzing the diagram it is clear that Maggi noodles can capture its market to a great extent after its relaunch.



(Source: wikibizpedia.com)

After coming back again in market, Nestle India Ltd reported a 50% jump in its net profit for the quarter ended 30 June. Net profit for the June quarter stood at Rs 395.03 crore as against Rs 263.43 crore in the year-ago quarter. Revenue from

operations grew by 8.6% during the quarter, helped by volume growth across categories, to Rs 2,698.40 crore from Rs 2,484.73 crore in the same quarter last year. Its revenue from domestic market grew by 8.5% and exports by 8%% during the quarter under review.

5.3 Socio Economic Profile of the Respondents

Table 1: Age Wise classification of Respondents

Age	Percentages
20 - 30	35%
31 - 40	47%
41 - 50	16%
50 and above	2%

It is evident from the table that 47% of the respondents belong to the age group of 31 – 40 and 35% in the age group of 20-30. At the same time only 16% and 2% of the respondents are in the age group of 41-50 and 50 above respectively. So majority of the respondents belong to the age group of 31-40.

Table 2: Educational qualification of Respondents

Educational Qualification	Percentage
SSLC	6%
Plus Two	14%
Degree	7%
PG	60%
Others	13%

(Source: Primary Data)

From the table it is clear that 60% of the sample respondents have PG. 7% of the respondents are degree holders. 14% have Plus Two. 6%, and 13% of the respondents have SSLC and other qualification respectively. So majority of the respondents in this study are PG holders..

Table 3: Monthly Income of Respondents

Monthly Income	Percentage
Below 15,000	3%
15,001 to 40,000	79%
Above 40,000	18%

(Source: Primary Data)

On the basis of monthly income 79% of the sample respondents belong to the category of 15,001 to 40,000. 18% have above 40,000 and only 3% have monthly income below 15,000. So in this study majority of the sample respondents have monthly income between 15,001 and 40,000.

**Table 4: Family size of Respondents**

Family Size	Percentage
2 members	4%
2 to 5 members	96%
Above 5 members	0%

(Source: Primary Data)

On the basis of family size of the respondents 94% of the respondents have 2 to 5 members in their family.

5.4 Attitude and Acceptance level of Customers

**Table 5: Most influenced advertisement Media after Maggi relaunch**

Advertisement Media	Percentage
News paper	0%
Magazine	0%
Television	87%
Online media	13%

(Source: Primary Data)

It is evident from the table, 87% responded that television is the most influenced advertisement media after Maggi relaunch. 13% of them were respond that online media is the most influencing source.

**Table 6: Reasons for preferring Maggi Noodles**

Reasons	Percentage
Flavour	36%
Price	0%
Taste	64%
Brand image	0%

(Source: Primary Data)

From the table it is clear that 64% and 36% of the respondents are preferring maggi noodles because of its taste and flavour respectively.

**Table 7: Brand preferences during the Maggi Ban**

Brands	Percentage
Sun feast Yippee Noodles	84%
Knorr Soupy Noodles	8%
Foodles	0%
Wai Wai	0%
Pathanjali	3%
Others	5%

	value	df	Asymp.Sig (2-sided)
Pearson Chi - Square	70.609	20	0.000

(Source: Primary Data)

The above table shows the brand preference of the sample respondents during Maggi ban. It is evident from the table that 84% of the sample respondents preferred Sun feast Yippee noodles during the Maggi Ban and 8% preferred Knorr Soupy Noodles. At the same time 5% and 3% of the respondents were prefer other brands of noodles and Pathanjali respectively. So it can conclude that the most preferred brand of noodles during the Maggi ban is Yippee noodles.

**Chi square test result**

The Chi- Square result shows the association between customers' brand choice and their age. From the result it is seen that the Pearson Chi – Square value is 70.609, p value = 0.000 i.e the chi square test result is less than the alpha level of significance of 0.05. this tells that there is a statistically association between customers' brand choice and their age. Hence, the first hypothesis there is a significant association between Age and brand choices is accepted.

	value	df	Asymp.Sig (2-sided)
Pearson Chi - Square	44.498	16	0.000

The Chi- Square result shows the association between customers’ brand choice and their educational qualification. From the result it is seen that the Pearson Chi – Square value is 44.498, p value = 0.000 i.e the chi square test result is less than the alpha level of significance of 0.05. this tells that there is a statistically association between customers’ brand choice and their educational qualification. Hence, the second hypothesis, there is a significant association between there is a significant association between educational qualification and brand choices is accepted.

**Table 8: Response towards Biggest competitor of Maggi Noodles**

Brands	Percentage
Sun feast Yippee Noodles	93%
Knorr Soupy Noodles	4%
Foodles	0%
Wai Wai	0%
Pathanjali	3%
Others	0%

(Source: Primary Data)

The table shows the response towards the biggest competitor of Maggi noodles from the respondents’ point of view. From the table it is clear that 93% of the respondents think that Sun feast Yippee Noodles is the biggest competitor of the Maggi. At the same time 4% thinks that Knorr Soupy Noodles is the biggest competitor and 3% are supporting Pathanjali. So it is conclude that after Maggi the second preference was given to yippee noodle during ban period. It shows that yippee is tough competitor of Maggi.

**Table 9: Response towards Willingness to Consume Maggi after Relaunch**

Frequency	Percentage
Yes	77%
No	23%

(source : Field Survey)

The above table shows willingness to consume Maggi after its relaunch. it shows how the consumer react and prefer Maggi post ban situation. When asked about their willingness to consume after its relaunch, 77% of the respondents ready to use and 23% are not willing to buy after relaunch. So it has been observed that majority of the sample respondents still

buy Maggi which conclude that respondent decision making is not much affected due to ban.

**Table 10: Frequency of Consuming Maggi After Relaunch**

Frequency of Consumption	Percentage
Increased	0%
Remained the same	60%
Decreased	40%

(Source: Primary Data)

The above table indicates frequency of Maggi consumption after it’s relaunch. The analysis shows that 60% of the respondents are consuming Maggi in the same level as before Maggi ban and 40% respondents decreased their consumption. It shows that Maggi is still choice of the customers.

**Table 11: Opinion on health safety of Maggi Noodles**

Options	Percentage
Very safe	0%
Safe	33%
Affects little	32%
Very unsafe	10%
Don’t know	25%

(source : Field Survey)

The above table indicates the opinion of the respondents towards the healthy safety of Maggi noodles. 33% of the respondents believes that Maggi is safe and 32% believes that it affects little to the health. At the same time only 10% believes that it is very unsafe and 25% are not aware about it. So it can conclude that majority of the respondents are still believe in Maggi noodles.

**Table 12: Response towards the Improved Aspects of Maggi after Relaunch**

Improved Aspects	Percentage
Promotion	23%
More flavours	16%
Packing	3%
No Harmful Ingredient	58%

(Source: Primary Data)

The table indicates the response toward the improved aspects of Maggi after its relaunch. It is evident from the survey result that 58% of the respondents do believe that absence of harmful Ingredient is the most improved aspect of Maggi after its relaunch. 23% opted promotion, and 16% supported

for more flavours. Only 3% considers packing as the improved aspect of Maggi. So it can conclude that majority of the Maggi uses still believes that there is no harmful ingredient in Maggi after its relaunch.

**Table 13: Response towards Reason for Ban**

Reasons	Percentage
Political conspiracy	5%
Adulteration	92%
Monopoly of Maggi	1%
Others	2%

(Source: Primary Data)

The above table shows the responds towards the reasons for ban. It is evident from the table that majority of the respondents (92%) thinks that adulteration is the most important reason for Maggi ban.

**Table 14: Response towards switching over to other brands during Maggi Ban**

Response	Percentage
Completely switch over to another brands	38%
Shifted temporarily to another brands	49%
Waited for Maggi to come back	13%

(Source: Primary Data)

The above table indicates the response towards the switching over to other brands during Maggi ban. It is clear from the table that 38% of the respondents are completely switched over to other brands. At the same time 49% shifted temporarily and 13% waited for Maggi to come back. So it can conclude that majority of the Maggi uses supported Maggi noodles during its ban period

**Table 15: Correlation between customers' Attitude and Customers' Acceptance**

		Customers' Attitude	Customers' Acceptance
Customers' Attitude	Pearson Correlation	1	.658**
	Sig. (2 – tailed)		.000
	N		100
Customers' Acceptance	Pearson Correlation	.658**	1
	Sig. (2 – tailed)	.000	
	N	100	

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

From the statistical result (table 15) it is inferred that customers' attitude and customers' acceptance are positively correlated each other (0.658). It indicates the extent to which two variables are linearly correlated. The probability value associated with the correlation is less than 0.01. It indicates that there is a positive relationship between customers' attitude and customers' acceptance. Hence the third hypothesis, there is a positive relationship between customers' attitude and customers' acceptance is accepted.

## VI. Major Findings

- On the basis of secondary data it is clear that Maggi used the best use of social media to connect the masses. Maggi India Twitter account makes an impressive effort to respond to every tweet from customers on the issue.
- Through smart use of social media during the crisis, the brand limited further damage by reassuring and informing customers to encourage them to continue buying the noodles in the future.
- Since its comeback in 2016, Maggi noodles has clawed back to its position and now holds 60% of the instant noodles market as against 80% before the ban. However, Maggi noodles' growth rate is now slowing.
- After coming back again in market, Nestle India Ltd reported a 50% jump in its net profit.
- Majority of the respondents (47%) belong to the age group of 31-40.
- 60% of the respondents in this study are PG holders.
- In this study majority of the sample respondents have monthly income between 15,001 and 40,000
- On the basis of family size of the respondents 94% of the respondents have 2 to 5 members in their family.
- In this study 87% responded that television is the most influenced advertisement media after Maggi relaunch.
- Taste (64%) and flavour (36%) are the reasons for preferring Maggi noodles.
- Most preferred brand of noodles (84%) during the Maggi ban is Yipee noodles.
- The Chi- Square result shows the association between customers' brand choice and their age (Pearson Chi – Square value is 70.609, p value = 0.000).

- The Chi- Square result shows the association between customers' brand choice and their educational qualification (Pearson Chi – Square value 44.498, p value = 0.000).
- After Maggi the second preference (93%) was given to yippee noodle during ban period. It shows that yippee is tough competitor of Maggi.
- 77% of the respondents are willing to consume Maggi noodles after its relaunch.
- The analysis shows that 60% of the respondents are consuming Maggi in the same level as before Maggi ban. It shows that Maggi is still choice of the customers.
- 33% of the respondents believe that Maggi is safe. From the survey result 58% of the respondents do believe that absence of harmful Ingredients is the most improved aspect of Maggi after its relaunch.
- Majority of the respondents (92%) thinks that adulteration is the most important reason for Maggi ban.
- On the basis of responds towards switching over to other brands during Maggi ban, 49% shifted temporarily and 13% waited for Maggi to come back. So it can conclude that majority of the Maggi uses supported Maggi noodles during its ban period.
- The Correlation analysis showed a positive relation between (.658) customers' Attitude and Customers' Acceptance.

#### VII. Conclusion

A crisis is any event that is going to lead to an unstable and dangerous situation affecting an individual, group, community, or whole society. It's the time when a difficult or important decision must be made. In the present study Role of Social Media on Crisis management – A Special Focus on nestle Maggi noodles invented the role and support provided by the social media to Nestle to bring back their two minute instant noodles in to the market again.

Through smart use of social media during the crisis, the brand limited further damage by reassuring and informing customers to encourage them to continue buying the noodles in the future and capture 60% of market share after its relaunch. The study shows that majority of the consumers want Maggi to be in the market and they are willing to buy the same in the future when they proved that there is no harmful Ingredients included in the Maggi after its relaunch.

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# Relevance of Insurance and Risk Mitigation during Crisis: Kerala Flood 2018

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**Abstract** - Insurance could be an effective mechanism to financially guard and recover the unforeseen losses due to natural disasters. Management of flooding is a major societal challenge that is only expected to worsen due to several trends including population growth and urbanization. India's southern state of Kerala was suffered its worst monsoon flooding in a century, with more than one million people displaced, and more than 400 reported deaths in the two. Aid agencies and government groups have set up more than 4,000 relief camps, while rescue personnel are making their way to submerged villages in helicopters and boats, bringing supplies, and evacuating those they can find. Weeks of heavy rainfall have caused dams to open their floodgates, triggered landslides in the mountains, and swamped the coastal regions of Kerala. In this paper an attempt is taken to study the relevance of insurance and risk mitigation strategies during flooding. India's position with respect insurance penetration and insurance density also studied. The recent major floods in India are identified and the losses and insurance claims also compared.

## I. INTRODUCTION

Natural calamity is a devastating response from the environment which disrupts the community as a whole. Flood is one such catastrophe that threatens the well-being of the people. Loss of life and property destruction are the ultimate consequences from the flood. Each one of us care for themselves, their family and relatives. As the future is uncertain, people tend to take actions which protect them and their beloved ones.

The province of the study is to provide brief overview of the background to the floods, the exemplary manner in which crisis management was undertaken, a brief review of the damage assessment, and, most important, the manner in which the way forward to a new Kerala is being visualized.

## A. Overview of Flood Damage

Flood is a major disaster recurrently being faced by India and causes huge loss to lives, livelihood and infrastructure. The number of flood disasters is growing (Parker et al., 2007: 3), driven by changes to catchments (such as deforestation or urbanisation) that lead to increased runoff; population growth in areas at risk of flooding; climate change, which increases the variability and severity of weather, such as record-breaking rainfall and possibly more severe tropical cyclones.

Over the last decade, India had witnessed flood in many regions. Bihar flood (2007,2008), North India flood(2013), Kashmir (2014), Assam(2015), Gujarat(2015), Chennai (2015), Northeast India(2017), Mumbai flood(2017) and recently Kerala Flood(2018).

Since the beginning of the monsoon, 91 districts in 12 Indian states have been affected by floods. In all, 511 people have lost their lives and 176 people have been injured. Floods have also damaged around 55,000 houses, with the greatest number being in Manipur (17,846). In addition, people have lost their means to livelihood, with 81,147 hectares of crops across the country being damaged by floodwater.

Recent floods	Loss of Life	Property Loss
Kerala Flood	474 Lives	31,000 crore
Mumbai Flood	14+21(killed due to collapse of building)	NA
Chennai Flood	400+lives	Rs.20,034 crore

Chart 1: Number of Disasters worldwide till 2018

Chart 1 depicts number of disasters occurred from 1970 to 2018. With respect to flood, in 2006, the occurrence was the highest. The latest year, 2018, the occurrence was approximate to 110.

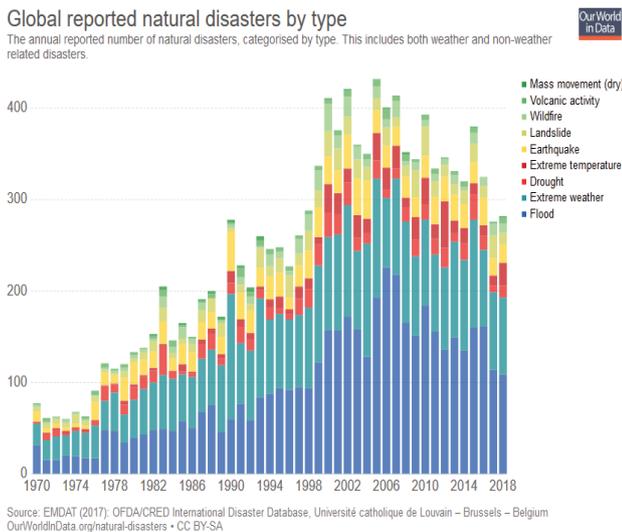


Table 1 : Losses incurred in flood

**B. Role of Insurance during Natural Calamity**

A step taken today is better than to regret later. Shelter, one among the basic needs of a man, has made him to think about his future. A safe and a secure life is also an important aspect which a common man looks for. This became realistic with the introduction of insurance industry.

Insurance industry is regarded as the backbone for the country’s risk management. A man cannot tolerate a huge loss that may come across. This situation search for the importance of insurance. An insurance is like a bodyguard to prevent great shocks. It helps in spreading the risk from the insured to the insurer.

**C. Benefits of Insurance**

Apart from safety, security and spreading the risk, insurance, especially life insurance, also encourages saving and provides profitable investment. Insurance also provide helping hands to business to improve business efficiency and as a part of welfare measure to employees. As insurance provides protection against loss and adequate capital for producing more wealth, it contributes to the economic growth of the economy.

In short the benefits are stated as follows:

1. Financial Security of Life and Assets in case of an unfortunate event
2. Tax Relief by way of deductions from Income, which lowers tax burden
3. Encourages saving and helps in Financial Planning for the Future
4. Life Insurance Policies can be used as a security to obtain a Loan

**II. LITERATURE REVIEW**

**A. Definition**

According to W.A Dinsdale, “Insurance is a device for the transfer of risks of individual entities to an insurer, who agrees, for a consideration (called premium) to assume to a specified extent, losses suffered by the insured.”

The insurance can be classified as Life insurance and Non-life insurance. Non-life insurance includes marine insurance, motor insurance, fire insurance, health insurance etc.

**B. Historical Perspective**

The history of life insurance in India dates back to 1818 when it was conceived as a means to provide for English Widows. Interestingly, in those days a higher premium was charged for Indian lives than the non-Indian lives as Indian lives were considered more risky for coverage.

The Bombay Mutual Life Insurance Society started its business in 1870. It was the first company to charge the same premium for both Indian and non-Indian lives. The Oriental Assurance Company was established in 1880. The General insurance business in India, on the other hand, can trace its roots to the Triton (Tital) Insurance Company Limited. The first general insurance company was established in the year 1850 in Calcutta by the British. Till the end of nineteenth century insurance business was almost entirely in the hands of overseas companies.

Insurance regulation formally began in India with the passing of the Life Insurance Companies Act of 1912 and the provident fund Act of 1912. Several frauds during 20's and

30's sullied insurance business in India. By 1938 there were 176 insurance companies. The first comprehensive legislation was introduced with the Insurance Act of 1938 that provided strict State Control over insurance business. The insurance business grew at a faster pace after independence. Indian companies strengthened their hold on this business but despite the growth that was witnessed, insurance remained an urban phenomenon.

### C. Importance of Mitigation

Mitigation defined as a continued action taken to minimize or eliminate risk to property or human (Kapucu, N. et al 2013). According to Kapucu et al (2013) stated there are 3 main goals of mitigation strategy. First, mitigation involved efforts to change the natural of threat. Second, mitigation targets to decrease community vulnerability to damage brought upon by disaster. Third, mitigation aims to reduce the exposure to the threat of possible disaster. Actually these 3 goals have the same target which is to reduce risk of life and property.

Mitigation offers few benefit by minimizing the influence of potential disasters. First, mitigation reduce direct damage to property. Second, mitigation reduce direct damage to business activities. Third, mitigation provide safer natural environments for park and wildlife. Forth, mitigation reduce human casualties or homeless. Fifth, mitigation reduce the need for basic emergency first response. Sixth, mitigation help to create more prepared community. Seventh, minimize the financial impact on community as mitigation reduce the disaster damage.

### D. Research conducted

Swenja Surminski in her article "Flood insurance and flood risk reduction" points out that the only truly sustainable response to flooding and climate change is a significant increase in efforts to reduce the underlying risks and influence risk drivers. This in turn can help to secure affordability and availability of flood insurance, a co-benefit of risk reduction.

Flood insurance is seen as a critical risk management tool for addressing increasing flooding risk. It can be used for (1) signalling to policyholders their individual risk to flooding, improving knowledge of the level and type of risk, (2) underwriting and redistributing the costs of risks globally, and (3) improving knowledge of risk management and disaster risk reduction (Golnaraghi et al., 2016).

Botzen et al. (2009) and Kunreuther (2015) emphasize the role insurance can play in mitigating damage by providing incentives to policyholders to undertake damage reduction measures, and their findings indicate that household owners

are willing to invest in mitigation in exchange for reduced insurance premiums.

The insurance sector is a lightning rod, serving as global integrator of impacts across all sectors of the economy, and messenger of these impacts through the terms and price signals it projects to its customers (P. V. Vellinga *et al*). Mills (2005) sees the availability and affordability of insurance as grist for economic development and the financial cohesion of society, as well as security and peace of mind.

Ekberg (2007, 349) explains by quoting Giddens (1998) that, risk and insurance share a common origin in modernity's aspiration to control nature, control risk and control the future. Insurance is oriented towards assessing, quantifying and spreading risk. Insurance cannot prevent the occurrence of a risk event, but it can lessen the harm by spreading the cost spreading risk.

Pistrika and Tsakaris (2007) describe flood risk as the likelihood of a flood event together with the actual damage to human health and life, the environment and economic activity associated with that flood event. In this context, Pistrika and Tsakaris (2007, 6) therefore consider flood risk as the actual threat and as the real source of flood hazard to the affected areas.

Bergh Crichton (2008) distinguishes very specific actions in which insurers can be of help in reducing flood risk:

1. Assistance with identifying areas at risk.
2. Catastrophe modelling.
3. Economic incentives to discourage construction in the flood plain.
4. Collection of data on the costs of flood damage to feed into benefit cost appraisals for flood management schemes.
5. Promotion of resilient reinstatement techniques.
6. Promotion of temporary defence solutions.

### III. OBJECTIVES

The aim of this research is to understand the relevance of insurance during flood crisis. This aim will be achieved via focussing on the recent Kerala flood 2018. The study also aims at achieving :

1. To explore the position of India in terms of insurance premium volume, penetration and density
2. To analyse the losses incurred in Kerala flood and the insurance claims filed.
3. To provide an overall overview on the risk mitigation strategies.

### IV. RESEARCH METHODOLOGY

The objective of this research is to explore the relevance of insurance and risk mitigation during the time of crisis, particularly at the time flood. The research design adopted for

the study is descriptive. Descriptive research involves observing and describing the behaviour of a subject without influencing it in any way. Newspapers and articles are main sources of data collection. Articles from past 6 were collected and analysed. Online search such as Google scholar and other linked databases were used to search to collect relevant information from the published literature to achieve the objective. Important reports published by various authorities were also investigated.

V. DATA ANALYSIS

A. Insurance sector in India

The Indian insurance industry, though faced many hurdles and hindrances since its origin in 1818, has gained a significant growth since Post- Liberalization. The growth of the insurance industry can be traced with the help of two main domains: Insurance Penetration and Insurance Density. Insurance Penetration is the ratio of premium underwritten in a given year to the Gross Domestic Product(GDP). Insurance Density is the ratio of premium underwritten to the total population. The insurance penetration in India has reached 3.69 per cent in 2017 from 2.71 per cent in 2001. The insurance density has reached \$73.00 in 2017 from \$11.50 in 2001. In 2017, India’s share in global market was 2 per cent. Gross premiums written in India reached Rs.5.53 trillion (US\$ 94.48 billion) in FY18, with Rs.4.58 trillion (US\$ 71.1 billion) from life insurance and Rs.1.51 trillion (US\$ 23.38 billion) from non-life insurance. In FY19 (up to Dec 2018), premium from new life insurance business increased 2.41 per cent year-on-year to Rs.1.42 trillion (US\$ 19.62 billion). Insurance sector companies in India raised around Rs.434.3 billion (US\$ 6.7 billion) through public issues in 2017.

Chart 2 depicts that India is standing far behind in insurance penetration ranking. Taiwan, Hong Kong South Africa, South Korea and UK stands the Top-5 positions.

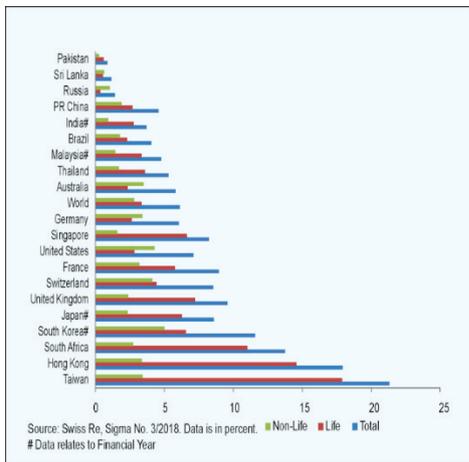


Chart 2: Insurance Penetration In Select Countries – 2017

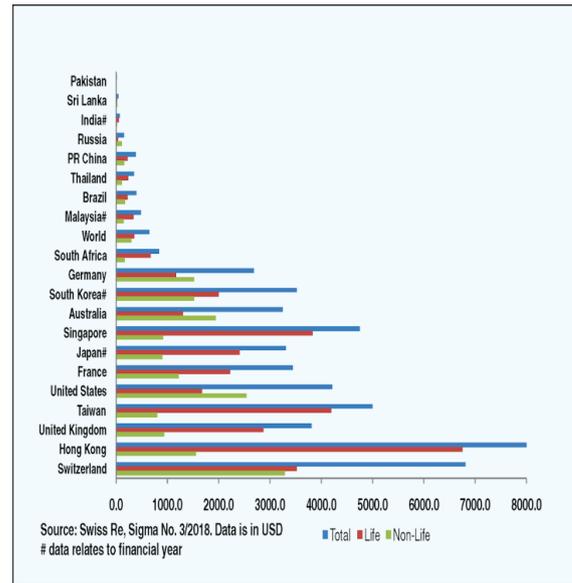


Chart 3: Insurance Density In Select Countries - 2017

Chart 3 depicts the ranking of selected countries in terms of insurance density. Switzerland, Hong Kong, Taiwan, Singapore and US have backed the top 5 positions. The ranking of India has been seen lower.

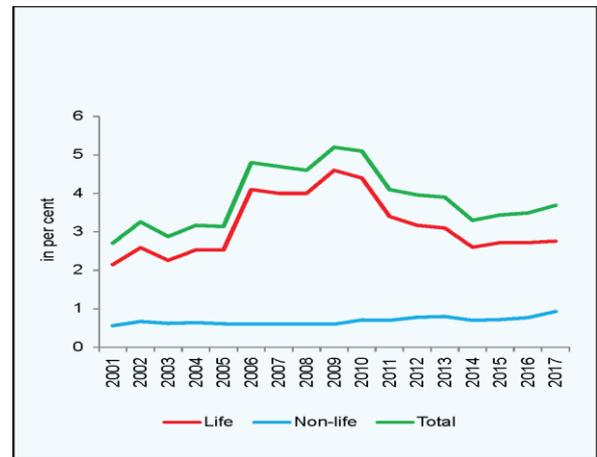


Chart 4: Insurance Penetration In India

The chart 4 depicts that the insurance penetration has gained an increase during the period 2005-2009 but decreased for the next 5 years, that is 2010 -2014. From 2015 the graph shows an upward trend and in 2017 the insurance penetration was 3.69 per cent.

world of \$27 billion. China leads the position, where the underinsurance or insurance gap is over \$74 billion.

**B. Kerala Flood 2018**

Floods are the most common of natural hazard in the state. Nearly 14.5% of the state’s land area is prone to floods, and the proportion is as high as 50% for certain districts. In August 2018, Kerala struck with the worst natural calamity that it had ever faced. The total loss incurred in Kerala flood as estimated by the Post Disaster Needs Assessment (PDNA) of the UNDP is Rs.31,000 crore. In all 474 people have been reported to have died, 12.47 lakh people were displaced, and around 20,000 houses seriously damaged.

According to latest reports of the state government, 1,259 out of 1,664 villages spread across its 14 districts were affected. The seven worst hit districts were Alappuzha, Ernakulam, Idukki, Kottayam, Pathanamthitta, Thrissur, and Wayanad, where the whole district was notified as flood affected. The PDNA estimates the total damages to be around INR 10,557 crore and total losses to be around INR 16,163 crore.

Kerala needs to mobilise about INR 31,000 crore (USD 4.4 billion) for its recovery and reconstruction over a period of five years, which is generally the time span needed for recovery.

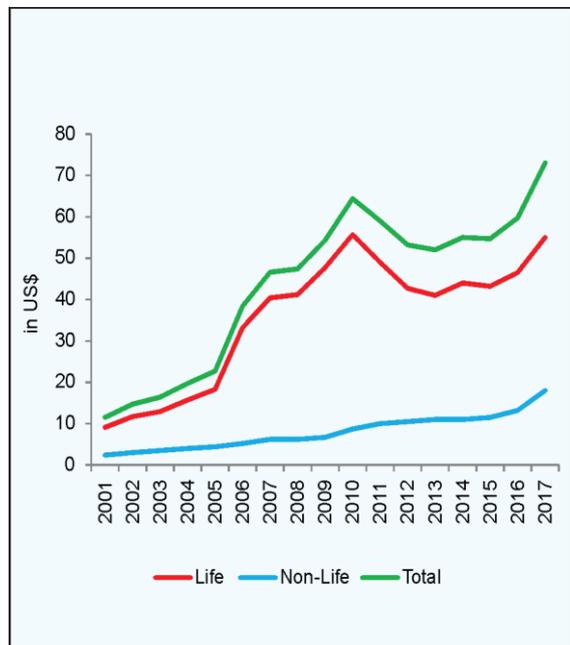


Chart 5: Insurance Density In India

Chart 5 depicts that the insurance density shows an upward trend. In 2017 the insurance density in India was \$73.

According to Lloyd’s of London report, global underinsurance stands at \$162.5 billion in 2018. Under insurance is the gap between the level of insurance in place to cover global risks and the actual cost to businesses and governments of rebuilding and recovering from major catastrophes. India has the second largest insurance gap in the

Table 2: Position of India in terms of premium volume in 2017

Country	Ranking by premium volume	Life premiums (USD bn)	Non -life premiums (USD bn)	Total premiums (USD bn)	Insurance density (USD)	Insurance penetration (%)
INDIA	11	73	25	98	73	3.69

Source: Swiss Re Institute, Sigma3/2018

Table 3: Estimation of damage consequent to Kerala floods,2018,in Rs.crore

Sector	Damage	Losses	Damage+ Losses	Total Recovery Needs
Social	5,743	1,448	7,191	6,337
Productive	2,975	4,180	7,154	4,498
Cross Cutting	10,561	16,159	26,718	30,715

Source: Post Disaster Needs Assessment Report, 2018

Table 4: Recent floods and insurance claims in India

Flood regions	Total loss	Insurance claims	Insurance claim worth
Kerala flood 2018	31,000 crore	11,000 claims	1,200 crore
Chennai flood 2015	20,034 crore	50,000 claims	4,800 crore

### C. Risk Mitigation strategies

Natural hazards/calamities such as hurricanes, earthquakes, tornados, floods and other such hazards cannot be prevented. For those hazards that cannot be prevented, there are still many opportunities to reduce the potential impacts on life, property, business operations and the environment. These opportunities are addressed in risk mitigation

There are many mitigation strategies that can reduce damage from hazards. This can be categorized into two categories-Property risk mitigation and financial risk mitigation. The first and foremost importance comes to life safety. Site selection is another important factor. Selecting a building site that is not subject to flood, storm surge, significant ground shaking from earthquakes or in proximity to hazardous facilities is the first consideration.

High valued assets including data centres, expensive production equipment and hazardous processes should be

carefully reviewed to determine the most appropriate production in accordance with national standards. Development of a business continuity plan with recovery strategies is a method to mitigate business disruption. Insurance is financial risk mitigation. Purchasing insurance is

a way to reduce the financial impact of business interruption, loss or damage to a facility or equipment. Insurance companies provide coverage for property loss, business interruption, worker's compensation, general liability, automobile liability and many other losses. Flood insurance coverage for a facility located within a flood zone may be purchased through the National Flood Insurance Program.

## VI. FINDINGS

Insurance is a great help to people during the time of a natural disaster. The insurance industry in India has grown exponentially over the last decade and opportunities for further growth exist. The insurance penetration in India has reached 3.69 per cent in 2017 from 2.71 per cent in 2001. The insurance density has reached \$73.00 in 2017 from \$11.50 in 2001. India ranks 11 in the world in terms of insurance premium volume. The recent disaster Kerala flood 2018 took away the lives of 474 and incurred a total loss of Rs.31,000 crore and out of which Rs.1,200 crore worth insurance claims have been filed.

Even though the insurance claim worth does not account a significant percentage of the total loss, the recovery and reconstruction need of INR 31,000 crore for Kerala over a time frame of five years could be raised through public and private finance. These channels include: a) Assistance from the Central government; b) Private donations and resources;

c) Augmenting resources through tax revenue; d) Market borrowings; e) Efficiency savings and f) Overseas development assistance (ODA).

The overall insurance industry is expected to reach US\$ 280 billion by 2020. This reveals that there will be growth in the insurance services provided and serves the needs of the people. This would help the citizens of the country to withstand and overcome any crisis, in the form of disasters. The insurance assures that the risk generated during crisis will be shared by the insurer and protect the interest of the people insured. Insurance is extremely beneficial as it provides timely financial assistance following extreme event shocks; as a result long-term consequences of disasters are reduced.

Any Insurance proposal must focus adequately on mitigation and must provide for effective measures to reduce losses. All stakeholders must be included in mitigation efforts - central, state and local governments, businesses and consumers, and, most importantly, the insurance industry. The proposal should promote building and relocation efforts away from high-risk areas.

## VII.CONCLUSION

Flood events in recent years had resulted in life losses, huge damages and demand urgent reaction. The emergency is also stressed by the fact that we face the threat of climate change. To avoid devastating effects of floods, we have to do everything to behave in a manner to mitigate potential risks for people and valuable goods. We have to make people aware of actual and potential risk and in order to induce their precautionary actions. Further-more, fight against flood damages can have positive effects in different other policy fields like nature conservation for instance.

A combination of risk-avoidance and risk-reduction activities should be adopted to manage present-day and future risk from flooding involves. The treatment options could be a combination of avoiding risk where possible, controlling risk through structural or regulatory measures, transferring risk through insurance, accepting risk, emergency management planning, warning systems, and communicating risk (including residual risk) to affected parties. The best combination will consider the needs of future generations and not lock communities into a future of increasing risks from flooding.

Kerala which has effective decentralised governance can utilise the capabilities built so far through Peoples Plan campaign for taking Building a New Kerala up the challenge

of building a new Kerala (Nava Keralam) leaving no one behind.

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# Role of ESAF Small Financing in Inclusive Financing: A Study with Special reference to ESAF Beneficiaries in Alappuzha

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*Abstract*— Financial inclusion means universal access to a wide range of financial services at reasonable cost. Microfinance means the provision of microloans to poor entrepreneurs and small businesses lacking access to **banking** and related services. Microfinance is a way to promote economic development, employment and growth through the support of micro-entrepreneurs and small businesses; for others it is a way for poor to manage their finances more effectively and take advantage of economic opportunities while managing the risks. The terms have evolved - from micro-credit to micro-finance, and now 'financial inclusion'. Evangelical social action forum better known as ESAF finance is a Small banking finance (Micro finance institution) and licensed by Reserve Bank of India and headquarter in Thrissur. ESAF provided lot of small Financial Services in rural sector in India. The researcher attempted to study the role of ESAF Financing among rural people with special reference to Alappuzha. The main objectives of the study included to identify the level of finance availability and the financial problems to the rural people in Alappuzha, to study the role of ESAF finance in inclusive financing among the rural people in Alappuzha, to suggest measures to achieve the overall inclusive financing among rural people in Alappuzha. For the research purpose, both primary data and secondary data are used. Primary data are collected by using questionnaire, schedules, interview etc... secondary data are used from journals, magazines, newspapers etc. In this study the sample unit is consider as rural area in Alappuzha. The sample size refers to the number of items to be selected from the universe to constitute a sample. Here the sample size taken for the study is 100 respondents from the place of Alappuzha. The sampling procedure used in the study is random sampling. If the demand for and supply of financial services are not proper, it leads to financial instability in the country. In other words, there are factors which are highly influencing financial inclusion process in India. If such factors are not proper, and then it will affect the financial inclusion process in India. Whether the micro finance programmes support or not the financial inclusion process will be the research problem. The study on the problem conducted by collecting, analyzing and interpretation of both secondary and primary data. From the

study, it is very clear that the ESAF Small financing having high role in supporting financial inclusion process. The study also mentioned some measures for the overall achievement of financial inclusion.

*Keywords*— Financial inclusion, Small financing, ESAF, financial exclusion, financial literacy, financial inclusion and exclusion factors.

## I. INTRODUCTION

“Most poor people in the world including India still lack access to sustainable financial services, whether it is savings, credit or insurance (Kofi Annan, former United Nations Secretary General). While poverty persists, there is no true freedom (Nelson Mandela). Poverty is the worst form of violence (Mahatma Gandhi). Therefore, financial inclusion is inevitable one for overcoming poverty. Financial Inclusion may be defined as the process of ensuring access to financial services timely and adequate credit where needed by vulnerable groups at an affordable Cost (The Committee on financial Inclusion, Chairman Dr. C.Ranga Rajan). Evangelical social action forum better known as ESAF finance is a non-banking finance company and micro finance institution and licensed by Reserve Bank of India and headquarter in Thrissur ESAF small finance banking is the first bank to be give a banking license in Kerala since independence founded in 2017 and its net income is 2800 cr. And it consists of 3750 employees. The journey of ESAF began in small house named Little at Thrissur in 1992 with the purpose of alleviating borrowers from difficult erasing out property and unemployment it is an MGO that reaches out to over taken poor house hold across 6 state including Kerala. Rural area country side is a geographic area that is located outside towns and cities typical rural area has a low population density small settlements. Microfinance initially had a limited definition - the provision of microloans to poor entrepreneurs and small

businesses lacking access to banking and related services. The two main mechanisms for the delivery of financial services to such clients were: (1) relationship-based banking for individual entrepreneurs and small businesses; and (2) group-based models, where several entrepreneurs come together to apply for loans and other services as a group. Over time, microfinance has emerged as a larger movement whose object is "a world in which as everyone, especially the poor and socially marginalized people and households have access to a wide range of affordable, high quality financial products and services, including not just credit but also savings, insurance, payment services, and fund transfers." Many of those who promote microfinance generally believe that such access will help poor people out of poverty, including participants in the Microcredit Summit Campaign. For many, microfinance is a way to promote economic development, employment and growth through the support of micro-entrepreneurs and small businesses; for others it is a way for poor to manage their finances more effectively and take advantage of economic opportunities while managing the risks. The terms have evolved - from micro-credit to micro-finance, and now 'financial inclusion'. ESAF provided lot of Financial Services in rural sector in India. The researcher attempted to study the role of ESAF Financing among rural people with special reference to Alappuzha.

## II. CONCEPTUAL FRAME WORK REVIEW

Financial inclusion means universal access to a wide range of financial services at reasonable cost. Availability of banking and payment services to the entire population without discrimination is the prime objective of financial inclusion public policy. The Barossa Valley in South Australia is an area noted for vineyards. In general, a rural area or countryside is a geographic area that is located outside towns and cities. The Health Resources and Services Administration of the U.S. Department of Health and Human Services defines the word rural as encompassing "...all population, housing, and territory not included within an urban area. Whatever is not urban is considered rural." The Barossa Valley in South Australia is an area noted for vineyards. In general, a rural area or countryside is a geographic area that is located outside towns and cities. The Health Resources and Services Administration of the U.S. Department of Health and Human Services defines the word rural as encompassing "...all population, housing, and territory not included within an urban area. Whatever is not urban is considered rural." The RBI and Government have launched several financial inclusion measures and programs over the last one decade. Financial inclusion measures on a mission mode were started since the launch of no-frills account by the RBI in 2005. Later in 2010, it was replaced by the BSBDA. A big stride to provide banking services to the 600000 rural habitations was made with the launch of Financial Inclusion Plan by commercial banks in 2010. Besides these lead measures, the Jan Dhan

Yojana has made a camp approach in 2014 towards financial inclusion. In recent years, several digital payments options were used by the RBI to support financial inclusion.

Microfinance, also called microcredit, is a type of banking service that is provided to unemployed or low-income individuals or groups who otherwise would have no other access to financial services. Microfinance services are provided to unemployed or low-income individuals because most of those trapped in poverty, or who have limited financial resources, do not have enough income to do business with traditional financial institutions ESAF Small Finance Bank is an Indian small finance bank providing basic banking services and small loans to the under banked. Before becoming a bank it was a non-banking finance company and microfinance institution (NBFC-MFI), licensed by the Reserve Bank of India and headquartered in Thrissur city of Kerala. ESAF started its operations as an NGO in 1992 as Evangelical Social Action Forum, in 1995 it started lending to become the first microfinance company in Kerala. It became ESAF Small Finance Bank after receiving the first banking license in Kerala since independence. The researcher attempted to study the impact of ESAF small financial services in the process of inclusive financing by considering ESAF beneficiaries in Alappuzha.

## III. STATEMENT OF THE PROBLEM

Financial stability depends upon the proper level of demand for and supply of financial services. If any imbalances in the level of proper demand for and supply of financial services, it directly affects financial stability. Small financing has wide role in providing financial services to unbanked sectors in rural area and thereby supporting in maintaining proper demand and supply of financial services in rural sectors in India. The researcher made attempt to whether micro finance programmes properly support the financial inclusion process in India by analysing and interpreting the role of ESAF Small financing in Inclusive financing by taking ESAF beneficiaries in Alappuzha.

## IV. OBJECTIVES OF STUDY

Following are the main objectives of the study

- To identify the level of finance availability to the rural people in Alappuzha
- To study the problems faced by the rural people on account of financial service availability
- To identify factors influencing financing inclusion
- To study the role of ESAF finance in inclusive financing among the rural people in Alappuzha
- To suggest measures to achieve the over all inclusive financing among rural people in Alappuzha.

V. NEED OF THE STUDY

The study about the progress of financial inclusion in India has much significance because of the following reasons:

- It checks whether ESAF provide financial awareness to the ESAF beneficiary about the microfinance programmes.
- It gives idea about the problem faced by the rural people on account of financial service.
- It gives suggestions on measures to achieve the overall inclusive financing among rural people.
- Micro finance programmes have direct impact on Indian financial inclusion process.

VI. LIMITATIONS OF THE STUDY

- The study concentrated on some of the factors that are affecting financial inclusion process in India.
- Accuracy of result depends upon the accuracy of the Primary data.
- Some of the respondents felt difficulty in understanding the technical words in the questionnaire.
- The size of the sample limited to 100.

VII. METHOD OF THE STUDY

The study on the problem conducted by collecting, analyzing and interpretation of both secondary and primary data. Primary data collected by questionnaire and schedule method. Secondary data collected from journals, magazines, newspaper, websites of government, public institutions. To collect primary data, sample of 100 respondents selected from the rural area of Alappuzha.

VIII. RESULT

Operational area	Respondent	Percentage
<b>Rural Area</b>	<b>72</b>	<b>72%</b>
<b>Low income</b>	<b>18</b>	<b>18%</b>
<b>Middle income</b>	<b>10</b>	<b>10%</b>
<b>High income</b>	<b>0</b>	<b>0%</b>
<b>Urban</b>	<b>0</b>	<b>0%</b>
<b>Others</b>	<b>0</b>	<b>0%</b>
<b>Total</b>	<b>100</b>	<b>100%</b>

Source: Primary data

Table 1: Operational Area of ESAF

**Interpretation:** From the analysis of the table, it is clear that ESAF mainly concentrated in rural sector of the Economy. That means the operational area of ESAF mainly concentrated on maintaining the adequate demand and supply of financial services in rural area.

Criteria	Respondents	Percentage
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<b>Grameen Financial Service PVT.LTD</b>	<b>18</b>	<b>18%</b>
<b>SKS M micro finance limited</b>	<b>14</b>	<b>14%</b>
<b>UJJIVAN finance service pvt.ltd</b>	<b>29</b>	<b>29%</b>
<b>ESAF finance institution</b>	<b>32</b>	<b>32%</b>
<b>Any other micro finance</b>	<b>7</b>	<b>7%</b>
<b>Total</b>	<b>100</b>	<b>100%</b>

Source: Secondary data

Table 2: the level of Micro Finance Access by ESAF beneficiaries

**Interpretation:** From the above table it is inferred that all most all rural people have access to almost all small financing services including the services of ESAF small Finance institution. It indicated there will be wide role of small finance institutions in financial inclusion process.

Dimensions	Agreement level							
	Strongly disagree	%	Disagree	%	Agree	%	Strongly agree	%
Agricultural and animal husbandry	0	0	0	0	52	52%	48	48%
Income generating activities	6	6%	12	12%	47	47%	35	35%
Consumption or household expenditure	6	6%	3	3%	68	68%	23	23%
Education to children	1	1%	5	5%	51	51%	43	43%
Medical expenses	8	8%	10	10%	11	11%	71	71%
Emergencies	7	7%	5	5%	67	67%	21	21%

Table 3: The agreement level of beneficiaries towards financial inclusive effectiveness of EASF

**Interpretation:** From the analysis of the table, it is inferred that, 52, 48% of beneficiaries are agreed and strongly agreed towards the effectiveness of ESAF in the supporting agriculture and animal husbandry related operations.6%, 12% are strongly disagree and agree and 47% and 35% of the beneficiaries are strongly disagreed and strongly agreed towards effectiveness of ESAF in supporting income generating activities. 6% and 13% are strongly disagree and disagree and 68%,23% of the beneficiaries are agreed and strongly agreed towards the efficiency of ESAF in meeting consumption or house hold expenditure.1%,5%,51% and 43% of the beneficiaries are strongly disagreed, disagree, agreed and strongly agreed towards the effectiveness of ESAF in providing financial support for education to children. 8%, 10%,11% and 71% of the beneficiaries are strongly disagreed, disagree ,agreed and strongly agreed towards the effectiveness of ESAF in supporting medical expenses .7%,5%,67% and 21% of beneficiaries are strongly disagreed , disagree ,agreed and strongly agrees

towards the effectiveness of ESAF in supporting emergencies.

Statements	Agreement level							
	Strongly disagree	%	Disagree	%	Agree	%	Strongly agree	%
Act as a coordinator for rural credit	0	0%	0	%	68	68%	32	32%
Convenient to save	11	11%	18	18%	67	67%	4	4%
Low interest on loan	68	68%	28	28%	4	4%	0	0%
Availability of loan in time	9	9%	18	18%	71	71%	2	2%

Source: Primary data

Table 4: Customer’s agreement level on amount of different aspects of ESAF finance

From the analysis of table, we can interpret that, 68% and 32% of ESAF customers have agreed and strongly agreed in ESAF acting as a coordinator for rural credit and 11%,18%,67% and 4% of ESAF beneficiaries expressed their views towards ESAF supporting to convenient to save. 68%,28%,4% of ESAF customers have strongly disagree, disagree and agreed towards low interest on loan by ESAF.9%, 18%,71% and 2% of ESAF customers have also strongly disagree ,disagree, agree and strongly agreed towards the agreement level in low interest on loan .

Statements	Agreement level							
	Strongly disagree	%	Disagree	%	Agree	%	Strongly agree	%
Adequate repayment facilities	11	11%	3	3%	79	79%	7	7%
Matching credit needs of borrowers	5	5%	24	24%	70	70%	1	1%
Document formalities of ESAF is very difficult	82	82%	5	5%	11	11%	2	2%
New schemes of deposits, loans and other services are availing to customers up to date	3	3%	18	18%	74	81%	5	5%

Source: Primar data

Table 5: Customer’s agreement level on account of different aspects of ESAF finance

**Interpretation:** From the analysis of table, we can interpret that, 11%,3%,79% and 7% of ESAF customers have strongly disagreed, disagreed, agreed and strongly agreed on account of ESAF provides adequate repayment facilities. 5%, 24%, 70% and 1% of ESAF beneficiaries strongly disagreed, disagreed, agreed and strongly disagreed towards the role of ESAF in matching credit needs of rural area borrowers. 82%, 5% ,11% and 2% of ESAF beneficiaries expressed their views as strongly disagreed, disagreed , agreed and strongly agreed on account of “Documentation formalities of ESAF is very difficult”. 3%, 18%, 74% and 5% of ESAF beneficiaries expressed their views as strongly disagreed, disagreed, agreed and strongly agreed on account of the statement ESAF provides new schemes of deposits, loans, and other services to customers are up to date.

Statements	Agreement level							
	Strongly disagree	%	Disagree	%	Agree	%	Strongly agree	%
Lack of education and experience created problem to use financial services effectively	5	5%	18	18%	72	72%	5	5%
ESAF financial awareness training improved to use financial services effectively	17	17%	15	15%	68	68%	0	0%
The ESAF officials are continuously meet customers to ensure financial services	5	5%	2	2%	81	81%	12	12%

Source: Primary data

Table 6: Customer’s agreement level on account of different aspects of ESAF finance

**Interpretation:** From the analysis of table, it is clear that, 5%,18%,72% and 5% of ESAF beneficiaries expressed their views as strongly disagreed, disagreed, agreed and strongly agreed on account of Lack of education and experience created problem to use financial services. 7%, 15%, 68% of ESAF beneficiaries expressed their views on account of ESAF financial awareness training improved to use financial services effectively. 5%, 2%, 81% and 12% of ESAF beneficiaries expressed their views as strongly disagreed, disagreed agreed and strongly agreed on account of “The ESAF officials are continuously meet customers to ensure financial services.”

Statements	Agreement level							
	Strongly disagree	%	Disagree	%	Agree	%	Strongly agree	%
Support to women empowerment	5	5%	1	1%	88	88%	6	6%
Support to poverty reduction	7	7%	5	5%	74	74%	14	14%
Increase social status	12	12%	6	6%	69	69%	13	13%
Improving financial decision making power	2	2%	7	7%	91	91%	1	1%

Source: Primary data

Table 7: Customer’s agreement level on account of different aspects of ESAF finance

**Interpretation:** From the analysis of table, it is clear that, 5%, 1%, 88% and 6% of ESAF beneficiaries strongly disagreed, disagreed, agreed and strongly agreed in expressing their views on account of ESAF Support to women empowerment. 7%, 5%, 74% and 14% of ESAF beneficiaries strongly disagreed, disagreed, agreed and strongly agreed in expressing their views on account of ESAF Support to poverty reduction. 2%, 7%, 91% and 1% of ESAF beneficiaries strongly disagreed, disagreed, agreed and strongly agreed in expressing their views on account of ESAF Support in improving financial decision making power among its beneficiaries.

Statements	Agreement level							
	Strongly disagree	%	Disagree	%	Agree	%	Strongly agree	%
Support to improvement in health care	8	8%	4	4%	88	88%	0	0%
Ensure gender equality	11	11%	6	6%	24	24%	59	59%
Support to improvement in standard of living	29	29%	14	14%	47	47%	10	10%

Source: Primary data

Table 8: Customer’s agreement level on account of different aspects of ESAF finance

**Interpretation:** From the analysis of table , it can be interpret that , 8%,4%,88% of ESAF beneficiaries strongly disagreed ,disagreed ,agreed in expressing their views on account of ESAF Support to improvement in health care among its beneficiaries . 11%,6%,24% and 59% of ESAF beneficiaries strongly disagreed ,disagreed ,agreed and strongly agreed in expressing their views on account of ESAF ensure gender equality among its beneficiaries . 29%, 14%, 47% and 10% of ESAF beneficiaries strongly disagreed, disagreed, agreed and strongly agreed in expressing their views on account of ESAF Support to improvement in standard of living.

Questions	Knowledge level							
	More	%	Average	%	Less	%	Nothing	%
Income generation loan scheme	12	12%	29	29%	57	57%	2	%
General loans scheme	78	78%	13	13%	8	8%	1	1%
Housing loan scheme	81	81%	5	5%	12	12%	2	2%
Agricultural loan schemes	72	72%	12	12%	8	8%	8	8%
Electronic loan schemes	41	41%	48	48%	9	9%	2	2%
Micro enterprise loan	45	45%	36	36%	12	12%	7	7%
Education loan schemes	34	34%	44	44%	8	8%	2	2%

Source: Primary data

Table 9: the knowledge level on account of financial product knowledge of ESAF

**Interpretation:** from the analysis of the table, while analyzing the financial products knowledge level of ESAF beneficiaries, out of total beneficiaries, 12 % have more knowledge, 29% have average knowledge, 57% have less knowledge and 2% have no knowledge about the financial product income generation loan scheme of ESAF. 78% have more knowledge, 13% have average knowledge, 8% have less knowledge and 1% has no knowledge about the financial products General loans schemes of ESAF. 81% have more knowledge, 5% have average knowledge, 12% have less knowledge and 2% have no knowledge about the financial products Housing loans schemes of ESAF. 72% have more knowledge, 12% have average knowledge, 8% have less knowledge and 8% have no knowledge about the financial products agricultural loans schemes of ESAF. 41% have more knowledge, 48% have average knowledge, 9% have less knowledge and 2% have no knowledge about the financial products Electronic loans schemes of ESAF. 45% have more knowledge, 36% have average knowledge, 12% have less knowledge and 7% have no knowledge about the financial products micro enterprise loans schemes of ESAF. 34 %have more knowledge, 44% have average knowledge, 8% have less knowledge and 2% have no knowledge about the financial products educational loans schemes of ESAF.

IX. DISCUSSION

From the overall analysis and interpretation of the data, general findings and findings on account of financial inclusion factors, suggestions, general implications of the

study, Educational Implications of the study, scope for further study and final conclusion are given below.

X. FINDINGS

Following are the main findings from the analysis and interpretation of the primary and secondary data.

- **Rural area operation:** ESAF concentrated its area of operation rural sectors of the economy so that it supports to the financial inclusion process. Financial inclusion is the economic process of ensuring the availability of financial services for unbanked rural area of the economy. So ESAF helped to maintain the stability between proper demand and supply of financial services in the society.
- **Rural area to micro finance access :** Most of the rural people have access to micro finance services. Among the role, ESAF have showed more influence in providing small financing services to rural people. By doing this, the level of financial inclusion can be improved well.
- **Supporting to Agricultural and animal husbandry:** ESAF providing number schemes to support agricultural and husbandry requirements financing at minimum collateral requirements.
- **Supporting to income generating activities:** ESAF introducing number income generating schemes to motivate rural customers to engage in income generating activities so that the level of income and standard of living of rural people can be improved.
- **Supporting to meet Consumption or household expenditure:** Rural people are continuously meet ESAF to borrow fund to meet consumption or household expenditure.
- **Supporting to Education to children:** Education is inevitable one in rural area sector. ESAF provides number educational loan schemes to rural children for their better educational requirements.
- **Supporting to meet medical expenses:** Now a days, medical treatment and expenses are inevitable in life because change in food habits and life style. ESAF introducing number of medical schemes to rural people to meet their medical related expenses.
- **Supporting to manage Emergency situations:** Emergency situations in life are inevitable one also. ESAF supporting rural people in supporting the emergency cash requirements of rural customers.
- **Acting as a co-coordinator for rural credit:** ESAF acting as a coordinator for maintaining proper demand and supply of financial services in rural area sector of economy.
- **Provided a way to save:** By providing loan and receiving loan installments, ESAF indirectly supports way to create saving habit among rural people.
- **High rate of interest level:** Even though ESAF supports providing financial services, the rate of interest charging is much more high. This because, most of the cases , loan provided based on repayment assure (Sangam

Scheme) by group of people rather than collateral based lending.

- **Availability of loan in time:** ESAF provides loan services in time because the loan services based sangam scheme and documentation formalities are minimum to the extent.
- **Adequate repayment facility:** ESAF maximum trying to provide adequate repayment facilities to its beneficiaries.
- **Easy documentation formalities:** ESAF maintaining easy documentation formalities while providing financial services.
- **Better financial products communication:** ESAF maintaining better communication services in order to reach all the official and unofficial matters to its beneficiaries.
- **Lack of financial literacy caused problem for better utilization of financial services among ESAF beneficiaries:**
  - **Financial awareness training:** ESAF providing financial training services to increase the level of financial knowledge among its beneficiaries but its effectiveness not much to the better level.
  - **Supporting to women empowerment:** By providing loan services, motivating saving habit, ensuring gender equality, ESAF highly supporting to women empowerment.
  - **Poverty reduction:** ESAF supports to reduce poverty problems by meeting the rural financial requirements.
  - **Improving financial decision making:** ESAF supports to improve financial decision making skill.
  - **Supporting to improvement in health care:** By introducing different health care loans and advances schemes, ESAF continuously supports in improving health care system in rural area.
  - **Ensure gender equality:** By providing financial services without any discrimination between men and women, ESAF ensure gender equity in rural area on account of financial services.
  - **Improvement in standard of living:** By providing different financial service scheme on account of rural area people financial requirements, ESAF supports in improving the standard of living of people in rural area.
  - **Financial products information of ESAF:** All most all ESAF beneficiaries have knowledge about all most all financial products offered by ESAF Small financing institution.

## XI. SUGGESTIONS

- Following are the suggestions to attain over all financial inclusion in India.
- **Innovative Scheme:** Develop more innovative financial scheme package which will attract prospective youth.
- **Provide Awareness Programme:** Awareness about regular, minor savings account, basic savings bank

deposit, senior citizen account, regular premium current account, fixed recurring deposits; tax saver fixed deposit of ESAF should be improved. This can be made possible by conducting awareness programmes, seminars etc.....

- **Need More Branches:** Establish more branches in different area of Alleppy district which will be more convenient to its customers for their operations.
- **Need More Good physical facilities:** Make good physical facility to its branches that will help its customers more comfortable.
- **Provide more Advertisement:** Provide more advertisement through television, newspapers, magazines, social media etc. which can give more information about ESAF to the people.
- **Introduce reduced rate of interest:** Make an adjustment in the rate of interest to reduce the burden of loan repayment.
- **Provide financial training programme:** Provide proper and accurate financial training among customers which will make the use of financial products effectively.
- **Motivation to Staffs:** The manager should motivate staffs, officials to deals financial inclusion programs with more care.
- **Maintain proper customer relationship management:** Improve the attitude of customer relationship management towards the customers.
- **Provide more seminars:** Awareness about banking services among rural and low income groups. This can made possible through conducting awareness programmes, seminars etc.
- **Provide More ATM Facilities:** Establish ATM facility in different area of the Alleppy district's.
- **Promote Saving habit:** Promote savings habits among rural people; this can be achieved through increasing the bank rate policy.
- **Introduce more financial literacy centers:** The ESAF financial institution should introduce more financial literacy centers to equip more financial awareness among rural people.
- **Implement financial bulletin:** The ESAF should circulate a financial bulletin in regional language to communicate about new financial products and its matters to rural people.
- **Immediate settlement for grievances:** The institution should introduce and maintain a good settlement mechanism to solve the complaints and problems among its beneficiaries.
- **Ensure safety mechanism in financial transactions:** The institution should be very care in assuring the safety and security in financial transactions otherwise it will affect the operational efficiency of institution.
- **Introduce Latest Technology:** Latest Technology Should be used to address the issue of outreach and credit delivering in rural and remote areas in a viable manner and make effective use of Information

Communication Technology to provide door step banking service by business correspondents model where the accounts can be operated by even illiterate customers by using biometrics, thus ensuring the security of transactions and enhancing confidence the banking system.

- **Vernacularisation:** Promote Vernacular language (Local or Regional language) during banking services and communication and vernacularisation of all forms including legal forms connected with financial operations.
- Promote "*Participatory Financial Literacy Campaign*" whereby number of banks co coordinately conducting Financial Literacy program.
- Introduce "*composite Risk sharing credit (CRSC) schemes*" where credit granted to rural area by two or more financial institution.

## XII. GENERAL IMPLICATION OF STUDY

Following are the general implications of the study.

- Financial Inclusion progress can be used as the indication for the progress of the country.
- The study revealed some sort of difficulties in the implementation of financial inclusion program and schemes
- The results of the study can be used to identify the relationship between financial inclusion and rural developments poverty etc...
- The results of the study can be used to formulate and implement new financial inclusion programme schemes.

## XIII. EDUCATIONAL IMPLICATION OF THE STUDY

Following are the educational implications of the study

- Financial literacy club.
- School bank / class bank.
- Seminars, Discussions on account of banking habits and thrifts.
- Training to students on account of online banking transactions.
- Promote and connect Government grants, scholarship to students by online banking transactions.

## XIV. SCOPE OF THE STUDY

Given below are the areas to which further study in financial inclusion can be conducted.

- Conduct a study on the level of financial literacy among various sectors of employees.
- Conduct a study on causes of emerging unorganized financial sector and its effect on organized financial sector.
- Conduct a study on direct and indirect relationship between financial inclusion and poverty.

## XV. CONCLUSION

Financial Exclusion is the inability of individuals, households or groups to access necessary financial services in an appropriate form. To avoid such situation, officials of India implemented variety of measures. Even though, each scheme has its own significance in the financial inclusion process, but there are problems occurred in its implementation. So that full financial inclusion cannot achieved in India. The connectivity and technology issues, illiteracy, the low income savings, lack of bank branches in rural areas, inadequate legal and financial structures etc. Continues to be a road block to financial inclusion in many states of India. In order to create saving habits and thereby financial inclusion, first equip the rural people to earn excess income, government not only implement various schemes to channelize savings into organized sector but also facilities more and more employment opportunities in rural area and thereby create excess income, finally it leads to create saving habits and it will results in full financial inclusion.

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# ‘Mapping the dynamic landscape of Entrepreneurial finance’ Comprehensive review Post financial crisis

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**Abstract**— Entrepreneurial finance landscape has changed tremendously over the last decade, especially post 2007–08 global financial crisis. New players have emerged in the era of post crisis to support nascent entrepreneurial firms. In this context, this paper is trying to address how and which stage of entrepreneurial life rely on these relatively new sources of financing and what are the advantages and disadvantages of these new sources compared to more traditional sources. In addition to that how these entrepreneurial environment is going to be affected by the emergence of these new funding sources. Literatures about various types of entrepreneurial finance have been complied. The supply and demand side factors were identified to be affecting the entrepreneurial finance. This study contributes towards a brief idea about recent developments in entrepreneurial finance and provides avenues for relevant and fruitful further research.

**Keywords**— Venture capital, Entrepreneurial Finance, Crowdfunding, Block chain, Business Angels

## I. INTRODUCTION

The global financial crisis during 2007-2008, hit most of the world’s national and regional financial and economic systems. Post global financial crisis, many economies concentrated various methods to economic recovery especially though focused financing on innovative firms ([18], [2], and [3]). Repercussion of the global financial crisis reflected in the evolution and emergence of new financing instruments to sustain growth of the entrepreneurial firms [18]. During the time of financial crisis, innovative and fast growing ventures undergo lack of funding due to high degree of information asymmetry, insufficient trading records and intangible knowledge-based assets which can obstruct their ability to grow ([4], [5], [1], [6], and [7]).

Increased financial needs of these nascent firms and potential opportunities demanded the growth of investors and resulted in growth of new styles of financiers compared to traditional investors. During Global financial Crisis ,entrepreneurial finance have gone through massive changes and several financing avenues are available either

in debt, equity and hybrid finance schemes including crowd funding, business angels ([8] ,[9] , [10], [11] and[12] ).

Entrepreneurial finance plays a major role in accelerating growth of startups in any economy. Studies have shown the impact of entrepreneurial finance on startup growth [13]. Financing of the new ventures are challenging and need utmost care when comparing with traditional SME firm investments [14]. Even though entrepreneur raise finance from multitude sources, major part of the entrepreneurial finance research is focusing only a few financing models [15]. Thus, there is an increased need of understanding on all sources of entrepreneurial finance.

While examining the literatures, new forms of entrepreneurial finance ([16], [17], [18] and [19]) such as crowdfunding, peer to peer (P2P) and most recently blockchain tokenization [20] are less discussed. In addition to that, reasons for the emergence and roles of new players in the entrepreneurial finance market [21] such as crowd funding platforms, accelerators, angel networks, seed venture capital (VCs), asset-based financiers, challenger banks, and new forms of early stage public investment feeder markets [22], gained very limited in terms of literature. Even though new forms of crowdfunding and blockchain finance are some of the major developments in emerging market like china and India [23].

In this context, this paper is trying to fill the knowledge gap by addressing certain research questions. How and which stage of entrepreneurial life rely on these relatively new sources of financing? What are the advantages and disadvantages of these new sources compared to more traditional sources? How these entrepreneurial environment is going to be affected by the emergence of these new funding sources? By addressing the research questions this article explain various forms of funding and factors affecting funding from entrepreneur and investors perspectives. The Literature on this topic is scant and fragmented, hence the article contributes to the existing body of literature.

## II. FUNDING ISSUES DURING FINANCIAL CRISIS

Evidences shows that during the financial crisis rejection rates for venture capital were much higher compared to bank and non-bank loans. For instance, 46% of entrepreneurs approaching venture capital funding experienced a rejection and 24% approached business angels also experienced rejection in UK during 2009 [15].

Difficulties are more for nascent entrepreneurial firms compared to established firms ([24], [25], [26] and [27]), especially during financial crisis. Major concerns of any investor to invest in a new venture includes high uncertainty ([28] and [29]), information asymmetries ([30] and [31]) and a lack of internal financing and collateral ([33], [1] and [32]). Global financial Crisis intensified these concerns further and resulted in credit crunch and entrepreneurial slow down [34].

## III. VARIOUS SOURCES OF ENTREPRENEURIAL FINANCE POST CRISIS

### A. Venture capital

Corporate venture capital (CVC) refers to investments by large, established firms into start-ups or growth firms. Instead of acquiring ventures and integrating them into their own organization, organizations buy stakes of an innovative startup .The startup firm remains independent, and provide the larger firms to develop further their promising technologies and markets.

CVC investors provide equity and they are interested in strategic goals such as access to new technology or new markets or new customer segments. Most of the time CVC syndicate with independent venture capital which in turn improve the performance of startup companies [35].

CVC investors have been shown to invest either in later or earlier stage ventures, with their inclination to early stage deals depending on the institutional characteristics of the entrepreneurial finance ecosystem in different countries.

CVC investment patterns are different in different VC markets especially the type of firms and stage of firms typically differs across region ([36] and [37]). This form of financing is highly volatile during financial crisis, for instance European VC market in the years from 2007 to 2015.

Many governments have set up programs that seek to foster VC financing, through the establishment of Governmental Venture Capital (GVC) funds, with the aim to alleviate the financial gap problem as well as at the same time to pursue investments that will yield social payoffs and positive externalities to the society. Governments may have various intentions and objectives when setting up these funds. To the extent that these governmental objectives differ, there is heterogeneity in the types of firms that the GVCs invest, in the effort that they devote to their investee firms, and, ultimately, in the efficacy of their investments [38].

The effectiveness of GVC programs depends largely on their design and aims. With regard to direct public intervention, there is heterogeneity in the type of allocation of governmental funds to GVCs. Allocation types can be classified into three categories: direct public funds, hybrid private-public funds, and funds-of-funds [39].

### B. Angel Investors

Angel networks are networks of Business Angels who invest together in early-stage and high growth ventures [40]. They provide equity and offer management support and network access. As a group, they can provide higher amounts of financing than individual Business Angel investors.

### C. Crowd Funding

Crowd funding is an umbrella term used to describe diverse forms of fundraising, typically via the Internet, whereby groups of people pool money to support a particular goal ([41] and [42]). There are four main types of crowd funding, namely reward-based, donation based, lending-based, and investment-based (equity) crowd funding. For Instance, in reward-based crowdfunding project, proponents look for finance from a crowd of backers. The most typical reward to backers is the delivery of a product or service, which makes this type of crowdfunding somehow similar to financial bootstrapping

### D. Accelerators and Incubators

Accelerators and incubators are organizations that aim to help start-ups with mentorship, advice, network access, and shared resources to grow and become successful [43]. Sometimes they also offer physical space and financial resources, which often comes in the form of equity. There exist different types of accelerators and incubators, depending on the services offered, the industry focus, and the owner, which could be a private company or a governmental institution.

### E. IP-based investment funds

These funds Invest into intellectual property (IP), mostly patents [44]. This way, innovative firms or investors can support their IP and use the funds generated to grow their venture. Thus, IP-based investment funds neither provide equity nor debt, but acquire intellectual assets of a company

### F. Block Chain

In twenty first century transformation of technology is fintech [23]. Blockchains enable online real time digitally recorded Peer to Peer transactions which are currently immutable and secure, at least until the advent of Quantum computing .Block chains are already at the heart of mainstream banking activity and offer tremendous potential to innovative early stage ventures of all types through assisting new forms of crowd funding, such as through initial coin offerings using block chain currencies such as Bitcoin.

Concerned about the funding gap that hinders young entrepreneurial ventures from exploiting growth opportunities, governments have created schemes to increase the availability of long-term financing to entrepreneurial ventures ([45] and [46]). These schemes include: subsidies to investment and research and development (R&D), subsidized loans and loan guarantees and government-supported equity through VC.

#### IV. STARTUP LIFE CYCLE AND INVESTMENT PROCESS LIFE CYCLE

Startup is the buzz word or it has been the flavour of the season. Nowadays almost everyone has a startup idea and entrepreneurship is very common. But the most challenging task is to identify a viable business model that would evolve overtime just like the way the idea converted into a reality. Every startup firm has to go through a series of stages during its development before it is listed through the IPO market. Normally the life cycle of startup can be easily breakdown in to distinctive stages such as pre startup, startup and growth stages. Generally it can be classified into five phases of startup development namely idea, early, growth, exit.

The first stage is Idea stage where an idea about an innovative product has emerged. Second stage is early stage where the minimum viable product from the idea is generated. In this stage idea starts developing into a formal business, the entrepreneurs are focused on generating commercial value from its product or service and validating the business viability with a few customers. Growth stage is the next stage in which the validated product is started adopting the market and gradually the market adoption increases rapidly. Revenues start growing and huge investment need also emerges. At this stage, focus is on investing more on scaling the infrastructure and operations and invest heavily in marketing activities. With the increased customer base and increased revenue startup firm will reach to a stage where startup firms are no more in the startup stage but are matured firms. At this stage growth starts diminishing a startups may start to think expand further through mergers acquisition or IPO exit.

Each and every stage of startup is funded by different financiers. In stage wise funding any startup will come across different financiers such as bootstrapping, grants, angel investments, venture capital (VC) funds and private equity (PE) bridge loans. Thereafter, any start-up will have to raise public equity through IPO market.

As stated earlier startups phases are distinct so the funding of startup also depends on these stages. But awareness about this stage wise funding from a financial perspective is not known clearly. In general initial stage of any startup is funded by the seed capital or these firms are bootstrapped by family, friends, or self-investments. Early stage startups are funded by Angels. Angel investors are wealthy and well-connected individuals with the motivation of investment in smaller businesses. They together form an Angel Network, which pools resources, makes informed decisions and offers advice to their portfolio ventures. Angel valuation is mainly focused on idea of the business and the team.

Growth stage of a startup is often funded by venture capitalist in a series of funding typically named as Series 'A', 'B', 'C', 'D' etc. Every round of funding has to go through a formal valuation process and against VC's investment corresponding equity share of the firm should be offered. Venture capital support the startup firms when the startup firms reaches a stage where it has fetched some revenue to ensure that its product or service has market acceptability. Getting top VC's funding is considered to be a great achievements by entrepreneurs because it ensure the quality and assurance of their business models [47]. Venture capital valuation is a complex and sophisticated phenomenon.

The investors of the startup are seeking an exit through either strategic acquisition or IPO in open market. In some cases bridge loans also help startups to manage the IPO or for acquisition process. Most of the successful firms follows the funding life cycle [48].

Apart from the above mentioned financing models, Crowd funding is a new financing model and another new phenomena is "unicorns" and in startups the generally ignored sources of financing is debt. It is very evident that a substantial change in the entrepreneurial finance had happened.

#### V. IMPORTANT FACTORS INFLUENCE THE ENTREPRENEURIAL FINANCE

Major factors affecting the entrepreneurial finance can be further classified into two such as supply side and demand side factors. Supply side factors are factors which influence the investors of startup whereas demand side factors are affected by startup related factors. In the following session important supply and demand side factors are described in detail.

##### A. *Supply side factors*

Supply side factors are mainly classified into four such as financial crisis related, technology related, policy related and regulation related factors

##### 1.) *Financial Crisis related factors*

Supply-side factors refer to the supply side of entrepreneurial financing and comprise various types of factors, some of which can be linked to the 2008/2009 financial crisis and the economic crisis that followed. As a reaction to the financial crisis, the regulation of financial institutions has intensified with a strong focus on banks. Examples of these regulations include Basel II and III, which increase the minimum capital requirements that a bank has to hold dependent on the riskiness of the loans it has given out. To comply with these intensified regulations, banks had to introduce various risk measures that make small firm financing more complex and expensive. As a result, start-ups and small firms with uncertain and risky business models have little chances to obtain bank financing for their ventures.

As a reaction to the economic crisis, the central banks cut interest rates to stimulate economic activity. The low interest rates made debt financing relatively cheap compared to other sources of entrepreneurial financing, provided that the venture's business model is low risk and that is has enough track record and securities to comply with the intensified risk measures introduced by the banks.

The low interest rates also had an effect on investors. Those who made investments in less attractive government and corporate bonds started seeking other investment opportunities. This has benefitted, among others, venture capital funds, incubators or crowdfunding providers in their fund raising efforts. This, in turn, increased the chances for innovative, high-risk ventures to receive risk capital. The tough economic climate and the negative experiences with the dotcom bubble in the year 2000 have led to a decrease in initial public offerings (IPOs).

This collapse along with the negative experiences made by investors has brought the market for IPOs down and created difficulties for risk or venture capital providers to exit their investments. The reduced exit possibilities make it more difficult for risk capital providers like VC funds to collect funds and invest them into start-ups [49].

#### 2.) *Regulatory frame work related factors*

Countries with stronger regulations enable entrepreneurship and entrepreneurial finance, as regulation can lower the cost of entry and ensure contractual certainty.

#### 3.) *Technology-related factors*

Technology has enabled the emergence of some new players for instance reward based crowdfunding, peer-to-peer lending, or invoice crowdfunding platforms which can be made available only through the Internet or through social media. Virtual currencies like Bitcoin and their associated technologies can change the business models of existing players in entrepreneurial finance and push the new players even further. These technologies provide new ways to assess risk and treat financial information, allow for easier participation of nonprofessional investors in entrepreneurial financing. It can provide greater liquidity, and reduce monitoring costs of investors, but can also lead to higher risk due to greater interconnectedness

#### 4.) *Policy-related factors*

The creation of functioning markets of entrepreneurial finance has become a priority for many governments around the world and has led to many policy initiatives. Countries like USA changed a number of laws and regulations making it easier for small firms to conduct an IPO or to collect funds through crowd funding. Many governments installed GVC funds to complement the market for private VC funding [50].

Another area of start-up policy concerns subsidized debt financing via state-owned banks and loan guarantee schemes

or state subsidies for startups and high-growth firms. Such policy initiatives reduce either the costs of a particular financing instrument or provide direct funding to new ventures through state subsidies.

#### B. *Demand-side factors*

Demand side factors related to the demands of start-ups, founders, and the business models and markets in which they operate.

The rise of the Internet and social media as well as the globalization of product markets, have created many innovative markets. Such markets are characterized by strong network externalities and lead to market situations where only a few firms survive. When a startup is operating at high technology intensive market then cash burn rate will be high and demand for the funding needed will be in the early stages of firm life cycle.

Another factor is the growth of the knowledge economy together with a high importance of Intellectual Property such as patents, trademarks, and design rights. As firms tend to patent more, IP based financing instruments such as patent-based investment funds become available and can be an option for IP-based start-ups and growth ventures to fund their operations. Moreover, patents can be used as collateral to obtain debt funding from banks and other financial institutions [51].

### VI. CONCLUSION AND FUTURE DIRECTIONS

Global financial crisis has paved ways to new entrepreneurial financing avenues. Entrepreneurial financial intermediation has been a subject of considerable study in the finance literature. To summarize, the markets for entrepreneurial finance have changed rapidly over the last years. Many new players have entered the arena. Scholarly research in entrepreneurial financing appears biased toward certain players and financing instruments such as VC and, more recently, crowd funding and has neglected others. Examples of neglected new players in entrepreneurial financing are debt venture funds and angel networks.

Another neglected area in entrepreneurial finance research is the interplay or interaction between the new players or instruments and the established forms of entrepreneurial financing such as VC or Business Angel financing. Start-ups seeking financing often use several financing instruments simultaneously [52]. Most existing entrepreneurial finance research focuses on single financing instruments such as VC or bank financing and does not take a holistic approach where financing instruments are regarded as complements rather than substitutes.

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# Dataveillance and its Impact on Privacy

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**Abstract— The purpose of this paper is to present a view on Dataveillance and its impact on privacy. Dataveillance is the practice of collecting individual data. Government bodies, Business organizations, political parties and NGOs use the collected data to build policies, monitor individuals, promote business and ideologies and various other positive or negative purposes.**

**Keywords— Dataveillance, Surveillance.**

## I. INTRODUCTION

Dataveillance is the systematic collection and use of personal data for the investigation or monitoring of the actions or communications of one or more persons. Dataveillance started in the 1980s, when a set of tools for exploiting data was used on data collected for some other purpose. Developments in information technologies and an urge for social control by government agencies and corporations alike, has seen dataveillance practices diversify and proliferate.

In today's world, the regulatory frameworks that enable and control dataveillance activities are not considered important. Data privacy measures, usually referred to as (personal) data protection, have been the subject of a great deal of activity in legislatures, resulting in many countries having data protection oversight agencies and related laws. On the other hand, provisions that enable rather than constrain dataveillance are more. The pre-dated data protection laws often over-rule the attempts to constrain dataveillance. This paper summarizes the impact on individual privacy while analyzing various dataveillance methods used in modern world.

## II. WHAT IS SURVEILLANCE?

Surveillance involves keeping constant watch over individual, group or an organization with the intention to spy, supervise or to control. It assists in collecting information about the target's movement, contacts, communication and activities. The main form of surveillance is known as physical surveillance which is ultimately watching and listening. The current technologically advanced world assists greatly in surveillance. Technology provide means to monitor the target from a distance at any time of the day. Technology today provides top monitoring devices such as infrared binoculars, field glasses, light amplifiers satellite cameras, and sound capturing devices like directional microphones. Surveillance these days provide profound insight into the target's life. The collected data from multiple sources can be used to build a complete history of past and present of the target who is under surveillance. Access to such detailed

view of information gives power to the surveillant agency such as the government to control the individual.

## III. WHAT IS DATAVEILLANCE?

Dataveillance is method of surveillance on individuals by tracking and analysing the data collected on them. Dataveillance was originally defined as the systematic use of personal data systems in the investigation or monitoring of the actions or communications of one or more persons. Dataveillance is monitoring by accessing, trapping, tracking and reading through personal and confidential data of an individual by using advanced information technology tools. This involves accessing bank account details, credit card purchases, GPS, mobile phone (Calls and application), emails and internet browsing to get an insight into their personal lives.

Dataveillance is the result of evolution of technology, as we become more and more dependent on technology it is creating an opportunity for others to invade our privacy and monitor our every move. Government agencies often use dataveillance to prevent terrorist attacks and other heinous crimes. There are four aspects of dataveillance:

1. **The timeframe** in which surveillance is conducted may be:
  - across a single span of time.
  - Across recurrent time spans.
  - Scattered across time mostly based on a trigger situation like a published text.
2. **The intensity** with which surveillance is conducted may be once-only, repeated, continual, or continuous.
3. **The persistence** of consequences of surveillance may be once, short-to-medium term or long-term or permanent.
4. **The period** within which surveillance is applied:
  - The present, through real-time use
  - The past, through retrospective use
  - The future, through prospective or 'predictive' use.

### A. Types of Dataveillance – Personal Dataveillance

Personal dataveillance is the monitoring of a targeted individual for a reason.

Government agency like the police or tax department can do monitoring of individual to find evidence of crimes committed or anti governmental/social activities. This form of dataveillance is valuable to the authorities as it provides them with evidence and information that cannot be easily

obtained through manual investigation and interrogation techniques.

Businesses can track employees' activities such as internet usage and time checks to ensure employees are working efficiently. It can also be used in risk management to detect and prevent errors and fraud to better safeguard their business. Individuals can also use dataveillance to a degree such as using GPS on a car to see where a family member has travelled and what websites the kids are browsing. It offers families a form of security and control.

#### *B. Types of Dataveillance – Mass Dataveillance*

Mass Dataveillance refers to the collection of data on groups of people. The general distinction between mass dataveillance and personal dataveillance is the surveillance and collection of data as a group rather than an individual. It involves identifying members of the entire population that belong to a specified group and then using techniques like that of personal dataveillance.

The benefits of this form of surveillance is that it is most likely that the person of interest will belong to that group hence monitoring just that group will be more efficient than looking through the entire population. It is used by authorities such as the government and police as well as some businesses.

This type of surveillance has been used heavily for checking on terrorism or anti governmental activities. This shows how one's privacy can be invaded if necessary, by higher authorities even when they maybe innocent. Mass surveillance can be criticized on many grounds like violation of privacy rights, illegality and for prevention of social and political freedom.

#### *C. Types of Dataveillance – Facilitative Dataveillance*

An individual's data is used along with others and checked if comparison can unveil distinct patterns.

### IV. DATAVEILLANCE IN MODERN WORLD

#### *A. Social network analysis*

One common form of surveillance is to create maps of social networks based on data from social networking sites such as Facebook, MySpace, Twitter. This also include traffic analysis information from phone call records and mobile apps. These social network "maps" are then data mined to extract useful information such as personal interests, friendships & affiliations, wants, beliefs, thoughts, and activities.

Many government agencies across globe are investing heavily in research involving social network analysis. The intelligence community believes that the biggest threat comes from decentralized, leaderless, geographically dispersed groups of extremists, and dissidents. These types of threats are most easily countered by finding important nodes in the network and removing them.

**SSNA algorithms program** - social network analysis to assist with distinguishing potential terrorist cells from legitimate groups of people

**AT&T developed a programming language called "Hancock"** – analyze enormous databases of phone call and Internet traffic records.

#### *B. Biometric*

Biometric surveillance is a technology that measures and analyzes human physical and/or behavioral characteristics for screening purposes. Examples of physical characteristics include fingerprints, DNA, and facial patterns. Examples of mostly behavioral characteristics include gait (a person's manner of walking) or voice.

**Facial recognition** is the use of the unique configuration of a person's facial features to accurately identify them, usually from surveillance video. Advanced technologies can identify a person at up to 500 ft (150 m) by their facial features.

**Behavioral biometrics** might be used for instance to see if a person's behavior is suspect (looking around furtively, "tense" or "angry" facial expressions, waving arms, etc.). Based on affective computing, computers can recognize a person's emotional state based on an analysis of their facial expressions, how fast they are talking, the tone and pitch of their voice, their posture, and other behavioral traits.

**DNA profiling**, which looks at some of the major markers in the body's DNA to produce a match. The FBI is spending \$1 billion to build a new biometric database, which will store DNA, facial recognition data, iris/retina (eye) data, fingerprints, palm prints, and other biometric data of people living in the United States.

**Facial thermographs** are in development, which allow machines to identify certain emotions in people such as fear or stress, by measuring the temperature generated by blood flow to different parts of the face, which might indicate that they are hiding something, lying, or worried about something.

#### *C. Datamining and Profiling*

**Data mining** is the application of statistical techniques and programmatic algorithms to discover previously unnoticed relationships within the data.

**Data profiling** in this context is the process of assembling information about an individual or group in order to generate a profile — that is, a picture of their patterns and behavior.

Data profiling can be an extremely powerful tool for psychological and social network analysis. A skilled analyst can discover facts about a person that they might not even be consciously aware of themselves

Electronic record-keeping makes data easily collectable, storable, and accessible—so that high-volume, efficient aggregation and analysis is possible at significantly lower costs. Many such transactions are aggregated to assemble a detailed profile revealing the actions, habits, beliefs, locations frequented, social connections, and preferences of the individual. This profile is then used to determine whether the person is a military, criminal, or political threat. Economic (such as credit card purchases) and social (such as telephone calls and emails) transactions in modern

society create large amounts of stored data and records. Today many of these records are electronic, where each transaction recorded electronic record. Public records—such as birth, court, tax and other records—are being digitized and made available online.

In addition to its own aggregation and profiling tools, the government can access information from third parties — for example, banks, credit companies or employers, etc or by purchasing data from commercial data aggregators or data brokers.

#### D. Corporate

Corporate surveillance is the monitoring of a person or group's behavior by a corporation. The data collected is most often used for marketing purposes or sold to other corporations but is also regularly shared with government agencies. It can be used as a form of business intelligence, which enables the corporation to better tailor their products and/or services to be desirable by their customers.

The United States government often gains access to the data collected from consumer credit and direct marketing agencies—such as Google—for augmenting the profiles of individuals whom it is monitoring. The FBI, Department of Homeland Security, and other intelligence agencies have formed an “information-sharing” partnership with over 34,000 corporations as part of their InfraGard program. The U.S. Federal government has gathered information from grocery store “discount card” programs, which track customers’ shopping patterns and store them in databases, in order to look for “terrorists” by analyzing shoppers’ buying patterns.

##### 1). Business Intelligence

Data collected on individuals and groups can be sold to other corporations, so that they can used for direct marketing purposes, such as targeted advertisements on Google and Yahoo. These ads are tailored to the individual user of the search engine by analyzing their search history and emails.

For instance, Google, the world's most popular search engine revenue model is based on receiving payments from advertisers for each page-visit resulting from a visitor click.

Google stores identifying information for each web search. An IP address and the search phrase used are stored in a database for up to 18 months.

Google scans the content of emails of users, to create targeted advertising based on what people are talking about in their personal email correspondences This information, along with the information from their email accounts, and search engine histories, is stored by Google to use for building a profile of the user to deliver better-targeted advertising.

##### 2). Intra-Corporate Surveillance

More than 40% of the companies monitor e-mail traffic of their workers, and 66% of corporation monitor Internet connections. Statistics show about 30% of the companies had also fired employees for non-work-related email and Internet usage such as "inappropriate or offensive language" and "viewing, downloading, or uploading inappropriate/offensive content".

#### E. RFID and GeoLocation Devices

##### 1). RFID tagging

Radio Frequency Identification (RFID) tagging is the use of very small electronic devices (called "RFID tags") which are applied to or incorporated into a product, animal, or person for identification and tracking using radio waves. The tags can be read from several meters away. Some companies appear to be "tagging" their workers by incorporating RFID tags in employee ID badges.

It is speculated that, soon, every object that is purchased, will have RFID devices in them, which would respond with information about people as they walk past scanners (type of phone, shoes, books, Credit Cards or membership cards carried by them). This information could be used for identification, tracking, or targeted marketing.

##### 2). Global Positioning System (GPS)

In the U.S., police have planted hidden GPS tracking devices in people's vehicles to monitor their movements, without a warrant. Several cities are running pilot projects to require parolees to wear GPS devices to track their movements when they get out of prison.

##### 3). Mobile Phones

Mobile phones are also commonly used to collect geolocation data. The geographical location of a mobile phone (and thus the person carrying it) can be determined easily (whether it is being used or not), to calculate the differences in time for a signal to travel from the cell phone to each of several cell towers near the owner of the phone.

Content information included the actual text of messages, emails and the wiretapping of voice or messaging content in real-time.

In modern world, tracking of mobile phones is most commonly used way to track down ran away fugitives and criminals.

## V. SOCIAL IMPACT - BENEFITS OF DATAVEILLANCE

### Law Enforcement and Criminal Investigation

- Provides evidence and information that cannot be easily obtained through manual investigation and interrogation techniques.

- Helps local authorities hunt down cyber predators and bullies as well as identity fraud.

- Dataveillance plays a vital role in tackling terrorism.

- Having unique identifiers such as IP addresses allows for the identification of user’s actions, which are often used to track illegal online activity such as piracy.

### Business Intelligence

- Understand interests of potential clients by tracking their online activity.

- By tracking online activity through cookies, as well as various other methods, businesses can better understand what sort of advertisements work with their existing and potential clients.

- Information freely available from online transactions made by users, help boost sales and attract attention towards their products to help generate revenue.

#### **Effective use of modern technology on data collected or data monitored**

- Data mining, profiling and analytics on data collected helps predict possible social threats.
- Analyze customer behavior and output can be leveraged for business planning and marketing.
- RFID tags in newborn baby ID bracelets put on by hospitals have foiled kidnappings.
- RFID and microchips help track criminals.
- Effective use of medical data collected can help formulate better treatment procedures.

#### VI. SOCIAL IMPACT - CONCERNS ON DATAVEILLANCE

Personal dataveillance of an individual without their consent is illegal. While the government agencies are excused as they perform these monitoring techniques to ensure our safety. However, for businesses and individuals if caught tracking an individual without their consent, it can be punished by law as it is a breach of one's privacy. Concerns on various types of dataveillance can be summarized below:

- **Privacy:** Threat to the privacy and identity of individuals and as a society
- **Human Rights:** Violation of privacy rights, illegality and for prevention social and political freedom.
- **False Identity:** Dataveillance is more in terms of monitoring data than the actual person, it provides room for wrong identification of individual and can lead to ill-informed decisions.
- **Data Protection:** If social media database that has personal details isn't protected someone can break and access this valuable information and exploit them.
- **Data Quality:** Concerns on the quality of the data that are collected in the dataveillance systems that put an individual in unnecessary dangers and misinterpretation of data.
- **Exploitation:** Data collected for business intelligence is sold to corporate companies without addressing privacy concerns.

Personal dataveillance is also a powerful weapon that can be used to gain power over another entity. Confidential secrets can be uncovered and be used to blackmail an individual. It can be used to stalk a person or locate someone to hurt physically. In the wrong hands it can become a great tool to continuously have access to the intended target and that thought alone is frightening.

#### VII. SOCIAL IMPACT – DATAVEILLANCE, PRIVACY AND HUMAN RIGHTS

Broadly interpreted privacy is an individual's integrity and therefore includes every characteristics of an individual's social need. Privacy of personal data is an individual's right to control over his data even in the hands of a third party.

##### **Why data Privacy?**

- Philosophically – Importance of human rights to protect human dignity, integrity, individual autonomy and self-determination.
- Psychologically – The people's need for private space.
- Sociologically – The people's need to behave freely and to communicate with other people without having the threat of being observed.
- Economically – The people's need to invent without surveillance.
- Politically – The people's need to be free to act, think and argue without surveillance.

##### **International initiatives for data protection**

International safeguards recommended for targeted surveillance assume some prior suspicion of the target of surveillance. These safeguards for targeted surveillance emerge from International Human Rights legal norms that require that there must be clear justification whenever there is any interference with the right to privacy, that ensures that there is compelling justification for any serious interference with protected human rights.

The United Nations is veering towards framing useful norms - it has recently passed a resolution calling upon states to review their procedures, practices and legislation with respect to communication surveillance, including mass surveillance, with a view to upholding privacy rights. The UN Special High Commissioner for Human Rights Navi Pillay, in her report titled 'The right to privacy in the digital age' has emphasized the importance of safeguards to protect rights during mass surveillance and has pointed out that internal procedural safeguards without independent external monitoring are inadequate for the protection of rights.

#### VIII. CYBERSPACE REGULATION OF DATAVEILLANCE

Dataveillance is subject to many different influences, which may variously stimulate or constrain its use. This section briefly reviews the various forms of influence that are of a regulatory nature. Clearly, law is one major form of regulation.

Mechanisms other than law also have regulatory influence on dataveillance. In more general context cyberspace regulation involves:

- Consists of standards and protocols more than software.
- Regulation hardware and in biometrics
- Enabling architecture/infrastructure for regulating dataveillance

- By mechanisms as default settings, message encryption, pseudonymous identities and obfuscator routing.
- Use of various tools associated with the concept that of **counter surveillance** that disrupt the effectiveness and possibilities of dataveillance.
- Use of Privacy-enhancing technologies, otherwise known as PETs in browsers to prevent other actors from collecting user's data.  
Design features of cyberspace infrastructure that regulates dataveillance:
- **'You cannot'** - Do not support dataveillance activities and may even prevent them.
- **'You cannot, unless'** – Prevent support dataveillance activities, unless the individual takes some action to enable it.
- **'You can, unless'** - Prevent support dataveillance activities, unless the individual takes some action to disable it.
- **'You can'** - Explicitly support dataveillance activities.

## IX. DATAVEILLANCE IN INDIA

There has been an exponential growth in the presence of technology in the daily life of an average Indian citizen over the past few years. These technologies allow great potential for surveillance. The technology being used to carry out surveillance in India over the past 5 years is largely an upgraded, centralized and substantially more powerful version of the surveillance techniques followed in India since the advent of telegraph and telephone lines

The main programmed of the Indian Government (in public knowledge) that are being used to carry out state dataveillance are explained in subsequent sections.

### A. *Central Monitoring System (CMS)*

Collection, storage, access and analysis of data collected from across the country in a centralized manner. The data collected by the CMS includes voice calls, SMS, MMS, fax communications on landlines, CDMA, video calls, GSM and even general, unencrypted data travelling across the internet.

The CMS is primarily operated by Telecom Enforcement and Resource Monitoring Cell (TERM) within the Department of Telecom, which also has a larger mandate of ensuring radiation safety and spectrum compliance.

### B. *National Intelligence Grid (NAT-GRID)*

Links the stored records and databases of several government entities to collect data, decipher trends and provide real time analysis of data gathered. Citizen data sources include bank account details, telephone records, passport data and vehicle registration details, the National Population Register (NPR), the Immigration, Visa, Foreigners Registration and Tracking System (IVFRT). Big data analytics is effectively utilised on collected data to prevent another instance of the September, 2011 terrorist attacks in Mumbai.

The list of agencies that will have access to this data collection and analytics platform are the Central Board of Direct Taxes (CBDT), Central Bureau of Investigation (CBI),

Defense Intelligence Agency (DIA), Directorate of Revenue Intelligence (DRI), Enforcement Directorate (ED), Intelligence Bureau (IB), Narcotics Control Bureau (NCB), National Investigation Agency (NIA), Research and Analysis Wing (RAW), the Military Intelligence of Assam, Jammu and Kashmir regions and finally the Home Ministry itself.

### C. *Lawful Intercept And Monitoring Project (LIM)*

Lawful Intercept and Monitoring (LIM), is a secret mass electronic surveillance program operated by the Government of India for monitoring Internet traffic, communications, web-browsing and all other forms of Internet data. It is primarily run by the Centre for Development of Telematics (C-DoT) in the Ministry of Telecom since 2011.

It is the primary programmed for internet traffic surveillance in India, allowing indiscriminate monitoring of all traffic passing through the ISP. Using advanced search algorithms developed uniquely for the project, the system has various automatic routines which range from targeted surveillance on the source of the data to raising an alarm with the appropriate authorities.

### D. *Network Traffic Analysis System (NETRA)*

Software is meant to monitor Internet traffic on a real time basis using both voice and textual forms of data communication, especially social media, communication services and web browsing. It is developed by the Centre for Artificial Intelligence and Robotics (CAIR) at the Defense Research and Development Organization. (DRDO).

## X. LAWFUL REGULATION OF DATAVEILLANCE IN INDIA

The Indian government's new mass surveillance systems present new threats to the right to privacy. Mass interception of communication, keyword searches and easy access to users' data suggest that state is moving towards large-scale monitoring of communication. This is particularly flawed given that our privacy safeguards remain inadequate even for targeted surveillance.

This need for better safeguards was made apparent when the Gujarat government illegally placed a young woman under surveillance for obviously illegitimate purposes. This incident was a good example demonstrating that the current system is prone to misuse. While the lack of proper safeguards is problematic even in the context of targeted surveillance. It is a threat to the health of our democracy in the context of mass surveillance. The proliferation of mass surveillance means that vast amounts of data are collected easily using information technology and lie relatively unprotected.

Our safeguards in India apply only to targeted surveillance and require written requests to be provided and reviewed before telephone tapping or interception is carried out. India has no requirements of transparency whether in the form of disclosing the quantum of interception taking place each year, or in the form of subsequent notification to people whose communication was intercepted. It does not even have external oversight in the form of an independent regulatory body or the judiciary to ensure that no abuse of surveillance systems takes place.

The complete lack of accountability of the surveillance framework questions the way surveillance is likely to be used in India. In this context, mass surveillance and the Central Monitoring system (CMS) raises real concerns of extensive misuse of power by the state. News reports in India indicate this is a move towards intercepting all communication over the internet in India and scanning it for keywords like 'attack', 'bomb', 'blast' or 'kill'. Tweets, status updates, emails, chat transcripts, and even voice traffic over the Internet (including from platforms like Skype and Google Talk) will be scanned by this system.

In the context of surveillance of phone-calls CMS is even more opaque than targeted surveillance since the state can intercept communication directly, without making requests to private telecommunication service provider. This means that there is one less layer of scrutiny through which abuse of power can reach the public. There is no one to ask whether the requisite paper work is in place or to notice a dramatic increase in interception requests.

#### XI. CONCLUSIONS

Dataveillance has two sides; on one side, it apparently offers speed, security, and safety. The increased use of dataveillance has been found very useful on many occasions and positive aspects of dataveillance is widely accepted. Perhaps it is the one of the easiest ways for the state to monitor threats and track anti-social activities. With increase threats from unorganized radical and terror groups, dataveillance provide as a powerful tool to monitor such threats. With advanced technologies on data mining, profiling and analytics it is possible to predict possible threats. Dataveillance has its own benefits in business intelligence and effective marketing.

On the other hand, dataveillance exposes individuals to potential threats on privacy. Privacy is the right to have our own space, to be safe, and to be left alone. Dataveillance in its modern form questions human rights in terms of privacy. Flaws in data collection and storage exposes the data to groups who can use the data in wrong context. With modern era dataveillance on social media and any information passed through phone and internet, social impact of dataveillance is deep-rooted.

Main concern for the use of dataveillance technology is that it has no standards or regulations. In addition, because of its perceived benefits, the worrisome aspects are usually overlooked. There are no international norms to safeguard the information collected or regulations on data collection. In India there is no scrutiny or accountability of dataveillance systems which has resulted in unprecedented data collection and its interpretation.

- It is important for citizens to question whether the negative impacts of dataveillance on society are likely to be mitigated or eliminated.
- It is the responsibility of the elected representatives to formulize standards and regulations on dataveillance to safeguard individual's privacy and freedom.
- Regulated, standardized data collection along with advanced technologies can bring benefits to society while safeguarding privacy, rights and protection. External agencies and regulatory bodies are required to monitor data collection, storage and usage.

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# Influence of Size, Value and Overconfidence Bias on Asset Valuation Before, During and After Stock Market Crisis

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**Abstract**— The investment decision behaviour of an investor often moves away from the logical justification as postulated theoretically. These differences are attributed to behavioral consequences than ‘chance’ as described by the efficient market hypothesis. Behavioral finance introduces cognitive biases based evaluation models and rests on the pillars of cognitive psychology [14] and values the security from behavioral and market factors. The paper looks into the effect of size, value and overconfidence on portfolio return before, during and after crisis. , the study shows that both behavioral and market factors are relevant, but during specific market situations, for asset valuation.

**Keywords**— Traditional Finance, Behavioural Finance, Overconfidence, crisis.

## I. INTRODUCTION

Traditional finance focused on company specific factors for valuing securities. Asset pricing theories like CAPM and APT assume investors to be rational processors of all available information. Thus it is difficult for any investor to continuously beat the market and to earn extra profit without bearing an additional risk. The deviation from fundamentals, if occurs, are eliminated immediately by arbitrageurs. These assumptions create simple and pleasing models [11], which was the reason for its wide acceptance by the finance world. However, the growing evidence of discrepancies between the standard finance assumptions and reality, for instance, market anomalies, bubbles and volatility, relapse the authenticity of standard finance theories [12].

Behavioral finance on the other hand allows markets to be inefficient considering the fact that the investors are subjected to various errors in making decision as a result of heuristics and biases. Contrary to standard finance, behavioral finance considers investors to be normal [16]. Normal investors are not resistant to cognitive errors and emotions similar to rational investors. They are emotional, experience the effect of illusion and sometimes process the information incorrectly [9]. Behavioral finance integrates with psychology, sociology and finance and tries to give a better justification for the anomalies in the market. In short, behavioral finance has brought about practicality to the field of finance which was originally developed on rationality and randomness.

## II. LITERATURE REVIEW

Although the traces of behavioral finance can be seen long back in 1912, when Seiden suggested the relationship

between the mental attitude of market participants and stock price movements [13], it got attention with the publication of most influential article on decision making by Tversky and Kahneman in 1973. They introduce three biases, representativeness, anchoring and framing which plays a significant role while making a decision by an individual. Their prospect theory [19] stands as an important theory in behavioral finance. It was DeBondt and Thaler, who started with analysing the presence of bias in the stock market. They captured the presence of representativeness bias in the market which leads to overreaction [6]. Same year witnessed the exposure of another trend in the market, disposition effect, which makes investors to realise gains too early by selling winning stock too early by holding the losing stocks, which contradicts the rationality assumption of standard finance [15].

Another well-established concept in psychology which has also become the favourite pattern of behavioral finance is overconfidence. Overconfidence is defined as overestimation of one’s knowledge or precision of one’s decision. Theory advises investors not to trade frequently. Maintaining a well-diversified portfolio and its periodical revisions enable investors to earn considerable profits. However, the reality differs. Studies show that the average number of stocks in the investor’s portfolio is far less than the recommended. This is an evidence of overconfidence. Overconfidence also leads to increased trading by the investors [20]. An overconfident investor’s participation in stock market increases by around 20%. This excess participation does not increase return. Conversely, studies have shown that the aggregate portfolio return of an investor trims down by 3.8% due to his aggressive trading [3]. Also men are considered to be more overconfident than women and hence trade more [2]. The reason for excess volatility can also be attributed to overconfidence [1].

## III. DATA AND MODEL

The study is done on the Nifty index of National Stock Exchange of Indian secondary market, for the period June 1996 to June 2014. The model is inspired by Fama French three factor model. Fama and French extended the single factor model CAPM by adding a size and a value factor [7]. Though it is considered as a healthier version of CAPM, it is not able to capture the market behaviour completely. Nevertheless, the model still enjoys a central position in the literature of finance. Numerous researchers extended the model, the popular one being Carhart’s four factor model [5],

who extended the three factor model by adding a behavioral factor, momentum factor. Present study also extends Fama French three factor model.

Along with the three factors of Fama and French, present study tests the influence of behavioral factor on asset valuation before, during and after crisis. The behavioral factor used in the study is overconfidence bias. Overconfidence is a well-established and favourite concept in behavioral finance. An investor is said to be overconfident when there is an overestimation of the probability of favoured hypothesis [8]. It happens when one believes that they are better than what they really are [18], [4], [17] and underestimate others. Also, research shows that overconfidence is directly related to volatility in stock market, especially during crisis [1]. Thus, considering overconfidence bias than any other bias can give a clear view of the influence of behavioral factor in stock market.

Behavioral finance literature uses various methods such as surveys, laboratory experiments and empirical evidences to capture the biases. Present study employs a popular method to capture the overconfidence bias, market reaction. Several researches have used this method to capture the presence of biases [5], [6]. Thus, overconfidence is captured using, turnover of Nifty index. Also, similar to Fama and French, size factor is captured using market capitalisation and the value factor using book to mark equity ratio. The model can be summarised as follows.

$$R_{(t)} - R_{(f)} = \alpha + (R_m - R_f) * C_1 + SMB * C_2 + HML * C_3 + OVC * C_3$$

Where,

$R_{(t)}$  is the return from portfolio formed by combining all the stocks under study.  $R_{(f)}$  is the risk free return, which is one month T-bill rate.  $SMB$  is the return on the portfolio mimicking size and is the difference between the one month average return of small and big company.  $HML$  which represents the return of portfolio mimicking the value is the difference between one month average return of high and low value company.  $OVC$  or overconfidence is the one month average return of high and low turnover portfolio.  $C_1, C_2, \dots, C_3$  are the corresponding coefficients.

#### IV. ANALYSIS

##### A. Splitting of sample into three time horizons

The financial crisis of 2007 -2009 is considered as the most critical one in the last decades [10]. Hence, the sample is divided into, pre-crisis period (Jan 1996 – June 2007), on-crisis period (July 2007 to Nov 2009) and post- crisis period (Dec 2009 to Aug 2014) [10], [1], (Graph 6.1).

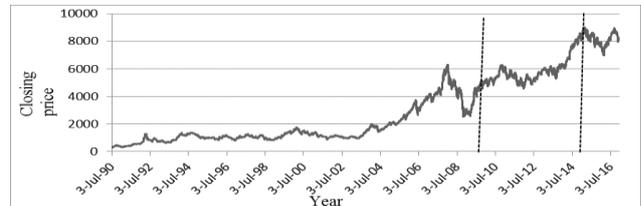


Figure 1 : Nifty Time Horizons (1996 to 2016)

##### B. Influence of Market and Behavioral Factors on Asset Valuation Before Crisis

The first split consists of data from Jan 1996 to June 2007 (pre-crisis period). The result is summarised in Table 1. In the table, M1 is CAPM model, M2 is Fama-French three factor model and MB2 is the behavioural model, which has the behavioural factor, overconfidence, along with Fama-French three factor model.

Market risk premium and overconfidence have a positive coefficient; size and value have negative coefficients (Table 1). All the models are significant. Model MB2 has a high explanatory power.

TABLE I  
MARKET / BEHAVIOURAL FACTORS INFLUENCE ON ASSET VALUATION BEFORE CRISIS

	M1	M2	MB2
Market risk premium (coefficient)	0.084*	0.069*	0.066*
Size (coefficient)		-0.205*	-0.131*
Value (coefficient)		-0.120*	-0.032
Overconfidence (coefficient)			0.217*
Adjusted R-squared	0.607*	0.821*	0.847*
Durbin-Watson	2.212	1.859	1.996

Note: coefficient values and their \*Significant at 1%. Model M1 is the simple CAPM model, M2 is Fama and French three factor model, MB2 is a combination of Fama – French factors and overconfidence factor

The result shows that, market risk premium and overconfidence have a positive influence on return whereas size and value have a negative influence. Also, explanatory power of the model increases after adding behavioral factor into the model. The explanatory power of the model has increased by an average of 1.98% after introducing a single behavioral factor to the Fama French model.

Thus, before crisis, creating a portfolio of high turnover companies find to be more profitable than market capitalization and book to market ratio.

##### C. Influence of Market and Behavioral Factors on Asset Valuation during Crisis

The next split of data is from July 2007 to Nov 2009, which is considered as the crisis period. The result of regression analysis is summarised in Table 2. Market risk premium and overconfidence have a positive coefficient (Table 2). During crisis, size and value become insignificant.

TABLE 2  
INFLUENCE OF MARKET / BEHAVIORAL FACTORS ON ASSET VALUATION DURING CRISIS

	M1	M2	MB2
Market risk premium(coefficient)	0.051*	0.056*	0.044*
Size (coefficient)		0.07	0.076
Value (coefficient)		-0.142	-0.028
Overconfidence (coefficient)			0.272*
Adjusted R-squared	0.937*	0.937*	0.952*
Durbin-Watson	1.789	1.762	2.041

Note: coefficient values and their \*Significant at 1%. Model M1 is a simple CAPM model, M2 is Fama-French three factor model, and MB2 is a combination of Fama – French factors and overconfidence factor

The result shows that, during crisis period, similar to pre-crisis period, overconfidence has a positive influence. Size and value which have a negative influence before crisis become insignificant during crisis. The predictability of the model is higher in the model with a behavioral factor (MB2) which reemphasizes the importance of considering behavioral element also while calculating return.

D. Influence of Market and Behavioral Factors on Asset Valuation Post Crisis

The third classification of sample was done from Dec 2009 to Aug 2014 (Post-crisis) and the regression result is summarised in Table 3. The market risk premium has a positive coefficient (Table 3). Value has a positive coefficient; size and overconfidence are not significant.

TABLE 3  
INFLUENCE OF MARKET / BEHAVIORAL FACTORS ON ASSET VALUATION POST CRISIS

	M1	M2	MB2
Market risk premium (coefficient)	0.042*	0.032*	0.033*
Size (coefficient)		0.033	-0.068
Value (coefficient)		0.185*	0.178*
Overconfidence (coefficient)			-0.123
Adjusted R-squared	0.796*	0.840*	0.840*
Durbin-Watson	2.08	2.216	2.282

Note: coefficient values and their \*Significant at 1%. Model M1 is a simple CAPM model, M2 is Fama-French three factor model, and MB2 is a combination of Fama – French factors and overconfidence factor

The regression result depicts that, after crisis, value and market risk premium have a positive influence on return whereas overconfidence and size are insignificant. The predictability of the model are same for both M2, which is Fama-French three factor model and MB2 which include overconfidence along with Fama-French model.

V. SUMMARY AND CONCLUSION

Financial markets are highly dynamic and are a perfect example for complexity in action. Numerous studies have done to analyse the financial market. Present study also tries to analyse the influence of size, value and overconfidence bias on portfolio return.

An analysis of stock market data from 1996 to 2016 gives numerous insights into the influence of size, value and

overconfidence on portfolio return, before, during and after crisis.

Overconfidence has a positive influence before and during crisis but become insignificant after crisis. The result contradicts the negative relationship between overconfidence and return [3].

Market risk premium has a positive influence in pre, during and post crisis. Size has a negative influence on return before crisis, but becomes insignificant during and post crisis. Value which has a negative influence on return before crisis becomes insignificant during crisis. However, value has a positive influence on return after crisis.

Thus, high market capitalised firms (proxy for size) are not profitable before crisis as it has a negative influence on return and they are not significant during and after crisis. High book to market ratio (proxy for value) firms are profitable after crisis, but has a negative influence before crisis and are insignificant during crisis.

Overconfidence is not significant in the sample split after crisis. Hence, high turnover firms (proxy for overconfidence) are profitable on all situations except post crisis.

The above results also reveal that behavioral biases have a significant influence on return of the asset and hence on asset valuation. Thus, both behavioural and market factors are relevant, but during specific market situations, for asset valuation. Overall both market and behavioral factors are to be used by investors for asset valuation

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# Indian Banking Crises: Is it an Opportunity?

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**Abstract** - The banking industry in India has a huge canvas of history, which covers the traditional banking practices from the time of Britishers to the reforms period, nationalization to privatization of banks and now increasing numbers of foreign banks in India. Therefore, Banking in India has been through a long journey. Banking industry in India has also achieved a new height with the changing times. The use of technology has brought a revolution in the working style of the banks. Nevertheless, the fundamental aspects of banking i.e. trust and the confidence of the people on the institution remain the same. As if the bad loan crisis at Indian banks wasn't alarming enough, there is a ticking time bomb that can spark another crisis for the industry. Loans worth Rs3.5 lakh crore (\$48.88 billion) have not been recognized by banks in India as non-performing assets (NPAs) and they run the risk of turning sour, India Ratings, a part of the global ratings agency Fitch. In this paper an attempt has been made to identify various crisis in the entire banking system in India and how these crisis will create further issues. This article is divided in three parts. First part includes the introduction and general scenario of Indian banking industry. The second part discusses the various crisis faced by Indian banking industry in the recent times. Third part analyses about the possible solutions for the crisis and find out how these crisis could benefit the private players in the Indian Banking system.

**Keywords**— Banking Crisis, NPA, Public Sector Banks, Indian Banking

## I. INTRODUCTION

The financial system in the economy is like the circulatory system in the human body. And banks form its beating heart. If banks falter, the flow of money stops and the economy suffers the equivalent of a heart attack. The banking system's overhang of bad loans is another full-blown crisis in India that stymies growth and shows no signs of an early resolution. Popularly referred to as non-performing assets, or NPAs, these are loans for which borrowers have stopped repaying (or are unable to pay) interest and principal. The corpus of bad loans just keeps growing and is proving to be a drag on economic growth. It is acting as a constraint on fresh loans not just for the large corporates but also for the crucial small and medium sector which forms the economy's backbone. In India, banks are not doing terribly well. They have lent unwisely. As a result, many loans have "become overdue" and a number of borrowers are not in a position to pay back their debt. This has made many a loan a non-performing asset (NPA). When borrowers are in default or in arrears on scheduled payments of principal or interest for specified period, usually 90 days,

the loan is classified as NPA. All banks around the world have some NPAs but, if they become too large, banks can collapse. If the banks are big enough, this can cause the meltdown of the entire financial system. According to CARE Ratings, India had the fifth highest NPA ratio in the world, ranking only after Greece, Italy, Portugal and Ireland. India's NPA ratio stands at 9.85%, while major economies such as Britain, the US, Japan and Germany have ratios less than 2%. According to the latest Financial Stability Report of the Reserve Bank of India (RBI), the NPA ratio is set to deteriorate to 12.2% by March 2019, which would put India in fourth position, overtaking Ireland. As per the RBI, 11 public sector banks are under the prompt corrective action category, which means that the poor quality of balance sheets have to be addressed immediately to avoid potential meltdown.

India's banking industry could be said to be in what economists call secular decline. This occurs when adverse long-term trends threaten an entire business model. This secular decline has led to much introspection within the government and its various regulatory bodies. The Financial Sector Legislative Reforms Commission (FSLRC) has proposed a new Indian Financial Code. This code would streamline India's confusing regulatory framework and hold various actors in the financial system accountable. Currently, the country's regulatory framework is a bit like the US with overlapping mandates and multiple regulatory power centers, but none of them having the power or the ability to oversee the financial sector effectively.

### A. State-lenders are in trouble

For years, state-owned banks have funded projects in sectors like steel, power and infrastructure that were not the best in class and they later became non-performing assets when the business cycle turned. But unlike in the past, the current Indian government is a lot less willing to bail out the troubled banks by just recapitalizing them. Instead, it is pushing for greater structural changes.

This government has taken a harder stance along with the Reserve Bank of India, saying that 'you know this is a structural issue, we can't keep bailing out these banks.' It's too much of a waste of public money. The government would not

allow state lenders to default, but it is also not going to guarantee profitability. Still, in January, the government said it would disburse nearly \$14 billion into 20 public banks by March in exchange for them implementing reforms. That was part of a broader undertaking announced last October, where the government said it would inject about \$33 billion into its state-run lenders over two years. Following that, the Reserve Bank of India tightened guidelines for banks to resolve bad assets in February. Under the new rules, banks are not able to use loan restructuring schemes to delay recognizing bad debt. As a result, banks' profitability took a hit as they had to declare many existing loans as non-performing assets and required higher loan loss provisions — they are counted as expenses that banks set aside as allowance for uncollected loans and loan payments. State lenders have also been plagued by fraud. For example, India's second-largest state lender Punjab National Bank said rogue employees orchestrated a massive \$2 billion fraud over several years.

## II. LITERATURE REVIEW ON BANKING CRISES

Banks are often found at the center of financial crises, although banking crises often coincide with other financial crises, such as collapses in asset prices, currency crises, and sovereign debt crises. (I refer to Flood & Marion 1999, Krugman 2000, and Dooley & Frankel 2003 for detailed surveys of currency crises; to Sturzenegger & Zettelmeyer 2007 for a comprehensive account of sovereign debt crises; and to Kaminsky & Reinhart 1999 for an account of the interdependence of banking and currency crises.) Given the special role that banks play in the allocation of funds in the economy, banking crises have the potential of inflicting serious damage to the economy, causing collapses in output and increases in unemployment. Laeven & Valencia (2010) find that output losses following a typical banking crisis average approximately 37% of potential output.

The causes of banking crises have long been debated. A first set of theories regards banking crises as depositor panics characterized by unwarranted depositor withdrawals that place undue pressure on the liquidity position of the bank (Friedman & Schwartz 1963). Such depositor runs can cause illiquidity at banks that are intrinsically solvent. When severe, such liquidity pressures will force the bank to sell assets, possibly at fire sale prices, and might render the bank insolvent.

Banking failures can become systemic, if not prevented through policy, and can create panics and contagion, with negative externalities. Bank runs may or may not be related to changes in the real economy. For example, in traditional models of bank runs by Bryant (1980) and Diamond & Dybvig (1983), bank runs are self-fulfilling prophecies in an environment where consumption needs are unknown and long-term investments are costly to liquidate. Bank runs occur when depositors fear others will withdraw as well. Such models view banks as inherently unstable because they finance long-term, illiquid assets with demandable debt in the form of first-come-first-serve deposits. In these models, deposit withdrawals are unrelated to changes in the real economy.

Bank runs can also be triggered by depositors withdrawing funds in anticipation of economic downturns that will reduce the value of bank assets and raise the possibility that banks will not be able to meet their obligations (Jacklin & Bhattacharya 1988, Chari & Jagannathan 1988, and Allen & Gale 1998). Such crises are particularly likely when there is asymmetric information across depositors about looming bank distress. Importantly, Diamond & Rajan (2005), building on their 2001 model (Diamond & Rajan 2001), show that when illiquidity stems from the bank's asset side, bank runs can start and propagate systemic crises even when depositors do not panic, that is, even if depositors' actions are coordinated and they do not run simply because they fear others will run.

Depositor panics are most damaging when they result in contagion, with liquidity pressures spreading through the banking system as failures of individual banks create network externalities for the banking system as a whole. Contagion can arise from direct contractual linkages between banks, such as through interbank loans, or from indirect linkages, such as through balance sheet exposures to common shocks (Bhattacharya & Gale 1987, Allen & Gale 2000b).

Banking crises have been frequent since the adoption of deposit insurance, aggregate deposit withdrawals have rarely exceeded 10% of total deposits, with the most severe case in Argentina during the 1989 crisis when monthly deposit withdrawals from the system reached 26% during a single month (Laeven & Valencia 2008a)

A set of theories regards banking crises as stemming from widespread losses on the asset side of banks' balance sheets that render banks insolvent. Losses generally follow a protracted deterioration in asset quality and stem from adverse macroeconomic shocks, market failures, government interference, or fraud. Most of these theories are based on changes in economic fundamentals, and regard banking crises as a natural consequence of business cycles, with credit growing procyclically (Minsky 1982, Gorton 1988).

Credit grows rapidly when the economy is booming, as investors turn more optimistic about the future and lending standards deteriorate. When economic conditions slow, a flight to quality causes a collapse in credit. This procyclicality of the financial system makes it fragile and vulnerable to crises. Temin (1976), Wicker (1980, 1996), and Calomiris & Mason (2003b) report evidence in support of these theories that U.S. bank failures during the Great Depression were mostly driven by economic fundamentals rather than panics or contagion from failures. More recent theories view banking crises as an outcome of asset price bubbles not based on economic fundamentals. Such theories require an ingredient of irrational behavior or information asymmetry.

The macroeconomic origins of banking crises lie in unsustainable macro policies, global financial conditions, and exchange rate misalignments (Lindgren et al. 1996). Overly expansionary monetary and fiscal policies have spurred lending booms, excessive debt accumulation, and

overinvestment in real assets, causing deterioration in the quality of bank assets. Indeed, Reinhart & Rogoff (2009) find that banking crises are typically preceded by credit booms and asset price bubbles. Such macroeconomic shocks can cause particularly severe bank distress in emerging markets that have a tendency to borrow abroad using short-term foreign currency denominated debt. Indirect credit risk arising from currency or maturity mismatches in firms' balance sheets can easily translate in losses for banks following exchange rate depreciations or increases in world interest rates, and large shifts in the terms of trade will impair the capacity of exporting firms to service their debts.

The collapse of U.S. investment bank Lehman Brothers was in part also caused by accounting fraud. It used repurchase agreements to temporarily remove securities from the firm's balance sheet at each filing date, thereby overstating the value of the firm. The firm filed for bankruptcy on September 15, 2008, marking the largest bankruptcy in U.S. history, with gross debt outstanding of U.S. \$768 billion. Its collapse sent shock waves through international banking markets, as many banks had significant exposures to Lehman Brothers and investors feared that other banks may have been mismanaged as well.

Large loan losses are often associated with lending to related parties on preferential terms. Famous examples are Chile in 1981 (Sanhueza 2001), Mexico in 1994 (La Porta et al. 2003), and Russia in 1998 (Laeven 2001). As a result of such loan losses, banking crises typically see a surge in nonperforming loans, running as high as 75% of total loans and averaging approximately 25% of loans. In some cases, surges in nonperforming loans in part reflect a tightening of prudential requirements during the aftermath of the crisis.

The bank failure recording the single largest corporate loss was the U.K. banking group Royal Bank of Scotland, which recorded a loss of U.S. \$34.9 billion after being nationalized in 2008. This raises questions about the quality of governance of banks more generally (Saunders et al. 1990, Caprio et al. 2007, Laeven & Levine 2009).

Given these different origins and causes of banking crises, it is not surprising that there is much disagreement about the proper definition of a banking crisis. To make matters worse, many banking crises are not observed due to preventive policy action on the part of governments. Caprio & Klingebiel (1996), Laeven & Valencia (2008a), and Reinhart & Rogoff (2009) define banking crises as situations in which "a large fraction of banking system capital has been depleted," whereas Calomiris (2010) defines banking crises as "panics or waves of bank failures." A broader definition of a banking crisis is a situation

in which actual or potential bank runs or failures induce banks to suspend the internal convertibility of their liabilities or that compels the government to intervene by extending assistance on a large scale (IMF 1998, chapter 4).

Laeven & Valencia (2010) quantify what entails large-scale government intervention. They define banking crises as situations in which there are significant signs of financial distress in the banking system—as evidenced by significant bank runs, bank losses, and bank liquidations—or significant policy intervention measures directed toward banks. They apply quantitative thresholds to determine whether such intervention was significant, and using this approach they identify a total of 144 banking crises since 1970 (see Table 1 for a complete list). Although the recent global financial crisis has some new elements, it has many commonalities with previous crises in advanced and emerging market economies. (Comprehensive reviews of the events preceding and during the current financial crisis can be found in Gorton 2008, Laeven & Valencia 2008a, Brunnermeier 2009, and Adrian & Shin 2010.)

What originated the mortgage credit boom and upward trend in real estate prices in the United States over the decade prior to the crisis is still a source of debate, though there appears to be broad agreement that financial innovation in the form of asset securitization, government policies to increase homeownership, global imbalances, expansionary monetary policy, and weak regulatory oversight played important roles (Obstfeld & Rogoff 2009, Taylor 2009, Claessens et al. 2010a, Keys et al. 2010).

The boom was exacerbated by financial institutions' ability to exploit loopholes in capital regulation by moving assets off balance sheet and by funding themselves increasingly short term and in wholesale markets (Gorton 2008, Brunnermeier 2009, Acharya & Richardson 2009). Higher asset prices led to a leverage cycle by which increases in home values led to increases in debt (Adrian & Shin 2008, Mian & Sufi 2009). The asset price boom was further fueled by lax lending practices that caused an explosion of subprime mortgage credit (Dell'Araccia et al. 2008b).

With losses being widespread and hard to locate because of asset securitization, banks no longer trusted each other, leading to a confidence crisis that threatened the liquidity of the financial system. Authorities initially responded with massive liquidity support to banks and by lowering interest rates. The panic intensified after the collapse of Lehman Brothers, a major investment bank with global financial linkages. By the end of 2008, many economies around the world suffered from a collapse in international trade, reversals in capital flows, and sizable contractions in real output.

Although some aspects of this crisis appear new, such as the role of asset securitization in spreading risks across the financial system, it broadly resembles earlier boom-bust episodes, many of which followed a period of financial liberalization (Reinhart & Rogoff 2009, Laeven & Valencia 2010). One commonality among these crises is a substantial rise in private sector indebtedness, and when banking crises erupt, they generally trigger losses that spread rapidly throughout the financial system by way of downward

pressures on asset prices and interconnectedness among financial institutions

### III. OBJECTIVES OF THE STUDY

1. To identify the major crisis in Indian Banking Industry.
2. To analyse the crisis and suggest possible remedial measures.
3. To compare the public sector banks and private sector banks in terms of NPA
4. To find out the opportunity available for the private banks.

### IV. BANKING CRISES IN INDIA

When the over 150-year-old US investment bank Lehman Brothers went bust in September 2008, it sparked a global financial crisis and a gradual erosion of faith in public institutions, particularly banks. India largely weathered that storm. The country's Lehman-like moment came ten years later, in 2018, as a series of events shook its banking system and people's faith in it. These events ranged from the resignation of the central bank governor to the unearthing of a giant fraud at a major state-run bank. The private sector banks that had been on a better footing till last year also came under fire. A series of other scams and high-profile CEO exits further dented confidence in the system. For one, the sector's huge pile of toxic loans is expected to come off its 2018 peak, according to official estimates. The rupee, Asia's worst-performing currency this year, has already begun recovering. The newly appointed governor of the Reserve Bank of India (RBI), Shaktikanta Das, is widely expected to mend the battered ties between the government and the central bank. But before we tread towards the next year, here's a look at ten big events in the banking sector that rocked the boat in 2018.

#### A. *Crisis : 1 The Punjab National Bank Fraud*

The biggest ever banking fraud in India's history came to light in February this year at a Mumbai branch of the Punjab National Bank (PNB), India's second biggest state-run lender. Two diamondaires, Nirav Modi and his uncle Mehul Choksi, allegedly siphoned nearly \$2 billion (Rs14,000 crore) from PNB over a period of seven years. India's Central Bureau of Investigation (CBI) filed a case against the duo on Jan. 31, but by then both were already on the run. While indications of their locations emerge at times, the two remain fugitives.

#### B. *Crisis : 2 The Fall Of Chanda Kochhar*

Chanda Kochhar, the former CEO of ICICI Bank, India's second-largest private sector lender by assets, was one of the most celebrated women bankers in the country till she quit the firm in October. Her 34-year association with the company ended following allegations of nepotism against her. A whistle blower accused Kochhar of unfairly granting loans to NuPower Renewables, a firm founded by her husband. Soon questions of conflict of interest, lack of disclosures, and quid pro quos surfaced. While the bank staunchly defended her

initially, it later agreed to set up an independent probe. In July, Kochhar went on indefinite leave and the bank appointed an interim CEO. Finally, in October, she quit.

#### C. *Crisis :3 Shikha Sharma's Impending Exit*

The managing director and CEO of Axis Bank, India's third-largest private lender, will also be stepping down on Dec. 31, nearly two years before her term ends. This decision came amidst reports that the banking regulator was not happy with the lender's performance under Sharma's watch. Sharma took charge of the bank in 2009, and is credited with building its retail and investment banking portfolios. However, in the past couple of years, Axis Bank's bad loans had increased and profits plunged. Following the exodus of top bankers—Ananthasubramanian, Kochhar, and now Sharma—few women are left in top leadership roles in an industry which has always been dominated by men.

#### D. *Crisis :4 Mergers & Apprehensions*

The government had said that bank consolidation was a key point on its agenda. In line with the stance, in September this year, it announced plans for a mega merger between Mumbai-based Dena Bank, Bengaluru's Vijaya Bank, and the Vadodara-headquartered Bank of Baroda (BoB). While Vijaya Bank and BoB are strong entities, Dena bank had been posting losses and was even barred from lending by the RBI under its corrective action plan. The merged entity will have total assets of over Rs14 lakh crore and will end up becoming India's third-largest lender, after the State Bank of India (SBI) and HDFC Bank. While the government believes that the new entity will be a stronger one, employees are not convinced. On Dec. 26, employees of various public and private sector banks went on strike protesting against the merger, saying it will be detrimental for the employees and customers.

#### E. *Crisis: 5 IL&FS Crisis*

In August-September, troubles at the non-banking financial company (NBFC) Infrastructure Leasing & Financial Services (IL&FS) sent tremors across the industry. It defaulted on a few repayments, indicating that the giant, with 169 subsidiaries, associates, and joint venture firms, had run out of cash. This spooked the credit market and sparked a sell-off in bonds and stocks. Meanwhile, many banks turned cautious and refused to lend to other NBFCs as well, sparking a liquidity crisis. The government then requested the RBI to relax certain norms to ease the cash supply in the market. However, the central bank maintained its position that it was monitoring the situation but refused to oblige.

#### F. *Crisis :6 Rupee Woes*

Currencies in emerging countries were on a weak footing this year as fears of a trade war loomed. Higher crude oil prices, a strengthening dollar, and foreign investors pulling out of the country weighed on the rupee, which ended up as Asia's worst-performing currency, depreciating by nearly 10% this

year. This despite a 5% appreciation in the period since October-end. While a weaker rupee led to record remittance inflows, it was a major pain point for banks and other businesses. The government had to step in to stem the fall but the significant recovery in rupee happened after the price of crude oil declined. Going into 2019, it is expected that the rupee will remain volatile ahead of the general elections next year.

ended. Even though Patel cited personal reasons, it is widely believed the RBI's worsening relationship with the Narendra Modi government led to this. The two had been openly sparring on a host of matters, including access to the central bank's reserves, lending restrictions placed on banks, and the central bank's autonomy.

Table: 1 Net NPA as % to Net Advances (Public sector)

Banks	Net NPA as % to Net Advances			
	2015	2016	2017	2018
Allahabad Bank	3.99	6.75	8.91	8.04
Andhra Bank	2.93	4.61	7.57	8.48
Bank of Baroda	1.89	5.06	4.72	5.49
Bank of India	3.36	7.79	6.90	8.26
Bank of Maharashtra	4.19	6.35	11.76	11.24
Canara Bank	2.65	6.42	6.33	7.48
Central Bank of India	3.61	7.36	10.20	11.10
Corporation Bank	3.08	6.53	8.33	11.74
Dena Bank	3.82	6.35	10.66	11.95
Indian Bank	2.50	4.20	3.02	3.81
Indian Overseas Bank	5.71	11.94	13.99	15.33
Oriental Bank of Commerce	3.32	6.67	8.95	10.47
Punjab & Sind Bank	3.55	4.61	7.50	6.92
Punjab National Bank	4.05	8.59	7.80	11.22
Syndicate Bank	1.90	4.48	5.21	6.28
UCO Bank	4.30	9.09	8.94	13.10
Union Bank of India	2.71	5.25	6.57	8.42
United Bank of India	6.11	8.98	9.97	16.51
Vijaya Bank	1.91	4.81	4.36	4.32
State Bank of India (SBI)	2.12	3.81	6.17	5.73

Source : Reserve Bank of India

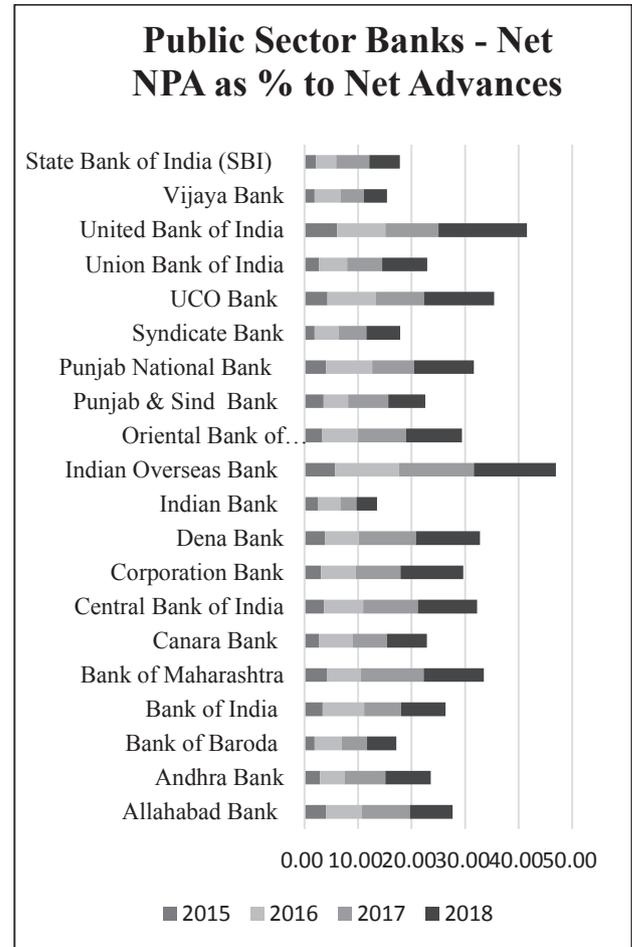


Fig.: 1 Net NPA as % to Net Advances ( Public sector )

G. Crisis : 7 No Extension to Yes Bank Chief

Rana Kapoor, another poster boy of the Indian banking industry, was another CEO to be booted out this year. The RBI refused to extend his term beyond Jan. 31, 2019, but did not cite any specific reasons for its decision. Kapoor founded the bank about 14 years ago and has been its chief ever since. It is widely believed that the repeated under-reporting of toxic loans by the bank led to Kapoor's exit. In financial year 2016, YES Bank reported a loan divergence of Rs4,176 crore in its gross NPAs. The next year, an asset quality review by the RBI revealed that the bank had under-reported bad loans of Rs6,355 crore—three times the reported amount.

H. Crisis : 8 The Governor Leaves

This was a year of exits in the banking industry. But the biggest shocker came when Urjit Patel resigned from his post as RBI governor on Dec. 10, nearly a year before his term

Table: 2 Net NPA as % to Net Advances (Private sector)

Banks	2015	2016	2017	2018
City Union Bank	1.23	1.53	1.71	1.70
Tamilnad Mercantile Bank	1.22	0.89	1.74	2.16
Catholic Syrian Bank	2.22	4.40	5.51	4.46
Dhanlaxmi Bank	3.80	2.78	2.58	3.19
Federal Bank	0.74	1.64	1.28	1.69
J & K Bank	0.22	4.31	4.87	4.90
Karnataka Bank	1.91	2.35	2.64	2.96
Karur Vysya Bank	0.41	0.55	2.53	4.16

Lakshmi Vilas Bank	3.44	1.18	1.76	5.66
Nainital Bank	0.00	1.05	1.25	1.14
RBL Bank	0.31	0.59	0.64	0.78
South Indian Bank	0.78	2.89	1.45	2.60
Axis Bank	0.44	0.70	2.11	3.40
DCB Bank	0.91	0.75	0.79	0.72
HDFC Bank	0.27	0.28	0.33	0.40
ICICI Bank	0.97	2.67	4.89	4.77
Indusind Bank	0.33	0.36	0.39	0.51
Kotak Mahindra Bank	1.08	1.06	1.26	0.98
YES Bank	0.05	0.29	0.81	0.64

Source : Reserve Bank of India

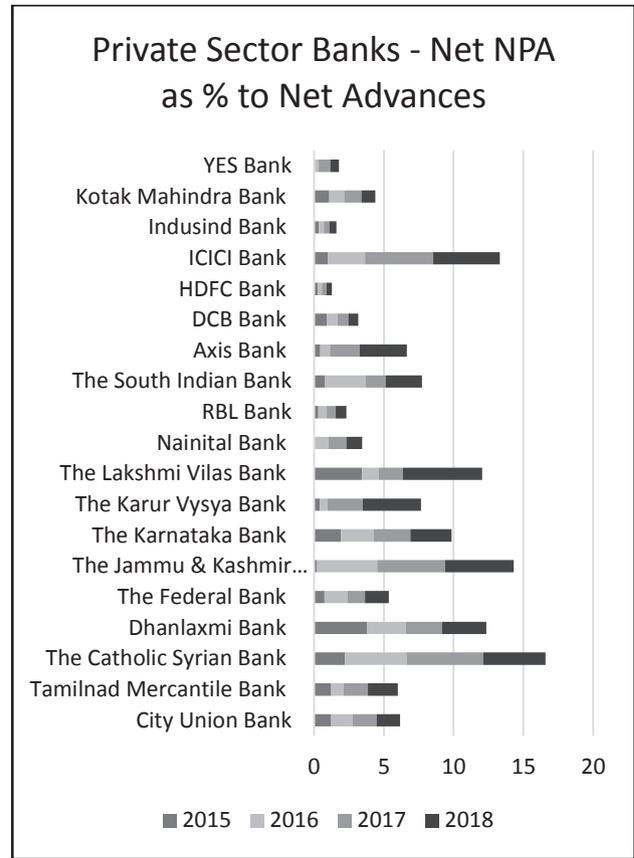
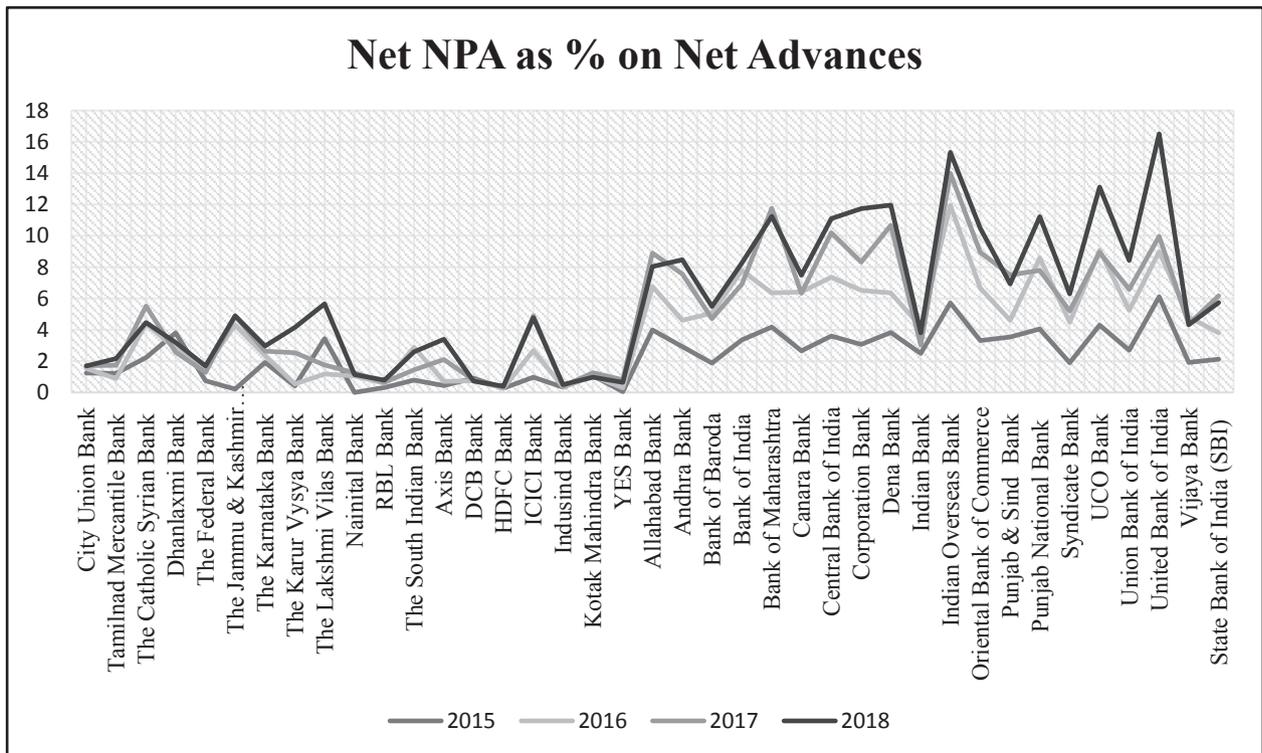


Fig.: 2 Net NPA as % to Net Advances (Private sector)



### *I. Crisis : 9 Bad Loan Resolution*

Toxic loans have kept piling up in the Indian banking system for years. Finally, in February 2018, the central bank introduced a new set of rules for banks to recognise their bad-loan problems immediately and act. The industry strongly opposed these norms on the grounds that they would restrict their operations.

Even the government wanted the RBI to relax some of these rules, but the central bank refused to oblige. As the lenders were forced to be more prudent in recognising the bad loans, more banks were brought under a corrective action plan by the RBI. The plan imposed restrictions on lending and expansion. Eleven out of India's 21 public sector banks (PSBs) were put under this framework, which became a sore point in government-RBI ties. Now, however, government banks' gross NPAs have begun declining. Their bad loans reduced from 14.6% at its peak in March 2018 to 14.1% by September 2018, the government said in a presentation earlier this month.

### *J. Crisis :10 Weekly reports on Toxic Loans from lenders*

The Reserve Bank of India (RBI) has tightened the leash on banks, and its new norms may force lenders to recognise bad loans sooner than later. This, after some of the country's largest banks, including the giant State Bank of India, have juggled soured loans in the past, citing technicalities. In order to make the process of declaring and reporting bad loans more efficient, the RBI has streamlined existing norms into a new framework, a notification on Monday (Feb. 12) said. The new norms also direct banks to disclose large loan defaults on a weekly basis to the RBI credit registry, which can be accessed by all lenders. This will ensure that a borrower's account is treated as a non-performing asset (NPA) across all banks who have lent to this entity. With a new resolution mechanism in place, the hope is that there will be no rude shock from gross non-performing assets (GNPA), which are expected to rise from Rs8 lakh crore in March 2017 to Rs9.5 lakh crore in March 2018.

## V. STRATEGIC RESPONSE FOR THE INDIAN BANKING CRISES

Despite the banking crisis or perhaps because of it, authorities have taken a few good measures. Under Raghuram Rajan, the previous governor of the Reserve Bank of India, the RBI toughened its norms of classification for NPAs. As a result, banks have far less discretion to roll over stressed assets. Rajan has admitted that the RBI should have begun the NPA clean-up earlier, but it is now finally underway in earnest.

In defense of public sector banks, we have to cut them some slack for approving lending for infrastructure projects, social sector initiatives and other government schemes, which they have been forced to engage in thanks to diktats of bureaucrats in New Delhi. Furthermore, India lacks a well-developed bond market, particularly for junk bonds. This means that banks participate in the riskier spectrum of lending compared to, say,

Germany or Japan. Naturally, this increases their risk profile and makes them vulnerable to meltdown. In the light of the risks that Indian banks face, the government passed the Insolvency and Bankruptcy Code in 2016. This code has been a revolutionary change, giving banks far-greater powers to recover their loans. They can now declare loans to be in default and initiate insolvency proceedings at the National Company Law Tribunal (NCLT). There are too few of these and not enough professionals to adjudicate these proceedings, but the lenders can finally claw back loans from defaulting borrowers and safeguard the hard-earned savings of hundreds of millions of Indians. Now, the government and the RBI together have to ensure a controlled unwinding and institute further reforms.

### *A. Strategic Response : 1*

The government must open more branches of the NCLT, make the process more efficient and hire more insolvency professionals. To recover its loans from Jet Airways, state-run lender State Bank of India (SBI) is mulling moving National Company Law Tribunal (NCLT) as it feels the airline is running out of funds for operations, even as shareholders of the debt-laden carrier have approved a debt rejig plan. Lenders can initiate proceedings under the Insolvency and Bankruptcy Code (IBC) to recover dues from debt-laden entities. The process can commence only after approval from the NCLT.

### *B. Strategic Response : 2*

The government and RBI ought to institute long-term structural reforms and avoid knee-jerk reactions such as the privatization of public banks. Indian institutions are far too fragile and compromised. Any hasty privatization will inevitably lead to more crony capitalism. The alleged fraudulent transactions at PNB reflect lax operational controls, poor risk management and regulatory failure. Gordon Gekko's famous quote that "greed is good" in the film Wall Street should, however, caution us against an unthinking push to privatization. Privatization, without strengthening regulatory controls and improving governance, won't prevent fraud, or curtail undue exposure to risk. Indeed, it was the reckless approach to risk-taking by large private-sector banks that ultimately led to the collapse of Lehman Brothers in 2008 and exacerbated the global financial crises.

### *C. Strategic Response : 3*

India needs to develop a bond market, so that risky projects can raise capital directly from public markets and are not reliant on banks. This would improve the risk profile of Indian banks considerably. The corporate bond market also faces challenges such as finance sector skew, poor trading volumes and little appetite for debt rated in the 'A' category and below. While the domestic debt market in India amounts to about 67 per cent of GDP, the size of India's corporate bond market is just 16 per cent of GDP compared with 46 per cent in Malaysia, and 73 per cent in South Korea, this shows the corporate bond market is contributing very less to the debt market and the maximum stress will be on banks, which leads to banking

crisis.

#### *D. Strategic Response : 4*

The government must consolidate public sector banks, but ensure they do not become “too big to fail” as in the US. It has been argued that state control encourages management complacency as managers are secure in the knowledge the government will always come to the bank’s rescue if it is in trouble. But is ownership the sole criteria for government intervention? Governments have in the past bailed out banks that were considered “too big to fail”, regardless of ownership, to prevent a systemic collapse. Freddie Mac, Fannie Mae, Royal Bank of Scotland, Bradford and Bingley and Fortis—all came close to going bankrupt during the global financial crises and had to be rescued using tax payers’ money. Arguably privatization in some instances led to privatizing profits and socializing losses. If PNB or the State Bank of India were privately owned, would the state allow these banks to fail?. Consumer advocates worry that bank consolidation will reduce consumer choice and give surviving banks virtual monopolies.

The idea of a single bad bank where the NPAs of all PSBs may be transferred as a silver bullet to clean up PSB balance sheets must be rejected. Currently, 11 of 21 listed PSB banks are under RBI’s prompt corrective action framework and simply consolidating all NPAs would create an additional level of complexity.

#### *E. Strategic Response : 5*

The government must bring in better governance for public sector banks. It is high time for legislative changes giving clear mandate and operational autonomy to the RBI to replace boards, force a merger or even revoke the license of state-run banks. The regulator must also have power to fine errant executives and prosecute them in criminal courts. Those who are criminally delinquent or malfasant with savings of the hundreds of millions of poor Indians must end up in prison. India has no choice but to break the politician-bureaucrat-plutocrat nexus that has flourished for too long.

#### *F. Strategic Response : 6*

The government must not only regulate banks better, but also reform the state-run public sector banks themselves. These institutions are currently caught in a time warp. While the world has moved on from 1991, their operating processes, management structures and the way of doing business have remained the same for decades. To keep pace with the demands of the Indian economy, public sector banks need better selection, evaluation and promotion mechanisms. They also need professional management structures that safeguard independence from politicians and bureaucrats. These worthies have only too often pressured bankers to give dud loans to their cronies, leaving the banks in duress and the taxpayer in distress. That must change.

#### *G. Strategic Response : 7*

The government has to regulate not only public sector banks, but also the private sector better. Recent scandals in India’s private banks and its NBFCs, as well as the global financial crisis of 2007-08, clearly demonstrate that an unregulated or poorly regulated financial system presents grave risks to the economy. In the Indian context, the relationship between the management of private banks and the titans of the corporate world is highly incestuous, exacerbating risks to an already frail sector. Therefore, the government has no alternative but to draft rational regulations and create effective regulatory institutions for the financial system to function and the economy to flourish.

### VI. OPPORTUNITY FOR PRIVATE PLAYERS

India’s banking sector crisis has left most state lenders thwarted with mounting levels of bad loans, investigations into fraud and restricted growth opportunities. Amid that storm, private banks are set to emerge as winners. India’s public-sector financial institutions control about 70 percent of all banking assets in the country, but they have the highest exposure to soured loans amounting to as much as \$150 billion. In fact, the 21 state-owned banks had stressed loans of about 8.26 trillion rupees (\$120 billion) as of Dec. 31, Reuters reported. Private sector lenders, meanwhile, reportedly had a bad loan pile of just about 1.1 trillion rupees.

Experts believe that, over the years, private sector banks will likely gain more market share from their state-run counterparts because they have stronger balance sheets, they are less exposed to stressed sectors, have stronger governance and are more competitive. “If you take a 10-year view, currently the private sector banks’ market share is 30 percent. Probably it will become 60 percent,” Sukumar Rajah, senior managing director at Franklin Templeton Emerging Markets Equity, told CNBC. As a result, he said, “the overall health of the banking system will improve because the better banks will be a bigger portion of the market and the weaker banks will become a smaller portion of the market.”

Public sector banks are already losing market share, particularly the 11 banks that are placed on the Reserve Bank of India’s prompt corrective action (PCA) framework, according to Sanjeev Prasad, co-head at Kotak Institutional Equities. That framework is used by the central bank to assess risks associated with banks based on capital, asset quality and profitability. When a bank is placed on the PCA, its ability to lend is restricted. Beyond that, suggested that public sector banks might struggle to hold onto their share of the deposits market. But the question worth asking is whether India’s private banks

have enough deposits to do the heavy lifting to meet the funding requirements of one of the world’s fastest growing major economies, Prasad said. Private banks have expanded

their loan books in recent years and many of them have been running at “really high credit-to-deposit ratios,” he said.

A credit-to-deposit ratio is usually used to measure a bank’s liquidity by comparing its total loans to its total deposits. If the ratio is too high, it means the bank is lending out a large share of the deposits it has received.

That might suggest potential liquidity problems during a downturn. India needs to work out a way to move deposits from public sector banks to private lenders, Prasad added. Still, there are alternative means of funding available to satisfy financing demands from companies and individuals.

“My view is that, incrementally, a lot of long-term financing of corporate India can also be met by the corporate bond market, which has developed reasonably well,” he said. “Between the corporate bond market and the private banks, I think most of the requirements can be met as far as corporate India is concerned.” When it comes to lending directly to individuals, Prasad said that is mostly done by the private banks and non-banking financial companies.

#### VII. FINDINGS

The critical issues in the Indian banking sector have been analysed and found that the Non-Performing Assets (NPA) was the sole factor which contributes and leads to the other crisis. Compared to public sector banks, private sector banks are with far better position in terms of bad loans. Apart from the NPA crisis in the public sector banks, it is also significant to resolve the issues in the private banks. The banking regulatory system (RBI) and the government must work systematized way to solve the banking related crises. The corporate bond market must be developed to offset the lending burden of sanctioning loans to the big ticket projects. National Company Law Tribunal (NCLT) must be given with adequate power dealt with the banking scandals and bad loans. Stringent policies must be developed to securitize the company before sanctioning the large-sum loans. It is evident that the private players can use this NPA crisis of public sector banks as an opportunity to improve their customer base.

#### VIII. CONCLUSION

The main policy approaches employed in the resolution phase of recent crises include workouts of distressed assets, debt restructuring, distressed asset purchases, and nationalizations and recapitalizations of banks. Reserve Bank of India can typically apply a combination of resolution strategies. The government can facilitate the workout of distressed loans through government subsidies to distressed borrowers, conditional on the borrower’s shareholders injecting some new capital, as an attempt to let the market determine which firms are capable of surviving given some modest assistance.

Likewise there have been schemes offering injection of government capital funds for insolvent banks whose shareholders were willing to provide matching funds. To the extent that such schemes are discretionary, they carry the risk of moral hazard as debtors stop trying to repay in the hope of being added to the list of beneficiaries.

The government and RBI must join hands to frame regulatory policies for big ticket corporate loans and strengthening the bond market would be the permanent solution for curbing the NPA which turn out from the corporates.

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# Issues and Challenges in Human-wildlife Conflict Management

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**Abstract** - Human-wildlife conflict is any interaction between human and wildlife which lead to the negative impact on human beings. The conflict occurs when the increasing human population overlaps the habitats and resources of wildlife. Deforestation, lack of water and food resources, varying climate and loss of habitat are leading wild animal to enter into human settlements. Malakkappara an important tourist destination in Kerala which is under Kerala forest department is facing an important threat of wild animals' attack and raid. In this paper we conducted detailed study about the various issues faced by the native people of Malakkappara and the control measures taken by the authority. The findings were that the animals enter the village in search of food and water. And the forest department and along with native people and local body are taking control measures. In order to manage the conflict it is better to have natural forestation (edible plants) and water facility in the forest itself.

**Keywords:** Human-wildlife conflict, Malakkappara, Forest Management.

## I. INTRODUCTION

Human-wildlife conflict, referred to as an interaction between human and wild animals which results negatively on people and their resources, or wild animals and their habitat. It occurs when the increasing human population overlaps the established wildlife territory and cause loss to wild animals and their resources. Deforestation, lack of prey, climatic changes and loss of habitat are forcing wild animals to live near human settlements leading them to raid human settlements in search of water and food and to prey on domestic livestock, endangering life of people living nearer to forest. The impact may range from loss of life or serious injuries to human as well as animals, loss of scarce resources and degradation of habitat. There are number of incidents being recorded in Kerala.

Malakkappara is a small hill station surrounded by forest and it is an important tourist destination, being a border place in the Thrissur district of state Kerala, India. The place is a part of forest area of Kerala forest department belonging to both Vazhachal forest division and Malayattoor forest division. The Malakkappara hill station is surrounded by Parambikulam tiger reserve, Anamalai tiger reserve and Nelliampathy hills. So, the place is highly prone to wild animal attack causing serious life threat to human and domestic animals. Animals raiding for foods are causing damages; they destroy the water supply system, crops and cause damages to houses. Wild animals entering the places are also causing problems like

blocking transportation and damaging livelihood. Sighting of wild animals has increased in Malakkappara over the past few years. Residents in Malakkappara live in an atmosphere of fear and they even abstain from venturing out of their houses after dark. The recent incident was tiger attack where a child was attacked and killed in nearest place Valparai. This is leading the native people to stop their children from going to schools or making their child to study in far places.

The control and management measures taken include electric fencing, traps and pits to capture animals and these captured animals are later released to the deeper forest regions. The wild animals are handled with great care without harming them so that they are safe; this is with an intention to protect the forest and its inhabitants. But there were cases in which wild animals were ordered to kill because of the serious damages they cause. The proposed study is to understand why wild animals enter into human settlements and what the different impacts are. The study also focuses on different control and management measures taken by authorities towards the problem. It is reasonable to assume that these wild animals are moving to human settlement because they are being disturbed by climatic changes and destruction of habitat, but it is only a small part of explanation. As we make our city greener, they become more attractive to humans and domestic animals.

## II. OBJECTIVES

1. To find why wild animals enter into human settlements.
2. To find the impacts of man-animal conflict.
3. What are the different measures taken or to be taken by authorities to manage human-wildlife conflict?
4. To know the challenges of human-wildlife conflict management.

## III. HUMAN-WILDLIFE CONFLICT OR CO-EXISTENCE

Expansion of human populations lead to shrinking of natural habitats, people and animals are increasingly coming into conflict over living space and food. From baboons in Namibia attacking young cattle, to rhinos in Nepal destroying crops, orangutans destroying oil palm plantations, European bears and wolves killing livestock etc., the problem is universal which affects rich and poor. People lose their crops, livestock, property, and sometimes their lives. The animals, many of which are already threatened or endangered, are often killed in counter attack to prevent future conflicts. The solutions are often specific to the species or area concerned, which are often creative and simple.

Even if the animals keep their distance from people most of the time, still a conflict is inevitable when these animals and humans share space. Sometimes the conflict is between the invading predators and domesticated animals. It's reasonable to assume that animals are moving to the city because they're being displaced by climate change and habitat destruction, which can only be a part of the explanation. As human make their cities greener, animals become more attractive towards human populated regions which lead them to human settlements in search of food and water. Wild animals do no longer fear human settlement; animals may view cities quite a bit differently than their ancestors did 50 years ago. When a large predator loses its instinctive fear of humans, that animal becomes more likely to attack

Wildlife is subjected to control if they are perceived to harm people, livelihoods or lifestyle of people. The control should include full scope of society; international organizations, governments, NGOs, communities, consumers and individuals. Both humans and animals should have the space they need. Protecting key areas for wildlife, creating buffer zones and investing in alternative land uses are some of the solutions. Compensation or insurance for animal-induced damage is another widely accepted solution. There are several practical field-based solutions that can limit the damage done both to humans and human property, and to wildlife, by preventing wildlife from entering fields or villages. However, such solutions can only be applied on a case-by-case basis. What people see as solution in one place, they may resist in another. And what works in one place, may have the opposite effect somewhere else.

#### IV. FOREST MANAGEMENT IN KERALA

The current jurisdiction of Kerala state was created in 1956 by combining the Travancore, Cochin, and Malabar regions. Nevertheless, the enforcement of a series of land and forest related acts, Kerala Forest Act in 1961, Kerala Land Reform Act in 1963, and Kerala Private Forests (Vesting and Assignment) Act in 1971, brought about great progress in the establishment of the state forest (Masuda and Mishiba, 2003). Now, all of the state forests in Kerala have already been classified as reserved forests (1,103,800 hectare) and protected forests (18,300 hectare). The total forestland of 1,122,100 hectare accounts for 28.9 % of the state land (Forest Survey of India, 2001). The reserved forests in Kerala are managed under a highly stratified organization of the Kerala Forest and Wildlife Department (KFD). The tribal people (1.1 % of the total population in 2001) mainly live in forested regions and some are still inside reserved forests.

In Kerala the Participatory Forest Management (PFM) guideline was established later in 1998. After the declaration of the PFM guideline, it has been noticed that both local people's livelihoods and the forests' conditions have improved (French Institute of Pondicherry, 2003). According to an internal document provided by the KFD in 2002, the PFM program in Kerala consists of three models: Fringe model, Non-Timber Forest Products (NTFP) model, and a separate model for the Cardamom Hills Reserve. The difference between the Fringe and NTFP models is that the former

involves the population outside forests, while the latter is applied to the tribal minorities still living inside the forests and making their livelihood by NTFP collection. The implementation body of PFM is called *Vana Samrakshana Samithi (VSS)*, which means forest conservation committee in Sanskrit (Masuda, Mishiba, & Dhaka, 2005).

#### V. BIODIVERSITY AND HUMAN-WILDLIFE CONFLICT

Biodiversity is fundamental to sustain ecosystem processes. Conservation of biodiversity and wildlife preserves cultural heritage and natural ways of living. It is essential for India, because the consequences of biodiversity loss and the resulting loss of ecosystem services have a far-reaching impact on the overall wellbeing of the population. The situation in India is however, changing. Human population increase and its consequent demand for natural resources has led to degradation and fragmentation of natural habitats. As a result, humans and wildlife compete for the same diminishing resources. This shift from co-existence to conflict has the potential to undermine existing and future conservation efforts and hinder the achievement of the Sustainable Development Goals (SDGs) (Ministry of Environment).

Human-wildlife conflict has a history that is as old as human civilization; yet currently the phenomenon poses a serious environmental challenge for human society, both due to their bio-geographical and social characteristics. Although the popular perception is that Human-Wildlife Conflict intensity has escalated over the past few decades. Human-wildlife conflict can have a negative impact, especially on rural Indian communities, so far causing economic losses accounting to millions of rupees. Intensive crop damage and the increasing frequency of animal attacks on both humans and their cattle have made communities less tolerant towards wildlife. Management of Human wildlife conflict in India is an urgent and important issue. It is necessary to address the issue in a holistic manner, and co-create the mitigation solutions, with full engagement of all the relevant stakeholders (Saurabh Anand & Sindhu Radhakrishnan, 2017).

Households experiencing crop raiding were more prone to food insecurity, and higher rates of self-reported human and livestock diseases, while children from villages bordering the park tended to have poorer scholastic achievement. Compensation is not affordable for the wildlife authority, nor is it sustainable as crop raiding is escalating. To mitigate costs for local communities, funding has been justified for the implementation of crop raiding defenses. Indigenous methods used for controlling the crop and other damages are; laying high voltage electric fencing using energizer which is effective for stopping elephants and other herbivores from entering the agriculture fields. Washing soap was found efficient in stopping entry of sambar into orchards for short periods. Crop damage is found to be linked to the cropping pattern and location of the agriculture fields (Vincent Nijman & K. Anne-Isola Nekaris, 2010).

In India out of the total 88 animal species which cause conflict, the top four species in terms of number of reports were Asian elephant *Elephas maximus*, leopard *Panthera pardus*, tiger

*Panthera tigris* and rhesus macaque *Macaca mulatta*. The main conflict species were Asian elephant, blackbuck *Antelope cervicapra*, and Indian gerbil *Tatera indica*. This changed to Asian elephant, Indian tiger, and common leopard during 1996–2018 (E.A. Jayson, 2010).

## VI. MALAKKAPPARA: AN OVERVIEW

Malakkappara is a small hill station surrounded by forest and it is an important tourist destination, being a border place in the Thrissur district of state Kerala, India. The place is a part of forest area of Kerala forest department belonging to both Vazhachal forest division and Malayattoor forest division. The Malakkappara hill station is surrounded by Parambikulam tiger reserve, Anamalai tiger reserve and Nelliampathy hills (Department of Tourism, Government of Kerala). So, the place is highly prone to wild animal attack like elephants entering searching for water and food. Tiger and other wild animal attacks causing serious life threat to human and domestic animals. Animals raiding for foods are causing damages, especially elephants. Elephants are visiting the human settlement region frequently; they destroy the water supply system, crops and cause damages to houses. Sighting of wild animals has increased in Malakkappara over the past few years. Residents in Malakkappara live in an atmosphere of fear and they even abstain from venturing out of their houses after dark. The recent incident was tiger attack where a child was attacked and killed in nearest place Valparai. This is leading the native people to stop sending their children to school alone or making their child to study in far places. Other wild animals entering the places are also causing problems like blocking transportation, destroying crops and water resources etc. The authorities and Forest department along with native people are taking effective measures to control and manage the increasing wildlife intrusion. The regular supervision enables native people to be prepared in case of an intrusion.

## VII. METHODS AND PROCEDURE

The study was conducted through in-depth interviews based on the objectives of the study. The interviews were taken from the Perumpara colony of Malakkappara in Athirapally Grama Panchayath. A total of 38 interviews were taken from individuals of different groups. We identified four major groups of interested parties and we selected individuals from each of these groups for the in-depth interview. Composition of the groups is as follows,

Group 1: *Tribals of Perumpara Colony*. This group included the tribal people who live in settlement colonies (Perumpara) in Malakkappara of Athirapally Grama Panchayath. The aim was to explore the problems faced by these groups by the man-animal conflict and the preventive mechanism they take to manage the conflict.

Group 2: *Localites*. This group consists of people those who run small petty shops and live in Malakkappara for a long period of time. The intention was to understand the problems faced by these groups by the wild animals in general.

Group 3: *Forest Officers*. This group included the officials of forest department who were not the permanent residents but

they live in the same society for their service period in Malakkappara. The reason behind selecting this group was to identify the influence and view of these group about the man-animal conflict in Malakkappara in general.

Group 4: *Vehicle Drivers*. This group included the private and public bus drivers, taxi drivers and travelers who frequently travel through Malakkappara. The reason behind selecting this group was to know the effect of man-animal conflict to the travelers in general.

### A. Data Collection

The focus of the study was to understand the various issues and challenges faced by the people in the Malakkappara locality. Hence a detailed interview which lasted for around half an hour was taken with individuals to realize the problem in detail. The individuals were visited directly and explained the outline and purpose of the study. All the details collected from the interview were recorded and they are considered confidential with the research team. The individuals were ready to co-operate and gave answers to the questions asked and shared their problems with a hope to share with the outside world. Most of the interviews were conducted in houses and in places where they live. Interviewees were asked a span of question related to the study including their opinions, views and feelings. The interview was conducted at the end of November 2018.

### B. Data analysis

Each interview was recorded in written form for analysis purpose. The present study analysis adopted the protocols of template analysis (King, 2004), where the researcher produces a roll of codes representing themes identified in the textual data. The transcripts were coded into broad themes based on the research objectives and interview questions to formulate initial template. This template was again discussed and modified among the researchers. Each theme underwent a detailed analysis by the researchers which gave clear picture about the categories within each theme. During the analysis it was known that all data were not shaped clearly into one exact category or the other. Therefore in explaining the findings there were a requirement to go beyond the categories at times. Also, our analysis was not a extravagant one in this area, rather we focused on identifying the issues in the area of study than making any conclusions about the strength and generalizability of such perspectives. The idea behind this research was raise discussions and argument about the needs and issues faced by the people (especially tribals) in Malakkappara.

## VIII. FINDINGS

The interviews conducted provided enough data regarding the human-wildlife conflict in Malakkappara. The study gave an understanding about the issues faced by the people of Malakkappara. Here we summarizes the data analysis results based on our research objectives; reasons for wild animals entering human settlements, issues and challenges of human-

wildlife conflict, impacts and measures taken to control the issues.

#### A. Reasons for wild animals entering human settlements

The interviews gave an understanding about why wild animals entering into human settlements. We found that the main reason why animals entering human settlement was in search of food and water. When the animals reach near to human settlements it is their curiosity combined with thirst and hunger leads them to human settlements.

The herd of elephants approach the houses in search for food especially rice grains. They enter in to the house and take away the rice sack. This raid is causing damages to the house and fear in people (Group 2: Localites).

The wild animals not finding sufficient food and water in the forest, hence in search of food and water they usually enter into the human settlements. These wild animals can smell food from far distance and therefore can identify the place where it kept.

The elephants entered into our community hall (tribal) where we kept our food stock that we received from government during flood. They can easily detect the presence of food by smell (Group 1: Tribals of Perumpara Colony).

The wild animals enter into human settlements during summer as there is scarcity food and water in the forest. Usually the tribals love the animals but the problem is that these animals create losses to their lives.

Usually the wild animals especially elephants come out of forest during summer as there is lack of sufficient water in the forest during that time (Group 1: Tribals of Perumpara Colony).

We should be very careful near to Anakkayam where we can see elephants quite often. They come there because there is enough water and bamboo for the elephants and other animals (Group4: Vehicle Drivers).

Not only the elephants but also other wild animals enter the place with the primary aim to search food and water.

Usually the wild swine and elephants enter in to our farm-land and destroy our crops. Yesterday night also wild animals destroyed my banana farming. (Group 1: Tribals of Perumpara Colony).

While the search they tend to attack human and destroy resources. Mainly they destroy things in search of water and food.

#### B. Impacts of man-animal conflict

The study gave us an understanding about the various issues faced by the people. The human and wildlife conflict is leading to many problems like destruction of houses, livelihoods, injuries, destruction of agriculture and resources. The animals wandering in the human settlement is causing problems to

tourism and transportation. The animals being in roads are creating hindrance to easy transportation.

Wild animals being in the road is causing blocks in the roads for hours. In such cases time management in each trip is difficult. The tourists tend to go back out of fear (Group4: Vehicle Drivers).

The tribals get water from the forest through pipes. The elephants and other animals destroy these pipes and throw it away as it is their usual practice to check wet land by different means.

Elephants while raiding, if they find cold in the soil it means there is a water supply system, animals have the tendency to check that and drink water. In that process they break the water supply pipes leading to loss of water which is scarce (Group 1: Tribals of Perumpara Colony).

The impacts of the issue were mainly destruction of life houses and livelihoods. The animals sometimes other than searching food can also harm people. Sometimes sound or movement can cause fear in them leading to troubles. Carnivores which reach the place are difficult to spot and catch. The agriculture is one of the source of income for the people but the raiding by animals are causing the destruction of the agricultural fields and thereby create a situation where the farmers find it difficult to live those places. People even think of migrating from that place.

A year ago in Valparai a four year old boy was attacked and killed by a leopard, after that we fear to let our children to go to school alone (Group 1: Tribals of Perumpara Colony).

Households experiencing crop raiding are having more food insecurity, and higher rates of self-reported human and livestock diseases, while children tend to have poorer scholastic achievements, still the children in the area are educated because the parents send their children to study in far places because of the fear of animals. The wildlife is sometimes causing more damages which may be light in present but a problem in future.

#### C. Measures taken or to be taken by the authorities to manage the human-wildlife conflict

The government along with the tribals is taking necessary control measure towards the wildlife intrusion to human settlements. The measures include electric fencing, creating sound to distract animals and flash lighting to create fear in animals. Whenever a chance for wildlife intrusion, the tribals along with forest department work together to make the animals flee.

Mainly animals reach the settlements during night. In that case we along with the native people make sounds and lights to fear the animals. Otherwise they may destroy houses and households, crops and water supply (Group 3: Forest Officers).

In the case of carnivores like tiger, leopard etc. if they are causing damage to life, traps or pits or cages are kept for catching these predators. The animals caught are later left in deep forest.

We need to have natural forestation (edible plants) and water facility inside the forest, then the wild animals will not enter the human settlement for food and water. They enter human settlement as they don't find food and water in the forest (Group 2: Localites).

Whatever be the problems, the place is having a good management and control system when considering the wildlife intrusion and attack. The people are in unity to deal with the animal intrusion.

#### *D. Challenges of Human-wildlife conflict management*

The study gave us an understanding about the various issues faced by the people. The human and wildlife conflict is leading to many problems like destruction of houses, livelihoods, injuries, destruction of agriculture and resources etc. The animals wandering in the human settlement is causing problems to tourism and transportation. But there are a lot of challenges in managing the human-wildlife conflict management.

We don't have any problem in tribals entering the forest and take things for their living because they are the children of forest (kadinte makkal). We don't allow unauthorized entry to forest by anyone else (Group 3: *Forest Officers*).

The fundamental question is that whether the human beings are creating problem to the wild animals or vice versa. The animals entering agricultural fields are causing large damages and loses sometimes it may lead to heavy losses which is too burden for a farmer.

The elephants clearly push the electric fence by using their trunk by placing exactly at the non-electric part of the fence and enter into the colony (Group 1: *Tribals of Perumpara Colony*).

There is solar based electric fencing protecting the tribal colonies from wild animals but there are serious other reasons in not making it a high power lines. First of all what will happen to those who unknowingly touches the line. So there are limitations as far as electric fencing is concerned (Group 3: *Forest Officers*).

There is a lack of latest or proper mechanism or technique to inform the people when the animals entering into human settlements.

## IX. CONCLUSION

Human-wildlife conflict is an interaction between human and wild animals which results negatively on people and their resources, or wild animals and their habitat. It occurs when the

increasing human population overlaps the established wildlife territory and cause loss to wild animals and their resources. The Malakkappara hill station is surrounded by forest reserve, so, the place is highly prone to wild animal attack causing serious threat to human and domestic animals. Not only in Malakkappara but also the forest neighborhood places in the world is suffering human-wildlife conflict due to increasing human demand towards living situations which in turn leading to overlapping of human and wildlife. The result of activities done by people are causing burden to people living near the forest. Though the need for human wildlife conflict management is well-established, several factors make it an extremely complex challenge: (1) traditional methods of lethal elimination to deal with problem-wildlife is no longer a desirable option due to increasing concerns over species conservation or social opprobrium. This means that human-wildlife conflict needs to be managed in a way that is publicly acceptable and does not jeopardize wildlife conservation goals; (2) people's perception regarding conflict is not only dependent on the actual damage by wildlife but is also shaped by a number of socio-cultural factors. In such cases, conflict continues to exist even after damage-control measures have been put in place; and (3) implementation of any mitigation intervention without a comprehensive understanding of species behaviors and human social factors often fails to achieve its desired result, and in some cases, may even increase the level of conflict (Saurabh Anand & Sindhu Radhakrishnan, 2017).

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# Crisis and its Management

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**Abstract**— Crisis management is the process by which an organization deals with a major unpredictable event that threatens to harm the organization, its stakeholders, or the general public. Governments are confronted with an increasing number of crises, often consisting of new threats. They may spread beyond national borders and may create significant economic knock-on effects. Crisis management is perhaps even more relevant and important to today's businesses in terms of safeguarding data, ethical supply chains, cross-cultural communication, safe products and man-made environmental disasters. The technology advancements in today's business world have transformed productivity and communication. It is this haste to keep up with the modern world where crisis management is key. Governments and businesses react to crises rather than planning for them. Crisis management in the modern world is now more important than ever.

**Keywords**— crisis, crisis management, crisis and crisis management in public institutions, businesses..

## I. INTRODUCTION

Crises can also be categorised as financial, political, social, organisational, psychological, technological and ecological crises. In a financial crisis the management must implement robust measures, including restructuring and closing down production units. Companies hovering at the brink select crisis leaders and leaders of change who have the courage to implement drastic cuts. Apparent or visible crises are noticed immediately and are easy to recognise.. Crises are not routine events (such as fires or traffic accidents). Crises are inconceivable events that often take politicians, citizens, and reporters by complete surprise. Crises occur when a community of people—an organization, a town, or a nation—perceives an urgent threat to core values or life-sustaining functions that must be urgently dealt with under conditions of deep uncertainty.

Crises are a significantly increasing threat to operations of public institutions, businesses, international organizations, NGOs and associations as well as their stakeholders worldwide. The major risk is the potential damage a crisis inflicts on public institutions and organizations in the long run. Crises can paralyze public life, affect business continuity and may have a global impact. Badly managed crisis communication will have economic consequences for the institution and society. Besides the primary concern of public security, transparency and professional crisis management,

poor crisis communication leads to irreparable reputation losses, loss of confidence and institutional damages.

Crisis management has two dimensions. The technical dimension pertains to the coping capacity of governmental institutions and public policies in the face of emerging threats. But there is also a political dimension: crisis management is a deeply controversial and intensely political activity. A combination of these dimensions translates into five critical challenges of crisis management: sense making, decision making, meaning making, terminating, and learning.

## II. OBJECTIVES OF THE STUDY

In this study, the researchers after stating the concept of crisis, its features, the theoretical framework of crisis management, will be focusing on crisis management implementations in businesses and government institutions and the necessary practices and regulations will be examined.

## II. REVIEW OF LITERATURE

### Crisis concept

In general terms, crisis represents an unstable structure and status, which does not operate properly and requires a reform. Crisis can be defined as an emergency situation of discomfort, which emerges suddenly and threatens the ordinary functioning of the organization. The origin of the concept of crisis is the ancient greek word "krisis" that means "decision". The concept of crisis is a change, which can wholly or partly affect the integrity and functioning of an organization. An organization (structure) in crisis is moved away from the old status, but also it cannot be considered to gain a new status. In fact, even the probable direction of change is not clear yet (genç , 2005: 334). The crisis is the situation which is not foreseeable and is unexpected. It is the case for the organization to respond immediately. Crisis is a position of threaten and stress for the current values and goals of the organization, which makes the organization's prevention and adaptation mechanisms. The concepts such as stress, anxiety and panic are emotional reflections to emerge during the crisis (Tağraf and Arslan, 2003: 150). Crisis is an unusual state and process of stress, which is brought forward by the strategic gap due to lack of adaption with the changes occurring in the environment. In crisis situations everyday functioning and current structure begins to be deteriorated, fast decision making is required, and

the managerial bodies have difficulty in decision making. Crisis is a condition that causes stress. It threatens the survival of the organization, endangers the most important goals of it. In case of a crisis, the constancy of the prediction and prevention mechanisms of the organization become inadequate and emergency reaction is required. According to that definition main characteristics of a crisis are (Can, 1999: 315; Simşek, 2002: 326); Crisis is unpredictable and the organization's foresight and prevention is insufficient, It threatens organization's survival and targets, Lack of sufficient resources, information and time to solve the problem, Need of emergency intervention and Causing stress for the management.

#### **Crisis management:**

Crisis management, involves the activities to be done in terms of; sensing and evaluating the signs of a possible crisis, making provisions and taking the actions, in order to cause the organization to get rid of the crisis with the least damage (pearson and clair, 1998: 61). An effective crisis management requires being prepared for the crisis and having plans before. Crisis management activities are the studies for pre-determination of potential crisis situations and deciding how to deal with them. Organizations, should allocate the necessary resources against possible crisis situations, create infrastructure systems and be equipped. One of the most important factor in coping with the crisis, is the organizations management's being knowledgeable and skilled about the subjects of preparedness for and management in times of crisis (sezgin, 2003: 181). In other words, crisis management is a management model improved for efficiently getting rid of the unusual situations, which emerge suddenly, disrupt routine functioning, increase risk, stress and conflict, and therefore makes decision making difficult.

#### **Crisis management approaches:**

One of the main features of crisis management should be perception of crisis signals and prevention of crisis, when detected. An organization's priority is not to face crisis situations if possible. However, despite all the measures if the crisis is faced, to the way out of the crisis with a minimum loss, should be searched (tekin and serenler, 2008: 232). The features of the situation do not change, for a fear crisis or opportunity. Usual responses are not enough; there is the lack of a system to manage change in the organization and develop new activities. Contrary to the need of emergency responses, the organization has difficulty even in defining their own goals. The management assess the process in terms of qualification and do not have the opportunity to measure, where the organization goes through. Although it is a rare situation that the management can control the emergence and speed of the crisis, reaction and solution for the crisis is a situation, which can be controlled. Because all crises, do not always arise unexpectedly and unpreventably; they warn the managers through many signs and symptoms as we noted earlier. In these conditions, two major approaches to manage the crisis well can be mentioned (dinçer, 2004: 423):

**Solutions for the crisis:** Besides being undesirable situations; a crisis can become useful if it is effectively managed. A manager, who directs the crisis well and turns it into an

opportunity, can escape both him/herself and the organization from the crisis, through strengthening. Because; every crises not only reveals the strengths and weaknesses of the organization, but also makes pressure to management for change and development. A manager can make the organization gain new approaches and dynamism by making the necessary arrangements and improvements about those weaknesses (dinçer, 2004: 424; tutar, 2000: 95-96). Crisis periods, at the times, when management skills of managers are best-understood. Crisis management and solution activities are fulfilled in specific processes such as all activities of the organization. Primarily solution of a crisis, begins with identifying the causes for the organization to enter a crisis situation. After determining all causes of the crisis, the organization is brought back to the previous stable state by eliminating those (tutar, 2000: 96). Even the crisis periods can be totally new eras of creating value-adds. Many organizations, cannot have the opportunity for evaluation of new approaches and development of business in normal times, under the pressure of routine business and operations. Those periods, should be considered opportunities for making structural reforms and innovations in the organization, and improving knowledge and skills of the employees (Baltaş, 2002: 27).

#### **Stages of crisis management:**

Crisis management is the process of taking and implementing all necessary measures for making the organization get rid of the crisis situation with minimum loss by taking and evaluating the signals of the crisis, as a response to possible crisis situations. The main objective of crisis management is to prepare the organization for crisis situations. Crisis management process consists of the following five phases (can, 1999: 318-320). In addition to the five stages of can, some authors add an intermediate phase of "identifying the positive aspects of the crisis", by also putting emphasis on the opportunities of crisis situation.

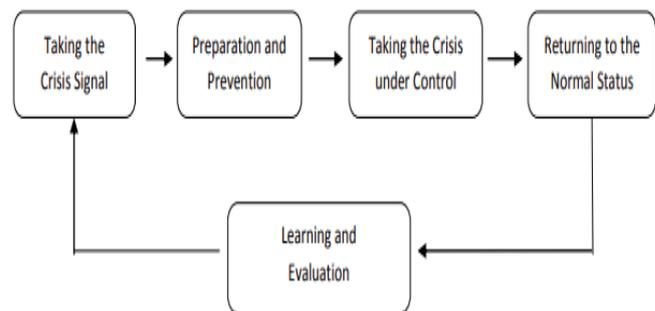


Figure 1: stages of crisis management

#### **Pre-crisis Phase:**

Prevention involves seeking to reduce known risks that could lead to a crisis. This is part of an organization's risk management program. Preparation involves creating the crisis management plan, selecting and training the crisis management team, and conducting exercises to test the crisis management plan and crisis management team. Both Barton (2001) and Coombs (2006) document that organizations are better able to handle crises when they (1) have a crisis management plan that

is updated at least annually, (2) have a designated crisis management team, (3) conduct exercises to test the plans and teams at least annually, and (4) pre-draft some crisis messages.

***Have a Crisis Management Plan in place:***

A crisis management plan (CMP) is a reference tool, not a blueprint. A CMP provides lists of key contact information, reminders of what typically should be done in a crisis, and forms to be used to document the crisis response. A CMP is not a step-by-step guide to how to manage a crisis. Barton (2001), Coombs (2007a), and Fearn-Banks (2001) have noted how a CMP saves time during a crisis by pre-assigning some tasks, pre-collecting some information, and serving as a reference source. Pre-assigning tasks presumes there is a designated crisis team. The team members should know what tasks and responsibilities they have during a crisis.

***Crisis Management Team:***

Barton (2001) identifies the common members of the crisis team as public relations, legal, security, operations, finance, and human resources. However, the composition will vary based on the nature of the crisis. For instance, information technology would be required if the crisis involved the computer system. Time is saved because the team has already decided on who will do the basic tasks required in a crisis. Augustine (1995) notes that plans and teams are of little value if they are never tested. Mitroff, Harrington, and Gia (1996) emphasize that training is needed so that team members can practice making decisions in a crisis situation.

***Communication Channels:***

An organization may create a separate web site for the crisis or designate a section of its current web site for the crisis. Taylor and Kent's (2007) research finds that having a crisis web sites is a best practice for using an Internet during a crisis. The site should be designed prior to the crisis. This requires the crisis team to anticipate the types of crises an organization will face and the types of information needed for the web site. For instances, any organization that makes consumer goods is likely to have a product harm crisis that will require a recall. The Corporate Leadership Council (2003) highlights the value of a crisis web site designed to help people identify if their product is part of the recall and how the recall will be handled. Stakeholders, including the news media, will turn to the Internet during a crisis. Crisis managers should utilize some form of web-based response or risk appearing to be ineffective. A good example is Taco Bell's E. coli outbreak in 2006. The company was criticized in the media for being slow to place crisis-related information on its web site.

***Crisis Phase***

The crisis response is what management does and says after the crisis hits. Public relations plays a critical role in the crisis response by helping to develop the messages that are sent to various publics. A great deal of research has examined the crisis response. That research has been divided into two sections: (1) the initial crisis response and (2) reputation repair and behavioural intentions.

***Post-crisis Phase:***

In the post-crisis phase, the organization is returning to business as usual. The crisis is no longer the focal point of

management's attention but still requires some attention. As noted earlier, reputation repair may be continued or initiated during this phase. There is important follow-up communication that is required. First, crisis managers often promise to provide additional information during the crisis phase. The crisis managers must deliver on those informational promises or risk losing the trust of publics wanting the information. Second, the organization needs to release updates on the recovery process, corrective actions, and/or investigations of the crisis. The amount of follow-up communication required depends on the amount of information promised during the crisis and the length of time it takes to complete the recovery process. As Dowling (2003), the Corporate Leadership Counsel (2003), and the Business Roundtable (2002) observe, Intranets are an excellent way to keep employees updated, if the employees have ways to access the site. Coombs (2007a) reports how mass notification systems can be used as well to deliver update messages to employees and other publics via phones, text messages, voice messages, and e-mail. Personal emails and phone calls can be used too.

***Terminating a crisis***

Crisis termination is twofold. It first requires shifting back from emergency to routine mode and downsizing the crisis-management operations. At the strategic level, it also requires rendering an account for what has happened and gaining acceptance for this account. These two aspects of crisis termination are distinct but in practice often closely intertwined. Government must regain the necessary legitimacy to perform its usual functions. Leaders cannot bring this about by unilateral decree, even if they possess the formal mandate to terminate crises in a legal sense. Formal termination gestures can follow, but never lead, the mood of a community. Premature closure may even backfire. Allegations of underestimation and cover-up are quick to emerge in an opinion climate that is still on edge.

***Crisis Management in Businesses:***

***Tylenol (Johnson and Johnson)***

In the fall of 1982, a murderer added 65 milligrams of cyanide to some Tylenol capsules on store shelves, killing seven people, including three in one family. Johnson & Johnson recalled and destroyed 31 million capsules at a cost of \$100 million. The affable CEO, James Burke, appeared in television ads and at news conferences informing consumers of the company's actions. Tamper-resistant packaging was rapidly introduced, and Tylenol sales swiftly bounced back to near pre-crisis levels

***Pepsi***

The Pepsi Corporation faced a crisis in 1993 which started with claims of syringes being found in cans of diet Pepsi. Pepsi urged stores not to remove the product from shelves while it had the cans and the situation investigated. This led to an arrest, which Pepsi made public and then followed with their first video news release, showing the production process to demonstrate that such tampering was impossible within their factories. A second video news release displayed the man arrested. A third video news release showed surveillance from a convenience store where a woman was caught replicating the tampering incident. The company simultaneously publicly worked with the FDA during the crisis. The corporation was

completely open with the public throughout, and every employee of Pepsi was kept aware of the details. This made public communications effective throughout the crisis. After the crisis had been resolved, the corporation ran a series of special campaigns designed to thank the public for standing by the corporation, along with coupons for further compensation. This case served as a design for how to handle other crisis situations.

#### ***Crisis Management by Governments:***

According to Lee (2009), a government crisis differs from a corporate crisis in both nature and scope. The government is always under the public eye; it has a duty to report decisions and actions to citizens. It requires a high level of responsibility and delicate communication skills. A crisis in this sector can face a degree of both public and media scrutiny that far exceeds a normal corporate crisis, which can lead to a loss of public trust towards the government (Lee, 2009; Liu, Horsley & Levenshus, 2010).

With new media, a crisis can spread to a global audience more easily than ever. Novak and Barrett (2008) and Xiao (2008) recommended that governments should thus designate a spokesperson during a crisis to assure the public, express willingness to assess the crisis situation and progress, announce if the government has any countermeasures and avoid secrecy. These steps are vital to uphold the public trust in an uncertain and complex situation like a crisis. Novak and Barrett (2008) believed that formal leader of an organization can be the best choice as the spokesperson. It is the spokesperson job to maintain the trust and credibility of the government and if necessary, admit fault and accept responsibility.

#### IV CONCLUSION

Crisis management concept seems to become synonymous with business management nowadays due to acceptance of especially economic relations and structures. On the other

hand, public administrations focus the crises, which are often caused by disasters. However, the worldwide economic crisis in recent years, revealed that public administration should be ready for not only disasters but also any kind of crises for whatever the reason is (erten, 2011: 1).

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# A Study on the Entrepreneurial Interest among Management Students

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**Abstract—** In a developing economy, entrepreneurial development is of immense importance. The two major problems faced by developing countries are unemployment and underemployment. Entrepreneurship is an effective strategy, or a remedy for both in this case. More than a mere creation of business, entrepreneurship's importance has gained wide acceptance as it is a major contributor to the economy from many spheres. Since the decision to become an entrepreneur is considered voluntary and conscious, it seems reasonable and important to 'analyze' how decisions are taken regarding this case. In this manner, a conscious attitude approach would be preferable. This study is an attempt to find the entrepreneurial interest among the management students.

The objective of industrial development, regional growth and employment generation, all depends upon entrepreneurial development. Being students are the forth comers who becomes an entrepreneur and entrepreneurship attitude and intentions merits scholarly research. Here the researchers are interested in identifying the major factors that contribute towards student's interest in entrepreneurship.

**Keywords:** Entrepreneurship, interest, factors.

## I. INTRODUCTION

Entrepreneurship is the process by which either an individual or a team identifies a business opportunity and acquires and deploys the necessary resources required for its exploitation. An economy cannot completely fulfil its objectives of growth without removing the major two problems, which is indeed the unemployment and underemployment. More than the creation of an enterprise, entrepreneur, newly contributed idea to an economy, entrepreneurship indeed has a much more importance. Entrepreneurship is a long-term strategy for reducing unemployment and boosting economic development through the exploitation of business opportunities available.

Entrepreneurship development today has assumed with great relevance as it is a key to economic development. The objective of industrial development, regional growth and employment generation, all depends upon entrepreneurial development. Thus, in this era of growing age where importance to Entrepreneurship Development Programs are taken with utmost care and importance by various agencies and

government itself, there has been a greater attempt to promote entrepreneurship especially, among students. Being students are the forth comers who becomes an entrepreneur and entrepreneurship attitude and intentions merits scholarly research. This study is an attempt to understand entrepreneurial interest among the management students.

## II. LITERATURE REVIEW

Many students are ambitious in such a way that they dream about their business in their education period itself. But it is quite unfortunate that, most of these ideas germinated get irresolute and discontinued, due to the lack of entrepreneurship development programs in schools, colleges itself. Many universities are trying in making the concept of entrepreneurship as a discipline in the syllabus as they've felt the need and importance of the same. Thus, a positive approach towards entrepreneurship education would be appreciated. (Dinesh Bhasin, Entrepreneur India, 2016)

Financial management and time management are two constraints faced by upcoming student entrepreneurs in their entrepreneurial career. As they are the beginners in this, it stands as a hindrance due to lack of knowledge and financial illiteracy. Thus, usual EDP program cannot fully contribute to the removal; an attitude approach would be preferable. (Alexia Hirschi, 2013)

Can Startups give boost to Indian economy? By India needs 10 million jobs a year and global data shows that it is not the usual large enterprises that create new jobs; they are the newly born idea backed startups. The core which gives much of importance to startups is the presence of innovation in the projects leading to the Unique Selling Proposition (USP) which generate employment. (Karma Bhutia, Can Startups give boost to Indian economy? 2016).

Increasing wealth or wealth building of assets (depreciating or appreciating) is common about a concern. The argument denoted by author, as common people are denied the chance of wealth building even by fabricated means for entrepreneurial motives are facts to be considered. (Wealth building isn't just for the for the wealthy, Devin Thorpe, 2017)

Despite much research into explaining what makes entrepreneurial leader. Along the way the data is also allowing scholars to study attributes of entrepreneurs by gender, as well

as compare serial entrepreneurs versus first time founders. We have always had a hard time being able to identify the skills and behaviors of entrepreneurial leaders. (Skills and Behaviors That Make Entrepreneurs Successful, HBS Working Knowledge 2016).

Immigrant entrepreneurship is a topic of key policies but on many facts. There has been an increase in number of immigrants from other nations and their economic related activity (business) which they undertake that makes the nation wise contribution. Some may frequently fail leading to giving up of entrepreneurial dreams, while others choose to iterate again. (Immigrant Entrepreneurship, Sari Pekkala Kerr and William R. Kerr, 2016).

The best performing startups are those where the founder is hands on with people management. Startup founders with hands-on management style of dealing with people are more likely to retain their employees along with witnessing the success of the firm. Founders are busy searching for various factors which runs their business and the key to hands on management style without conflicts and clashes will impact to employee turnover and firm success. More intensive people are worth the investment. (The most successful startups have hands-on founders, Dina Gerdeman 2017).

The lack of systematic presence of females with regards to entrepreneurial activities which implying to activities of innovation is pointed out here. The proportion of labor minority in labor and lack of presence of women in the entrepreneurial activities are reduced to an extent as compared to the analysis of the statistics of past reports. But further measures to remove these minor measures are to be adopted. (Diversity in innovation, Paul A Gompers and Sophie Q Wang, 2017).

The concept of entrepreneurship assures financial freedom and independence than being a paid worker. As stated by rich dad (rich dad poor dad by Robert T Kiyosaki), as a paid worker where one works for the pay checks, they unknowingly get in into the rat race which none like. Thus, there is been an increase in the entrepreneurial education with reference to this ideology. (Self-employment dynamics and returns to entrepreneurship, Eleanor. W, Dillion and Christopher T Stanton, 2017).

### III. NEED OF THE STUDY

Entrepreneurship is regarded as one of the best economic strategies to develop a country's economic growth and prosperity and to sustain competitiveness in facing increasing trends of globalization. There are a significant number of students who have valuable entrepreneurial traits and ideas which do not germinate and grow to completion, may getting irresolute to go on with the activities, many having less or no interest with the concept. Being an economy promoting entrepreneurship, this study is relevant for an understanding entrepreneurial interest of students (MBA) towards entrepreneurship.

### IV. OBJECTIVES OF THE STUDY

1. To review about the management student's interest towards entrepreneurship.
2. To review about the reasons students do not prefer entrepreneurship as a career.
3. To review about the awareness of students towards various schemes and incentives promoting entrepreneurship.

### V. RESEARCH METHODOLOGY

#### Data Sources:

This study was carried out with aids of both the primary and secondary data. As a part of collecting primary data questionnaire was printed and distributed among several people. Secondary data includes books, journals, websites and other published materials. The study was conducted based on samples collected from the management students in Ernakulam and Thrissur district. The sampling method used in study is convenient sampling method, 83 students responded to the questionnaire.

#### Hypotheses:

- H1: There is significant difference exists between among the gender of respondents with respect to entrepreneurial interest.
- H2: There is relationship between entrepreneurial interest and annual family income level
- H3: There is relationship between entrepreneurial interest and UG degree
- H4: There is relationship between entrepreneurial interest and start-up awareness
- H5: There is relationship between entrepreneurial interest and starting time

### VI. CONCEPT OF ENTREPRENEURSHIP

"Entrepreneurship in effect means finding and utilizing opportunity". It is opportunity focused and not problem-focused management that deals with problems. Entrepreneurs deal with opportunity. The entrepreneur is the systematic risk-maker and risk-taker, and he discharges this function by looking for and finding opportunity.

Entrepreneurship has been described as the capacity and willingness to develop organize and manage a business venture along with any risks in order to make profit. Entrepreneurship is a multi-dimensional task defined differently by different scholars. For some, entrepreneurship is 'risk-bearing', for some others it is 'innovating' and for some certain others it is 'thrill-seeking'. Entrepreneurship is neither science nor an art. It is a practice. It has knowledge base. Knowledge in entrepreneurship is a means to an end.

Entrepreneurship Development Programme (EDP)

Entrepreneurship Development Program (EDP) is a systematic and organized activity. It acts as a catalytic agent for the development of an industry. Entrepreneurial development Program means any program which intends to develop entrepreneurship. It is designed to help a person in identifying and strengthening his entrepreneurial motives and worth.

EDP enables a person to acquire, develop, and strengthen the skills capabilities and motivates which are necessary for playing the entrepreneurial role effectively. It results in the overall improvement in the personality of an individual. It transforms his/her outlook and materializes their ideas into actual enterprise. EDPs are essentially training programs which are instrumental in making a person a successful entrepreneur and an active participation in the economic development of as nation.

As an educational process Entrepreneurial Development Program aims at developing human resources. It induces motivation and competence in their prospective entrepreneurs. It causes proper utilization of local resources, more employment generation, and promotion of small-scale units and overall development of an area.

#### Objectives of EDP

The basic objective of an EDP is to motivate the job seekers to set up their own business concerns and thereby become employers and not employees.

- **Short term objectives:** Short term objectives imply the objectives which are to be achieved immediately after the completion of the program. They aim at preparing a person for an entrepreneurial venture and helping him to fix his goal of life as an entrepreneur.
- **Long term objectives:** Long term objectives intend to equip a person with all the skills required for the establishment and smooth functioning of business ventures. The aim is that the participant under training should establish his own venture.

#### Schemes provided promoting entrepreneurship

##### 1. Kerala Startup Mission (KSUM)

Kerala startup mission is the nodal agency of government of Kerala for entrepreneurship development and incubation activities in Kerala, India. The primary activities objectives of KSUM was to undertake the planning, establishment, and management of technology business incubators/ accelerators in Kerala to promote technology-based entrepreneurship activities and create the infrastructure and environment required for promoting high technology-based business activities.

###### 1.1 KSUM-EY accelerator

Kerala Startup mission in association with Ernst and Young have started a business & technology accelerator to provide for fully equipped and functional office space of 1500 sq. ft. at KINFRA Film & Video Park Thiruvananthapuram. The accelerator program will also support entrepreneurs to network with industry captains, angels, venture capitalists etc.

###### 1.2 FAB labs

KSUM has started two MIT USA Electronics Fabrication labs each at Technopark, Trivandrum and Kerala Technology Innovation Zone (KTIZ), Kochi. The FAB Lab is established inside the Indian Institute of Management-Kerala (IITM-K).

A fabrication laboratory (FabLab) is a technical prototyping platform for innovation and invention which aims at providing stimulus for local entrepreneurship and serves as a platform for learning and innovation.

KSUM has associated with centre for bits and atoms, MIT FabLab foundation, USA for this.

###### 1.3 Startup village

Startup village is a not for profit business incubator based in Kochi, Kerala in April 2012. On January 1, 2016 Kerala startup mission took physical space of iconic Startup village at Hi-Tech Park in Kalamassery.

The organization aimed to launch 1000 technology startups over the next ten years and start the search for the next billion-dollar Indian company. It focuses primarily on student startups and telecom innovation. It is India's first incubator that is funded jointly by the public and private sectors.

###### 1.4 Incubation program

Startup incubation can usually be divided into three stages, namely a pre-incubation stage (3-6 months), an incubation stage (6-12 months) and an accelerator stage (3-6 months). The pre-incubation mainly focusses on ideation of a potentially innovative idea in a co-working environment. During the incubation stage, startup companies graft product development and prepare themselves for marketing. KSUM at this stage will allot them specific seats /modules along with funds or grants as applicable under department scheme and right mentorship.

###### 1.5 Community gathering

Every month startup village holds a community gathering where would-be entrepreneurs can connect with investors, technology innovators and famous business persons. Interested founders are asked to come for an open house session that is held every Saturday at startup village's Kochi campus to connect the team and brainstorm with other

likeminded people. They can apply online if they wish to enroll for the incubation program.

## 2. Mudra loan scheme

Micro Units Development and Refinance Agency Ltd (MUDRA) is an organization established by the Government of India for development and refinancing activities relating to micro units. The vision of MUDRA is- 'Funding the Unfunded'. MUDRA bank loan initiative makes available low-cost funding for MFI (Micro Finance institutes).

## 3. Stand-up India scheme

The Stand-Up India scheme initiated by the Government of India promotes micro enterprises in the form of loans which will be extended by the banks. Under this scheme, they provide a composite loan between INR 10 lakh and up to INR 1 crore for setting up a new enterprise.

## 4. The Credit Guarantee fund scheme for Micro and Small enterprises (CGS)

The CGS was launched by the Government of India (GoI) to provide collateral-free finance to the micro and small enterprise sector. This scheme is available to new as well as existing business in India. The scheme makes available credit facilities in the form of term loans and working capital financing up to Rs. 1 crore per borrowing unit. The amount is contributed by the Government and SIDBI in the ratio of 4:1. Under the scheme, rehabilitation assistance is also made available to sick units.

## 5. Make in India loan for small enterprises

SIDBI began its small business funding schemes way back in 1990, and now is a popular financial institution that plays a vital role in the development and promotion of the Indian small business community. In association with SIDBI, government of India has launched a loan program for SMEs, the SIDBI Make in India for Small Enterprises (SMILE). Focused on the 25 sectors under Prime Minister's Make in India vision, SMILE offers quasi-equity and term-based loans to Indian SMEs, with less stringent rules and regulations.

## 6. National Bank for Agriculture and Rural Development (NABARD)

This scheme was launched mainly to promote agriculture-based rural business enterprises. Cottage and village industries are the main beneficiaries of NABARD, which aims to offer financial assistance.

## 7. National Small Industries Corporation Limited (NSIC)

NSIC was launched in 1955; with an aim to encourage small-scale industries in India. The main feature of NSIC is to import machines in hire purchase terms. It stresses

on supply and distribution of both indigenous and imported raw material as well as on exporting the products of business units.

## 8. Young Entrepreneurs Academy (YEA)

The Young Entrepreneurs Academy (YEA!) is a ground-breaking program that transforms local middle and high school students into real confident entrepreneurs. The Young Entrepreneurs Academy is a life changing program that positively impacts the entire community. Students learn how to develop and run a real enterprise in a fun project-based approach.

YEA! India looks forward to scale rapidly pan to fulfil its mission of "teaching students to make a job not just take a job".

## VII. ANALYSIS AND INTERPRETATIONS

### A. Demographics

A questionnaire was sent to the students those who are currently pursuing their MBA programme in Ernakulam & Thrissur district. 83 students responded to the questionnaire. 48.2% of the participants were female with the age group of 21 to 25. Among the respondents 61.4% belongs to the family income of below Rs. 2 lakhs. Out of the total participants 71.1% students have studied commerce in the under graduation.

### B. Entrepreneurial Interest

Among the respondents, 42.2% strongly agreed and 45.8% students selected agree for their entrepreneurial interest. Existing proven business models selected by 41% students as a motivating factor to start their business. 42% of students mentioned they don't know when they will start their business and only 7.2% of students having the plan to start their own business within a year. 34.9% have chosen passion is the reason for their start-up and next to that 31.3% students selected to learn new things as their option. 34.9% respondents have chosen poor funding possibilities is the main issue which hinders the entrepreneurship in Kerala. 39.8% respondents have selected confidence as the essential quality for a successful entrepreneur. Kochi is the best city for entrepreneurship and 74.7% students selected the same.

57.8% of the respondents are mentioned financial constraint and 20.5% respondents were selected risk is the main reason not to prefer entrepreneurship. 48.2% respondents were confident to learn and iterate again, if their initial attempts fail with respect to start-up.

For testing the hypotheses, correlation, t-test and ANOVA was used and the same executed through SPSS software package.

### A. t-Test

Table I

t-Test for Entrepreneurial Interest & Gender

**One-Sample Test**

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Entrepreneurial Interest	50.698	82	.000	4.265	4.10	4.43
Gender	27.511	82	.000	1.518	1.41	1.63

To test whether any significance difference exists between Male and female with respect to entrepreneurial interest, t-Test was used (using SPSS software) and it was found that p value (sig. two tailed) is less than 0.05. H1 : There is significant difference exists between among the gender of respondents with respect to entrepreneurial interest.

B. Correlation

Table II  
Correlation - Entrepreneurial Interest & Awareness  
**Correlations**

		Entrepreneurial Interest	Awareness
Entrepreneurial Interest	Pearson Correlation	1	-.179
	Sig. (2-tailed)		.106
	N	83	83
Awareness	Pearson Correlation	-.179	1
	Sig. (2-tailed)	.106	
	N	83	83

Table: 2 represents the correlation value between entrepreneurial interest and the awareness. There is a weak negative correlation which is not significant. (r = -0.179, p=0.106)

Table III

ANOVA for Entrepreneurial Interest & Income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.069	4	1.267	2.293	.067
Within Groups	43.100	78	.553		
Total	48.169	82			

Table : 3 represents the ANOVA table between entrepreneurial interest and annual family income. There is no significant differences among the income levels of the family and the entrepreneurial interest ( p > 0.05)

Table IV

ANOVA for Entrepreneurial Interest & UG degree

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.444	4	.361	.602	.662
Within Groups	46.725	78	.599		
Total	48.169	82			

Table: 4 represents the ANOVA table between entrepreneurial interest and annual family income. There is no significant differences among the UG degree and the entrepreneurial interest ( p > 0.05)

Table V

ANOVA for Entrepreneurial Interest & Start-up time

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.217	4	2.304	4.614	.002
Within Groups	38.952	78	.499		
Total	48.169	82			

Table: 4 represents the ANOVA table between entrepreneurial interest and start-up time. There is significant difference among the start-up time required and the entrepreneurial interest ( p < 0.05).

VIII. CONCLUSION

The study on entrepreneurial interest among management students, an empirical approach reveals about entrepreneurial interest of management students in selection of the same as

career. The stipulated notion as the management students are more to be concerned on the placement options and jobs seems to witness a trend change as students are interested to opt out from the placement options in order to start their own venture, which is indeed a good sign as entrepreneurship is the driving force behind rapid economic growth of a nation.

These figures depicting interest student's interest in entrepreneurship are fairly encouraging and will increase in days to come, only if suitable measures are taken by means of Entrepreneurship Development Programmes, along with providing various aids to remove the constraints faced by students if concerns of awareness, finance and technical skills, suitable infrastructure, mentoring are all satisfied. Proper implementation of entrepreneurship knowledge in course curriculum is also appreciated. Failure in do so in all these manners will result in loss of entrepreneurial talents which is so vibrant for a developing country like India.

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# Cancer Crisis in Kerala

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**Abstract**— Cancer a multifactorial life-threatening disease among the humans in world wide. The World Health Organization reports that, without immediate action, the global number of deaths from cancer will increase by approximately 80% by 2030. In 2018, 1 million new cancer cases were diagnosed in India, and approximately 800,000 deaths from cancer occurred. The most common cancers in India are oral cavity, lung, stomach, and colorectal cancers in men and breast, cervical, oral cavity, and colorectal cancers in women. Despite the fact that Kerala's health indicators are way ahead as compared to other Indian states, due to epidemiological transition lifestyle diseases are on the rise in the state. Every year 35,000 new cases of cancer are detected in Kerala. The Governmental support and involvement for the control program is highlighted. The modus operandi for early detection, public education and professional reorientation are described. District Cancer Control Programme, School Children's involvement, District Cancer Control Society and the role of Regional Cancer Centre are highlighted.

**Keywords**— Cancer, Early detection, Community volunteers, Empowerment, Screening

## 1. INTRODUCTION

KOCHI: The highest number of cancer cases in India is detected from Kerala, followed by Mizoram, Haryana, Delhi and Karnataka, while it is the lowest in Bihar. In 2016, cancer incidence rate in India was 106.6 per 1 lakh people, while in Kerala it is 135.3 per 1 lakh people. Even mortality and disability rates due to cancer are high in the southern state, a new study shows. The death rate for both sexes due to cancer was highest in Mizoram, followed by Kerala and Haryana. With the southern state witnessing 73.5 deaths per 1 lakh females and 103.4 per 1 lakh males, disability due to cancer was highest in Mizoram, Kerala, Assam and Haryana, says the report on 'The burden of cancers and their variations across the states of India: Global burden of disease study 1990-2016,' published in the Lancet this month. Dr A Nandakumar, director, National Centre for Disease Informatics and Research, Indian Council of Medical Research (ICMR), said Kerala has a slightly older population compared to the rest of the country and this could be reason for high incidence. "If you take the proportion of people above the age of 65 in Kerala, which is the age during which people are more prone to get cancer, it is high compared to the rest of India. Also, Kerala has well-established cancer care centres and cancer registry," said Nandakumar, co-author of the study funded by Bill & Melinda Gates Foundation, ICMR and Union ministry of health and family welfare.

Rajeev Sadanandan, secretary, health, said the factor that influences incidence of cancer the most is age. "The percentage of aged persons above 65 is 50% more than national average. Our detection is also high," he said. The study analysed variations in cancer burden across India using 42 population based cancer registries and the nationwide sample registration system to estimate the incidence of 28 types of cancer in every state from 1999 to 2016. It shows that 8% of the total deaths and 5% of the total disability-adjusted life years (DALYs) in India in 2016 were due to cancer, double the contribution in 1990. The study shows that 10 cancer types responsible for the highest proportion of disability in India in 2016 were stomach (9%), breast (8.2%), lung (7.5%), lip and oral cavity (7.2%), pharynx other than nasopharynx (6.8%), colon and rectum (5.8%), leukaemia (5.2%), cervical (5.2%), oesophageal (4.3%), and brain and nervous system (3.5%) cancer. (The Times of India, Cancer incidence rate highest in Kerala, Sep 19, 2018, 06.56 AM IST)

Cancer a controllable chronic disease has emerged as a complex health issue of this era. The prevention and control of cancer to improve quality of life of cancer victims is a scientific and public health challenge. Cancer occurs in all places, races, however its distribution and occurrence varies. Environmental factors and lifestyle are believed to be the cause of such variation. Population based cancer registries have provided reliable data on the occurrence of cancer in the state. The rate of cancer occurrence in Kerala and in India is much lower compared to western countries, but the large population will give rise to large number of cancers. India is not far behind when it comes to cancer. Cancer in india is around 2.5 million, which is a disturbing figure for any nation. Sedentary lifestyle, air pollution, unhealthy food habits, alcohols consumption, smoking habits, irregular sleeping pattern and stress at workplace are contributing to the alarming rise of cancer in India.

Various government and NGO organizations have provided the data related to the cancer cases reported in district level. These data shows the incident of cancer diseases is compared to lower than North Indian States. Moreover now a days incensed cases are reported from different Districts of Kerala due to urbanization and Industrialization and lifestyle changes etc... According to the report from Regional cancer centre, Kerala 35,000 new cancer cases occur in in one year. Male population affected about 50% cases are cancer in the mouth, lungs and throats due to the consumption of tobacco products. In Kerala tobacco related cancer in women's are rare associated to other states in India but large group of female population has widely affected Breast cancer is really a matter of anxiety. Cervical cancer was one of

the threatening cases are faced by women's before a decade. Every third women in the female populace are diagnosed with breast cancer. Mortality rate of breast cancer was not high but the cancer give stressful situation and are considered to be more defenceless.

### II. OBJECTIVES OF THE STUDY

The study on Cancer crisis in Kerala has the following objectives:

1. To understand the incidences of cancer in the state of Kerala.
2. To understand the factors which cause Cancer in Kerala.
3. To understand the support for Cancer care.

### III. LITERATURE REVIEW

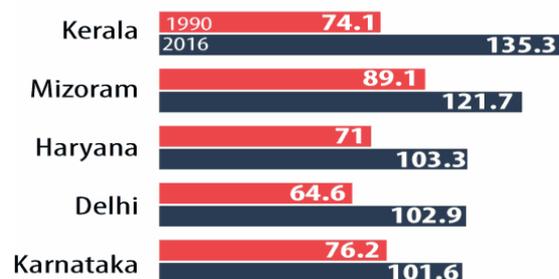
Cancer is a ubiquitous disease that continues to be associated with high mortality rates despite ongoing research. An estimated 6.35 million new cases of cancer are diagnosed worldwide annually, half of which originates in developing nations (Bonica & Ekstrom, 1990). Cancer is currently the cause of 12% of all deaths worldwide. In approximately 20 years time, the number of cancer deaths annually will increase from about 6 million to 10 million. The principal factors contributing to this projected increase are the increasing proportion of elderly people in the world (in whom cancer occurs more frequently than in the young), an overall decrease in deaths from communicable diseases, the decline in some countries in mortality from cardiovascular diseases, and the rising incidence of certain forms of cancer, notably lung cancer resulting from tobacco use (2). The impact of cancer is far greater than the number of cases alone would suggest. Regardless of prognosis, the initial diagnosis of cancer is still perceived by many patients as a life-threatening event, with over one-third of patients experiencing anxiety and depression.

Cancer can be equally if not more distressing for the family, profoundly affecting both the family's daily functioning and economic situation.

Cancer is currently the cause of 12% of all deaths worldwide. In approximately 20 years time, the number of cancer deaths annually will increase from about 6 million to 10 million. The principal factors contributing to this projected increase are the increasing proportion of elderly people in the world (in whom cancer occurs more frequently than in the young), an overall decrease in deaths from communicable diseases, the decline in some countries in mortality from cardiovascular diseases, and the rising incidence of certain forms of cancer, notably lung cancer resulting from tobacco use. The impact of cancer is far greater than the number of cases alone would suggest. Regardless of prognosis, the initial diagnosis of cancer is still perceived by many patients as a life-threatening event, with over one-third of patients experiencing anxiety and depression. Cancer can be equally if not more distressing

for the family, profoundly affecting both the family's daily functioning and economic situation. The economic shock often includes both the loss of income and the expenses associated with health care costs. Cancer prevalence in India is estimated to be around 2.5 million, with over 8,00,000 new cases and 5,50,000 deaths occurring each year due to this disease in the country. The common sites for cancer in India are oral cavity, lungs, oesophagus and stomach in males and cervix, breast and oral cavity among females. Over 70% of the cases report for diagnostic and treatment services in advanced stages of the disease, resulting in poor survival and high mortality rates. The disease is associated with a lot of fear and stigma in the country.

### CRUDE CANCER INCIDENCE per 100000 population



### Cancer burden in Kerala

The cancer burden in Kerala is available from Population based information from two Registries (PBCR- Population based cancer registry) located in Thiruvananthapuram and Kollam districts in Southern Kerala, both under the Regional Cancer Centre, Thiruvananthapuram. These Registries are in the network of National Cancer Registry Programme (NCRP) of the Indian Council of Medical Research (ICMR) and are in the southern part of Kerala. Population based information is not available from central or northern part of Kerala.

The age specific rates seen in Thiruvananthapuram and Kollam when applied to the projected Kerala population for 2020 it is evident that there would be 147 new cases diagnosed every day in Kerala with an annual prevalence of 1,61,307 cancer cases in Kerala. The all cancer incidence rates among males and females are given in table 3. The all cancer incidence rate in Thiruvananthapuram among males was 132.6 /100000 and among females it was 123.2/100000. The rates in Kollam among males was 118.5/100000 and among females 91.6/100000. Compared to other population groups in India, Thiruvananthapuram all cancer incidence rates among males stood in the 11<sup>th</sup> position and Kollam was in 7<sup>th</sup> position. Among females Thiruvananthapuram is in 6<sup>th</sup> position and Kollam is 16<sup>th</sup> position. The incidence rates may have wide variations in different regions of Kerala. In Northern and Central part of Kerala many clinicians report a high incidence of Stomach cancer and Liver cancer. Population based data is inadequate to verify this lead in these areas.

**District Wise statistics of Cancer patients**

Name of district	Percentage
Thiruvananthapuram	0.03%
Kollam	0.03%
Pathanamthitta	0.03%
Kottayam	0.03%
Idukki	0.05%
Palakkad	1.52%
Malappuram	4.84%
Wayanad	5.76%
Kannur	55.05%
Kasargod	13.68%
Kozhikode	17.70%
Thrissur	1.20%
Ernakulam	0.05%
Alappuzha	0.03%

**Factors which influence cancer**

The exact reason for the transformation of normal to cancerous cells, ie specific cause for many cancers is still unknown. Both environmental and genetic factors have been implicated. Common environmental factors include intake of tobacco in the form of smoking and chewing of tobacco and alcohol consumption, radiation (both ionizing and non-ionizing), infections, excessive fat consumption (diet and obesity), viruses, stress, lack of physical activity, asbestos, certain chemicals and environmental pollutants.

**Genetic causes of cancer :** The abnormal multiplicity of cells leading to cancer originates with the change/destruction of the genetic matter of a particular cell. Now that abnormal propensity for multiplication may affect several generations. According to the studies carried out in this line, there are reasons to believe that a limited number of cancer types may be hereditary in nature; but the same is not true of the most other variations.

**Tobacco driven cancer:** There are reasons to vouch for the direct connection between tobacco and cancer. Smoking is thus one of the antecedents. Apart from nicotine, the various carcinogenic inputs of cigarette are potential contributors to cancerous growth, particularly those affecting oral cavities and respiratory organs. Even passive smoking can be one of the causes of cancer.

**Breast Cancer:** Breast cancer is the most common malignancy among women in Kerala state of India. Advancing age, delayed first child birth, nulliparity, history of previous breast biopsies and family history of breast cancer among first degree relatives were found to be associated with increased risk of breast cancer. History of breast feeding was found to reduce the risk. Longer duration of breastfeeding was found to be protective against breast cancer.

**Exposure to Ultraviolet rays and cancer:** UV radiation and for that matter sunlight which happens to be the basis of harmful UV rays is one of the leading risk factors abetting the development of skin cancer.

**Lifestyle and its relation to cancer:** Lifestyle options including sedentary way of living, obesity, disproportionate body weight, alcoholism, junk palette and dietary imbalance are also some of the other risk

factors of cancer.

**Environment and cancer:** The environment with its envelope of carcinogens including radon, UV light and infection causing agents are some of the hazardous factors as well.

**Social and Emotional issues in Cancer:**

Cancer and cancer treatments can cause physical problems for patients, like hair loss, or nausea and vomiting. they can also cause social and emotional issues. These are problems that affect how a patient feels, or how they relate to their family and community. They are also sometimes called psychological problems. Common reactions to cancer People with cancer (and those close to them) can experience a range of feelings during their cancer journey. These can include:

- Anger
- Sadness
- Fear
- Feeling out of control
- Feeling that there is nothing they can do to help themselves or their situation.

These feelings are very common around the time of diagnosis, or when there are changes in the course of cancer treatment. Negative feelings related to cancer often come and go. They usually improve with time as the person gets used to their cancer diagnosis and treatment, and learns to cope with the stress of having cancer.

**Impact of Cancer on families of patients:**

Cancer is considered to be a period of stressful situations and patients who are affected with cancer are considered to be more vulnerable. During this situation patients can pass through several stressful situations and might think as to how one should survive in Social, Psychological and Economical stressful situations in life.

In India cancer is detected at late stages because the patients report late to the facilities. As the stage of the disease advances, more than one modality of treatment may need to be applied by which the cost increases. In Nair et al.'s survey about 18% of the cancers were detected at third or above stages. Another 18% delayed starting the treatment even after the diagnosis. For most of them, financial difficulties were the reasons for delaying treatment.6 The cost of treatment increased as the disease progressed and the average cost per day was more in private facilities (₹ 16,300.68) compared to public institutions (₹ 8,834.98).

In India, families of cancer patients cope with the financial distress by reducing the expenditure for other members or other aspects of life. Borrowing was used by in the people in the major cities of India. Hardly 9 % of the households managed the expenditure with the help of health insurances in Kerala and previous savings were spent by 85% of households. The most hard hit is the middle class just above poverty line who are neither eligible for government benefits nor have the resources to manage the expenditure. Many families adopted more than one coping mechanism to overcome the financial distress; the most prevalent of them being borrowing, social nets, savings, selling financial assets and delaying repayment of loans. Treatment facilities for cancer are very few in India compared to the increasing number of people getting diagnosed

with cancer. Lack of access to cancer care facilities makes the people travel to distant places multiple times. Breast cancer patients experienced catastrophic health expenditure. Patients with low income, admitted with second stage or above of breast cancer and patients from rural households were more prone to distress financing (taking loans from banks/ money lenders or selling economic productive assets to meet the expenses of treatment) in Kerala. The households in Kerala adapted coping strategies like reduced expenditure on food, education and social events and premature entry into the labor market.

### **Cancer care schemes for patients in Kerala:**

A patient can avail one or more than one of several schemes listed below to alleviate some of the financial burden he/she may have to bear during the course of treatment.

#### **Government**

#### **Schemes**

##### ***Cancer Suraksha Scheme (Government of Kerala):***

Cancer patients up to the age of 18 years in the BPL/APL groups are eligible to be included in this scheme and can avail of totally free treatment. All expenditure for investigations and treatment will be met from this scheme. Those patients who are yet to complete 18 years of age and need treatment are eligible for the benefit for one more year. To be included in this scheme a confirmed diagnosis of cancer is a must. Those patients who avail of pay ward facility and are eligible for medical reimbursement from other sources or have medical insurance are not eligible for this scheme. This scheme is applicable only to patients from Kerala.

***Thaalolam (Government of Kerala) :*** Children below 18 years of age are eligible. This scheme is applicable to patients belonging to families too poor to afford treatment irrespective of BPL/APL category. Maximum assistance given under this scheme is Rs.1,00,000/- for diseases other than cancer which are lethal or fatal.

***Karunya Benevolent Fund (Government of Kerala):*** Patient's whose annual income is less than Rs.3,00,000/- is eligible for this scheme. Patient has to apply in a particular form. Along with the application form they have to produce the passport size photo of the patient, family photo in front of the house, ration card copy and copy of aadhaar card. A family is eligible for Rs.2,00,000/.

***Sukrutham (Government of Kerala):*** All BPL ration card holders of Kerala are eligible for this scheme. To be included in the scheme, a confirmed diagnosis of cancer is a must. Patients who are availing pay wards are not eligible for this scheme. The maximum benefit is Rs.3,00,000/-

***CHIS PLUS (Government of Kerala):*** Production of the health card is a must. If the patient belongs to BPL category, he or she is eligible for a maximum of Rs.70,000/- cashless treatment or for whatever amount is left in the credit. Patients who are not eligible for reimbursement only can avail this scheme.

***Snehasanthwanam for Endosulfan Victims***

***(Government of Kerala):*** The Victims have to produce their Endosulfan Smart Card to avail free treatment under this scheme.

***Comprehensive Health Care Programme for Scheduled Tribes (Government of Kerala):*** The patient should bring a copy of tribal certificate from village officer / tribal Officer. A patient in this category is eligible for full free treatment, including food and travelling expenses for himself. In one day, an APL patient is eligible for treatment worth Rs. 10, 000/- and BPL patient for Rs.50, 000/-.

***Financial aid from the Society for the Poor (Government of Kerala):*** Cancer patients from low socioeconomic backgrounds are helped by paying Rs.50, 000/- for their treatment. Patients have to apply on a separate application form for this. The amount is fixed on the basis of expenditure already incurred by the patient.

***Prime Minister's National Relief Fund (PMNRF):*** Patients belonging to low socio-economic status get financial aid from PMNRF for treatment. To avail himself of the grant, the patient has to apply with his family income certificate in English sourced from the Tahsildar, a passport size photo, a request made in English by the patient and an expenditure certificate from the treating doctor.

***Rashtriya Arogya Nidhi (RAN)(under Health Ministers' Cancer Patient Fund):*** This scheme provides financial aid for specific investigations and treatments. Eligible amount for one patient is Rs.2,00,000/-. The Government of India has provided a scale for each state - rural and urban area. The patient has to provide an original income certificate in English from the Tahsildar. The amount can be utilised only for surgery, chemotherapy medicines, radiology scans and IP care. Reimbursement is not admissible under this scheme.

***Cancer pension scheme:*** Pension is given to cancer patients after completion of treatment for supportive care. The patient has to produce a certificate from the concerned doctor to that effect each year and apply to the Government on the basis of this certificate. All BPL patients get a pension of Rs. 1000/- per month on a lifelong basis.

***Chief Minister and Health Ministers Fund:*** Apply in the prescribed form. This fund is sent directly to the patient's address.

***Central Government Health Scheme (CGHS):*** Applicable for retired Central Government employees and dependents. Every month a reference letter from CGHS local clinics should be produced.

***Employees' State Insurance (ESI):*** The patient has to produce two reference letters from the ESI Hospital along with eligibility and identity certificate. The reference letter is valid for 6 months (January to June and July to December). Expenditure certificate must be issued from the hospital. All facilities are provided on credit basis. Patients are not eligible for pay wards. Every June and December, these initial formalities have to be repeated.

***Regional Cancer Centre Scheme Free food scheme:*** Below poverty line (BPL) patients who are admitted in wards are provided free food. Vegetarian food is provided three times a day and tea/coffee with snacks is provided twice. This scheme functions with the help of contributions from well-wishers. All 'F' Category patients and those patients in borderline income group, if recommended by ward sister are eligible for this scheme.

**Non Government schemes/services**

*Susan Daniel Cancer Relief Fund, USA* -It is benefitted to 100 patients /per year (\$ 100 each), for which RCC sends the list of patients. *Holy Trinity Charitable Trust, Trivandrum*- Patients have to apply directly. *Madhyamam Health Care scheme* - Individual patients get up to Rs. 20, 000 for treatment. *Melam Masala* - Patients have to apply directly. Application forms are provided from Thiruvalla office every second Saturday. *Indian Cancer Society* : In collaboration with HDFC Asset Management Co. Ltd this scheme provides funds for the treatment of curable cancers in low income group patients. Doctors identify the patients. *Aasandha Insurance for Male Patients*:Every Maldives patient will have to bring a reference letter from Aasandha Insurance Co. On some occasions reference letter can sent through SMS or e-mail. Only after receipt of the reference, can credit be opened. Maximum credit for one year is Rs.3,00000/-. Credit eligibility for one reference letter is Rs. 1,00000/-.

IV CONCLUSION

Cancer in Kerala is a serious health hazard. The prevalent cancer pattern indicates that a high percentages of cancer in men and women are either preventable or early detectable. The high prevalence of lung cancer highlights the need for effective intervention for curtailment of tobacco use. The increased trend of breast cancer incidence among females has to be critically evaluated. All efforts are needed for early case finding and treatment which alone will provide better survival rates and good quality of life of cancer victims. Public and professional education and participation in control efforts are essential.

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**Awareness programs:**

KERALA CAN is an initiative of Malayala Manorama intended to protect the society from the perils of cancer, through an effective outreach programme that includes the best cancer specialists with leading hospitals' support, that takes out cancer screening and early detection drives into all segments of the society especially the fringe groups and BPL families. Manju Warriar, an actress of repute, a tenacious social activist, a leading dancer and a philanthropist is leading the drive. This campaign was juxtaposed with the societal outreach programmes and medical screening camps.

# Social Media and Relationship Crisis

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**Abstract**— Now the social media is an important element of our daily life. The social network sites can influence people who use them in their daily life frequently. The number of people using social network sites has been increasing continuously. This frequent utilization has started to affect their social life and personal life. In this paper, I examine whether the use of social media affects the relationships among married people. If it does affect the relationship with them, I want to investigate how increased use of social media makes problems among married people. I have made a survey about the use of social media and relationship crisis. I have conducted the survey on 178 married people in the state of Kerala.

## I INTRODUCTION

Life has become fast paced. There seems to be no time for people to even pause and greet each other. In today's world it is almost hard to stay connected if you don't have social media accounts. Gone are the days people get touched by means of letters or phone calls. But now, face-to-face conversations can even be a rarity. Now communication occurs through apps like Facebook, WhatsApp, Twitter, Instagram, Snapchat, etc.

Communication is the life blood of our existence. After food and shelter, our need to belong and feel positively connected to others. Social media provides a platform to learn more about people you associate with. Social media has changed the way we meet and interact with each other. Social media have had important impacts on the people who use them in their daily life frequently. This frequent utilization has started to affect their social and personal lives and their communication skills. The use of these social network sites by many people has meaningful social impact and has completely affected daily lives of people all over the world. Research shows that increased usage of social media may lead to marital problems, infidelity, and divorce.

As we are surfing through our own newsfeeds on Facebook, Instagram, Flickr, etc, most of us have a tendency to compare our own lives to what we are seeing. This may lead to problems in relationships. One partner in a relationship may feel that the other spends too much time on social media; one partner may feel jealous that the relationship isn't as romantic as what he/she sees online; one partner may begin to have doubts about their relationship because they appear to fight more than what they see online. Online behavior by cause people from being jealous to creeping in on their partner's social media accounts to divorce.

## II. REVIEW OF LITERATURE

Social Network Sites can be described as “web-based operations that allow people to design a public or semi-public

profile within a closed system, make a list of other users in this system and share information with the people using the same social network system” (Boyd and Ellison, 2007). According to Salgur (2016), social networking is a type of computer-mediated communication in which users share information with their friends on social network sites. These are virtual friends who may be known or unknown internet users.

The first recognizable social network site is ‘SixDegree.com’ which was launched in 1997. Using this the users could design profiles and make a list of their friends (Marion & Omotayo, 2011). ‘Classmates. Com’ was another social networking site which allowed users to connect with their ex-friends from high-school or college and also search for other users who were also connected. Various social network sites were launched until 2003, such as Asian Avenue, LiveJournal, BlackPlanet, MiGente etc. (Salgur, 2016). There were some business networks which were started to serve such as Ryze.com, Tribe.net, LinkedIn. In 2003, MySpace was launched in California, U.S, to compete with other networks adding features allowing the users to personalize their own pages (Freeman, 2004). Social network sites became very popular with the arrival of Facebook in September 2005. Twitter, an American news and social networking service was launched in March 2006, on which users post and interact with messages known as "tweets". Whatsapp Messenger, which has become very popular globally, was started in 2009, Using this application, users can send text messages, voice calls, video calls, images, documents, and user location. The application runs from a mobile device. A photo and video sharing social networking service known as Instagram (also known as Insta or IG) was launched in 2010.

Social networking sites are used to try to recreate face-to-face communication and to maintain interpersonal relationships by allowing individuals to share and post things with each other (Farrugia, 2013). Social networking sites like Facebook are considered nonymous (opposite of anonymous) and are usually used to connect with connections that have been made offline (Zhao Grasmuck & Martin, 2008). Users can connect with people, upload pictures and share their interest with their friends. Facebook supports the maintenance of existing relationships and the formation of new connections (Ellison, Steinfield, & Lampe, 2007).

According to Salgur (2016), these networking sites have affected people's ability to interact and communicate. Its outcome is observed throughout all the levels of society in various countries. Social networking has changed the way of communicating with the society across all sectors and ages.

This shows that people have started to communicate through these sites instead of face to face interaction. Consequently, people have become more social. However, communication and interaction through social network sites do not help in strengthening relations between individuals, because they do not feel connected strongly compared to face to face communication.

The formation of a relationship depends on a number of factors including proximity, first impressions, similarity, and complementarity (Dwyer, 2000). Not all relationships are sustainable and will eventually come to an end. There are many reasons such as infidelity, lack of effort, physical or emotional distance, etc for relationships to end. Another cause for a breakup between couples can be caused by the amount of opposition from the other partner's friends and family (Parks, Stan & Eggert, 1983). Dissolution of relationships with romantic partners have been known to lead to distress and depression (Lukacs, 2012).

Utz and Beukeboom (2011) discuss three characteristics of social networking sites that can influence relationships. The first is that social networking sites increase the amount of information that romantic couples receive about their significant other. Social networking sites allow us to see things on our partner's profile that can influence our emotions towards them. If a partner sees a picture of his/her significant other at a party that they did not know about then it is likely to create bridging in the relationship. The second characteristic is that social networking sites make it relatively easy to monitor partners. Facebook makes it simple and anonymous if a partner feels jealous to basically spy on their significant other without them knowing. The last characteristic of social networking sites is that information about and relevant to a romantic relationship is publicly displayed to peers.

Social media is becoming part of our life. Social networks are becoming one of the dominant ways we communicate. People are more obsessed with checking their smartphone every 2 minutes than engaging in meaningful conversation with their child or spouse.

As the McKinley Irvin study found, it's not just what a partner does on social media, but the amount of time they spend on it. When it comes to the biggest arguments in couples about social media, the complaint is always how much time a partner wastes on it. While marriage is supposed to be about everything, for a third of social media users, keeping their passwords private from the prying eyes of their partners is a must. The study also found that one in 10 of adults admit to hiding certain posts or message from their partners on Facebook. For those who are just tired of hiding their behavior on social media from their partner, getting really sneaky is the best way to go. It's that group, eight percent of adults, who just have a secret social media account all together. Whether it's because of Facebook usage or a partner's behavior on it, for 25 percent of couples Facebook causes a fight at least once a week. People are fighting about it so often, that Facebook leads to confrontation in one in seven married couples, forcing the discussion of divorce to come up. According to the study, one in five people have found something on

Facebook regarding their partner that has made them feel "uneasy" in their relationship. But despite that less than half of spouses fight with their spouses about their findings.

As McKinley Irvin points out, what a partner "shares" on online can also be shared in a courtroom during a divorce case. In fact, 81 percent of the American Academy of Matrimonial Lawyers have used social media as evidence in cases, with the top three being state of mind while being on social media, communications on it, and the time and place of said events.

The Relational dialectics theory (RDT) can be used when discussing social networking sites and romantic relationships because it analyzes the creation of meaning from competing discourses that cause conflicts and resolutions in relationships. Relational dialectics theory states that romantic partners have to try to balance the effects of forces trying to bring them together and pull them apart simultaneously. The forces acting on the relationship are called dialectics and they occur both between the couple (internally) and between the couple and their social networks (externally) (Fox, Osborn, & Warber, 2014).

Researchers at the University of Guelph in Canada (Muise et al, 2009) surveyed 300 people aged 17-24 in 2009 about any jealousy they felt when on Facebook, asking questions such as, 'How likely are you to become jealous after your partner has added an unknown member of the opposite sex?' Women spent much more time on Facebook than men, and experienced significantly more jealousy when doing so. The researchers concluded they "felt the Facebook environment created these feelings and enhanced concerns about the quality of their relationship".

Jealousy in relationships occur both online and offline. Since social networking sites make it easy for someone to check up on what things their significant other is doing, this can create jealousy and uncertainty in a relationship. If a significant other is "liking" or commenting on someone else's pictures then that may make their partner jealous and create tension in the relationship. The lack of privacy on social networking sites make it easy for others to access information about a significant other. In their research on jealousy and social media, Muise et al (2009) found that the more time a person spent on Facebook, the more jealousy they experienced. Gender can also have an effect on jealousy in a relationship. Women tend to be more jealous of emotional infidelity than men and men tend to be more jealous of sexual infidelity than women (Buunk & Dijkstra, 2004).

Another study showed that exposure, after a break-up, to an ex's Facebook profile may hinder the process of healing and moving on (Marshall, 2012). In fact, checking up on an ex's profile led to more distress over the breakup, more negative feelings, and less personal growth (Marshall, 2012). Research has demonstrated the toll social media can take, not only on our current relationships but on our ability to form new

relationships. However, getting off social media is a challenge for many people, as a great deal of our communication happens online.

A Danish study by the Happiness Research Institute focusing on 1095 participants found that those who went a week without Facebook reported greater life satisfaction. (Happiness Research Institute, 2015). Therefore, it is important to cut back on your social media usage.

### III. OBJECTIVES

The purpose of this study is to understand the effect of social network sites on the relationship between married couples. Therefore, the objectives of the study are:

1. To examine the time spent by married people on social network sites
2. To know the most frequently visited social networking sites by married people
3. To examine the level of trust people have on their partners in terms of social network usage
4. To determine the level of relationship strain experienced by married individual as a result of social network usage
5. To understand if there is a difference in the relationship strain of married people based on demographic variable.

### IV. HYPOTHESES

1. There is a significant difference between male and female in the relationship strain experienced when partner uses social network
2. There is a significant difference in the relationship strain experienced based on age
3. There is a significant difference in the relationship strain experienced based on income
4. There is a significant difference in the relationship strain experienced, based on educational qualification
5. There is a significant difference in the relationship strain experienced in terms of the length of marriage

### V. RESEARCH METHODOLOGY

The study was conducted among married people in the state of Kerala. The survey was conducted online. There were 178 respondents who participated in the survey.

The questions to measure the variables were generated based on the questions used by Salgur (2016) and McKinley Irwin study report. One of the questions asked to measure the perceived relationship strain is "Do you feel uncomfortable when you see your spouse spends time on social network?"

The questionnaire contained demographic questions such as age, gender, annual family income, educational qualification, and number of years married. Questions were included to know the time spent by the respondent and his/her spouse with the social networking site. To measure the level of trust one has on his/her spouse is measured using two questions. They were eight questions used to measure the relationship strain experienced by married people.

Descriptive statistics using SPSS was employed to examine the time spent with social network, the most frequently visited social network site, the level of trust, the level of relationship strain. Independent sample T-test was used to determine if there was a difference between male and female in the perceived relationship strain. One-way ANOVA test was used to find out if there was a difference in the relationship strain based on other demographic variables.

### VI. RESULT AND DISCUSSION

The sample was found to be composed of 68.5% female and 31.5% male. Analysis using descriptive statistics showed that based on the length of service, the majority of the respondents have been married for 1-5 years (56%). The second largest group belonged to 6-10 years (about 20%). The majority of the respondents were found to be employed (54%), while 36% of them were unemployed and the rest self-employed. About 57% of respondents possess post-graduate degree and 28% were graduates with Bachelor's degree. A classification based on annual family income showed that respondents belonged to all starting from 1-5 lakh (with 29%) to 10-20 lakh (with 6.7%).

Whatsapp was found to be the most visited social network site with 83% of the respondents using it mostly. About 7% of the people used Facebook and other sites as the most frequent site followed by Instagram (2%) and Twitter (1%). About 35% of the respondents used social network sites less than one hour daily. Only 10% found to use it more than 5 hours. People who visited social media for one-two hours and two – three hours amounted to 32.6% and 22.5% respectively.

Majority of the respondents (70%) said that they do not search their partner's accounts. At the same time a large majority of 91% said that they do not hide their password from their partners. This indicates the trust they have on their partners.

A mean value of 2.32 for Relationship Strain indicated that the level of strain is low.

Hypothesis 1: There is a significant difference between male and female in the relationship strain experienced when partner uses social network

The Independent sample t- test conducted showed that there is no significant difference between male and female in their relation strain in terms of social network usage. Sig value 0.970 indicates that the finding does not support hypothesis 1.

Hypothesis 2: There is a significant difference in the relationship strain experienced based on age

A significant difference was noticed in the relationship strain among the different age groups. The sig value is 0.15, which is less than 0.05. The post-hoc test indicated that there is a significant difference between age groups of 26-35 and 36-45. The finding supports hypothesis 2.

Hypothesis 3: There is a significant difference in the relationship strain experienced based on income

No significant difference between different income categories was noticed based on the result (sig value= 0.162). The finding does not support hypothesis 3.

Hypothesis 4: There is a significant difference in the relationship strain experienced, based on educational qualification

Sig value (less than 0.000) indicates that a significant difference existed in the relationship strain experienced in terms of educational qualification. Post Hoc test showed that a significant difference existed between each category of educational qualification. Thus, hypothesis 3 is supported by the findings.

4. There is a significant difference in the relationship strain experienced in terms of the length of marriage

The one-way ANOVA test result indicated that there is no significant difference in the relationship strain experienced based on the length of marriage. The sig value is 0.156, which is greater than 0.05. Therefore, hypothesis 4 is not supported.

## VII. CONCLUSION

Social media has definitely become one of the important part of our life. Many people have accounts on the social media and they cannot imagine their daily life without those sites. Social network sites provides a platform to connect with people with shared interests. As a result of this social media become very common and attractive to all over the world. There is no difference between male and female in relationship strain experienced when partner uses social network.

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# Social Loneliness and Online Social Interaction

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**Abstract:** We are in the 21<sup>st</sup> century where social media requires no such initiation as we all work on it together. Let it be from Facebook, twitter, Instagram to Pinterest, TikTok and much more. A place where we all share our thoughts, interests, ideas and make active social interactions. But the question arises whether all the active members of various social sites are gleeful or try to be. Once you've been addicted to any of these websites, all your actions will be controlled by the media itself. It is hardly few who expresses their real life on social media, leaving others a fake representation. Hence their only goal would be to present their happy picture. This is where social loneliness creeps in and affects huge number of students or adults leading them to depression. Through this study authors are trying to analyze how social media has led the youth in the path of loneliness and depression.

**Keywords** – social media, social loneliness, youth and depression.

## 1. INTRODUCTION

Many people define social media as apps on their smartphone or tablet, but the truth is, this communication tool started with computers. This misconception stems from the fact that most social media users access their tools via apps. The ability to share photos, opinions, events, etc in real-time has transformed the way we live. Social media was always named the highest growing industry. It's a medium where we can open up to our social connections and peers, making greater contacts every day. Just like Facebook tagline states, 'connecting people around'. Earlier social websites were confronted to only a minimum sites that were used by few people for specific purpose. But as time passes, online mediums got recognition in all aspects. This platform has given an opportunity for all industries to perform their necessary dealings. Be it marketing of a product, service, recruitment, etc. Hence, social media has turned out to come through a triumphant way. Despite all these positive attributes, there are few instances that can have a huge impact through social media. Just like this context explains, many of the teens and adults have been so addicted to social media websites that they are often lead into depression and loneliness. Loneliness is a state that may affect everyone at some point in his or her life. But one such loneliness most people suffer is through depending on a small screen namely, social media. By spending more time on social websites,

people tend to lose their interactions with their peers and also tend to be less active personally. Even when they're socially active online, they would be contradicting drastically in personal life. With such huge dependence on these online games and sites, they often be controlled by these systems leading to a depressed life.

## II. LITERATURE REVIEW

### Definitions

The oldest publication about loneliness is Ubt, Einsamkeit (Zimmermann, ry8j-1786). More recent efforts to conceptualize loneliness started in with the publication "Loneliness" by From Reich-man (r9;q). Empirical research into loneliness was supported by the efforts of Perlman and Peplau (r98r), who defined loneliness as "the unpleasant experience that occurs when a person's network of social relations is deficient in some important way, either quantitatively or qualitatively". Social loneliness is defined as the 'distressing experience that occurs when one's social relationships are perceived to be less in quantity, and especially in quality, than desired', according to Social Psychology. Loneliness is a universal human emotion that is both complex and unique to each individual. Because it has no single common cause, the prevention and treatment of this potentially damaging state of mind can vary dramatically (J.K Joles, 2008). The perceived social isolation is more closely related to the quality rather than the quantity of social interactions. Accordingly, perceived social isolation predicts various outcomes above and beyond what is predicted by objective isolation ( John C.K, 2018). Lonely people can become "overly defensive and come across to others as detached, aloof, or even hostile—which only pushes them further away." Loneliness can create its own self-defeating behavior ( Guy Winch, 2009). "the discrepancy between one's desired relationships and one's actual relationships" (Carla Perissinotto, UCSF geriatrician). Empirical Studies Olds and Schwartz (2009) claimed that, despite the fact that this generation has more devices and technologies that help people to stay connected, the feeling of loneliness in 21st century America is the highest of all times so far. With the advent of the Internet, a new field of investigation has emerged within computer-mediated communication research. It focuses on the Internet and how it affects people's social networks. The studies of Kraut et al. (1998), Katz and Aspden (1997), Nie (1999) and Cole et al. (2000) use largely

quantitative survey research to identify, among other things, the effects of the Internet on people’s relationships.

**A. Impact of social loneliness.**

People can be alone without feeling lonely and can feel lonely even when with other people. Loneliness is associated with depressive symptoms, poor social support, neuroticism, and introversion, but loneliness is not synonymous with these psychological characteristics. Loneliness is typically thought of as a stable trait, with individual differences in the set-point for feelings of loneliness about which people fluctuate depending on the specific circumstances in which they find themselves. Social loneliness and isolation goes in together.

Loneliness is often correlated with social inhibitions, shyness, anxiety, low self-esteem and much more. It will only keep increasing at a maximum range unless he or she tries to interact with their peers. Under the cognitive approach, social loneliness is also explained through the differences inherited among the individuals that affect their perception and attributions. These set of people often look the world through tinted glasses. A social gathering is always a challenge for them.

**B. Social media and Social loneliness.**

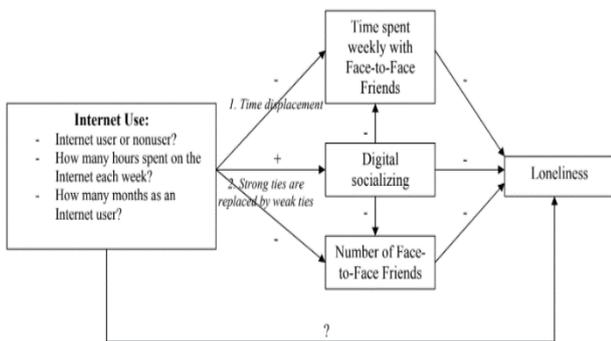


Fig 1: How internet affects social networks and Loneliness

Negative social media experiences were linked to depression: for every 10% rise in negative social media interactions a person experienced, their risk of depression rose significantly—by 20%. Positive experiences didn’t have any real effect. In the last fifty years, regardless of geographic location, gender, race, or ethnicity, rates of loneliness have doubled in the United States. Researchers says that such a number has increase only due to addiction of social websites. Most of the people often spend less time with their family or peers. Even in a social gathering, they always tend to be online rather than communicating with each other. In a survey exploring social media patterns, it was found that individuals who spent more time on social media every day felt lonelier than those who spent less time engaged in social media. Additionally, those who spent more time on social media in a given week felt more isolated than those who checked their social media less. An increase in social media use has been associated with increased distractibility and sleep disturbances.

There always exist a correlation between social media and loneliness. A notification from the phone alerts and distracts an individual in his personal life. All of us would wanted to be updated on how your friends or colleagues are. Phone calls are no more a pattern for most of us, since a communication is allowed. The number of likes I get for an Instagram picture, number of increase in followers of Twitter, number of friends in Facebook, messages from whatsapp, etc is all what we give importance too. Hence, all the youth would never want to stay away from social media. They would only want to show off their glamorous life, where some fake it. Going behind all these nuisances, only shows a present temporary happiness. It vanishes the very second day of posting a picture or a status. Among people in that age group, heavy use of platforms such as Facebook, Snapchat and Instagram was associated with feelings of social isolation, a study finds.

Isolation drives social media use and vice versa. Or there might be some unknown factor that is leading to both social isolation and social media use. (The researchers controlled for the major potential influencers including age, gender, relationship status, household income. Cyberbullying, including threatening messages, sharing private or humiliating information, or social exclusion, is a common cause for developing loneliness. However, due to the aggression occurring online rather than in-person, we may tend to underestimate the negative influence of cyberbullying. In a study of teens utilizing social media, spending more than two hours a day on social media made participants more likely to report cyberbullying. Digital self-harm, or self-trolling, in which an individual shares mean things anonymously about themselves online, is gaining attention. While the research is still new in this area, it is worthwhile to consider that some individuals who engage in this self-inflicted digital pain may use it as a desperate attempt to connect with others who will join in on the bullying process.

**III. OBJECTIVES OF THE STUDY**

- 1) To analyze the impact of social media interaction among the youth.
- 2) To interpret the relationship between social media and social loneliness.

**IV. METHODOLOGY**

The data collected for this study was done through Primary data and Secondary data. From secondary data, we got the reports and statistics done by researchers and experts on social media loneliness among students. Scientific details were also published in journals and magazines by famous Psychologists.

For the collection of Primary data, we had given conducted a direct- interview method along with questionnaires. Questionnaires were given to the students and analyzed according to the variables formed.

*Sample unit* – The sample unit of the study included all the students at the age of 18-29 of Thrissur and Kochi City.

*Sampling technique* – The sampling technique used was convenience sampling technique.

Sample size – 111 respondents.

V. DATA ANALYSIS

TABLE 1  
GENDER OF THE RESPONDENTS

Gender	N=111	Percentage
Male	71	64
Female	40	36

From the above table we know that, 64% of the respondents are Male while the remaining 36% of the respondents are females.

TABLE 2  
AGE OF RESPONDENTS

Age	N=111	%
19-22	51	46
23-26	32	29
27-30	28	25

Since our study is on the impact of social media loneliness among the youth, age group selected were between 19 and 30. Respondents between 19 and 22 has a lead of 46% while, respondents of age group 23-26 constitutes 29%. The least is covered by age group 27-30 with 25%.

TABLE 3  
RESPONDENTS MOST PREFERRED SOCIAL MEDIA

Options	N=111	%
Facebook	20	18
Whatsapp	43	39
Instagram	39	35
Twitter	0	0
Others	9	8

When asked about the most preferred social media website, Whatsapp stood the highest with 39%, followed by Instagram with 35%. 18% of the respondents are active on Facebook and remaining 8% of the respondents opt for other social media websites.

TABLE 4

TIME RESPONDENTS SPEND DAILY ON SOCIAL MEDIA

Options	N=111	%
More than 5 hours	49	45
2-3hours	37	34
Less than 1 hour	21	19
Not active	4	2

On a daily basis, 45% of the respondents spend their time on social media for more than 5 hours and 34% of them spend time between 2-3 hours. 19% of the people spends less than an hour and remaining 2% of them are less active.

TABLE 5  
RESPONDENTS' PRODUCTIVE USAGE ON SOCIAL MEDIA

Options	N=111	%
Always	16	14
Sometimes	58	52
Rarely	37	34

52% of the respondents sometimes puts an effort to make a productive usage of social media while 34% of the respondents states they rarely spend time for the above case leaving 14% of the respondents constituting always active for the real purpose.

TABLE 6  
ARE RESPONDENTS INTERESTED IN SPENDING TIME IN OTHER ACTIVITIES

Options	N=111	%
Yes	22	20
No	89	80

To analyze whether respondents are interested in other activities rather than social media, the study stated that 80% of them were not interested which constituted more than half of them. While 20% of the respondents said the opposite.

TABLE 7  
WHETHER SOCIAL MEDIA HAS A ROLE IN A NEGATIVE IMPACT OF TIME SPENDING WITH FAMILY

Options	N=111	%
Yes	98	88
No	13	12

From the study it was inferred that, 88% of the respondents spends lesser time with their family due to addiction of social media. Only 12% of the respondents states s positive impact.

TABLE 8  
RESPONDENTS INTERACTION WITH PEOPLE  
OUTSIDE SOCIAL MEDIA

Options	N=111	%
Yes	31	28
No	21	19
Sometimes	59	53

More than half of the respondents states that they don't often interact much with people outside like how they do social websites. On the other hand, 28% of the people interacts with people leaving 19% of them least interested.

VI. OTHER FINDINGS

- 1) The age group between 19 and 30 are the most addictive group of social media.
- 2) Whatsapp and Instagram are the most preferred social media platforms.
- 3) Students love to spend free time on social media more than a productive usage.
- 4) The study found that the more time people spend on the Internet, the less time they spend communicating with other people.
- 5) With addictive usage of these websites, interaction among peers have reduced which often leaves to depression.
- 6) Study also inferred that students found it difficult to take a break from all these online sites.

VII. CONCLUSION

Social media platform always expand from one stage to another with increase in time. Accordingly, even we are prone to such changes with the use of technology. We would become more dependable on them due to extent of easiness to compete. But at the same time a certain restriction is necessary on how to use a social media websites on a normal basis. There does exist a much more interesting life without the social media and all must learn to enjoy it in a positive manner instead of being socially isolated and depressed. Social loneliness is only a term where an individual creates out of his anxiety. With a proper stand, it can be easily minimized.

Focus on developing quality relationships with people who share similar attitudes, interests, and values with you. Expect the best. Lonely people often expect rejection, so instead focus on positive thoughts and attitudes in your social relationships.

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# Ease or Safe: A Study on Online Pharmacy in the Purview of Consumer Vulnerability

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**Abstract:** Recently, there had been a few judicial verdicts about e-pharmacy, which led me to dig further into online pharmacies in India. According to Frost & Sullivan, the reports reveals that India's online pharmacy market is expected to grow at a compound annual growth rate of 63 percent to touch Rs 25,000 crore by 2022. And the online sale of medicines could account for 15-20 percent of total pharmaceutical sales over the next 10 years<sup>1</sup>. It's evident that the e-pharma industry will create a more competitive environment for the retail pharmaceutical industry. To this end, the researcher tries to investigate the impact of online pharmacy, which is new, to Indian society at large. Research is mainly focused on resultant issues of online pharmacy.

In the wake of a new draft submitted to the Indian parliament concerning e-pharmacy, we find a wide, all-encompassing discussion in progress, and investment plans ready to be launched<sup>2</sup>. Unlike other sectors, online pharmacy is a top-grossing sector affecting the safety and very lives of human beings. So serious consideration needs to be given to specific systems for dealing with it in advance. The country's law makers have not yet drawn conclusions about the appropriate model of online pharmacy and its implementation, and about its impact on the social and business domains. Based on related incidents of consumer vulnerability, such as misuse, abuse and addictiveness, the online segment is more critical than a bricks-and-mortar model. So is Indian society mature enough to handle the issues related to online buying and selling of drugs and medicines? Critically evaluated, online pharmacy is opening up a new challenge and threat to public health and patient safety, and poses a risk to Indian society at large. Legal, regulatory and technological solutions must be devised to effectively address the entire online pharmacy ecosystem (Mackey & Nayyar, 2016).

**Methodology:**

A review was conducted of the literature with search terms 'online pharmacies', 'internet pharmacies', 'cyber pharmacies', 'rogue pharmacies', 'e-pharmacies' and 'digital pharmacies' using Elsevier, ProQuest, JSTOR, Taylor and Francis and ProQuest, and Google Scholar.

**Findings:** The researcher attempts to analyse the invisible impacts of e-pharmacy on the Indian consumer market. E

pharmacy should not been as a mere additional consumer sector but rather as a decisive component which can determine the very existence of human life. Being a new business domain, the focus of discussion on it will benefit society at large rather than the scope of investment or business. The study reiterates that any minor error in the pharmacy chain of events — e-prescription, storage, delivery — can threaten life. Therefore the implementation of online pharmacy should be addressed as potentially life-threatening and impacting consumer vulnerability. Its impact needs to be measured not only from a legal perspective, but also as an ethical, business, financial, health and media-related intra-disciplinary issue.

**Keywords:** Illicit pharmacy, patient safety, E-Pharmacy, e-prescription, consumer vulnerability.

## I. INTRODUCTION

E-pharmacies are new entrants within the Indian e-commerce industrial landscape, and are receiving enhanced attention from government and investors for the last 3 to 5 years. Today, the e-pharmacy market potential is worth over a billion dollars, with more than 30 start-ups assisting the growth of this sector in various regions of India (M., V., M.S., & T., 2016). On the other hand, many believe that online pharmacy poses a real threat to public life that could lead to a drug epidemic, drug abuse and misuse of habit-forming and addictive drugs<sup>3</sup>.

There are two e-pharmacy models prevalent in India. A few companies follow an inventory base model, having registered distributors and manufacturers, using warehouses and licensed direct sale. And the other is a market place model, serving as intermediaries that do not stock inventories, but source products from licensed pharmacies.

## II. CONTEXT OF THE STUDY

In a single decade, consumer pharmaceutical sales have evolved from a solely bricks-and-mortar business to one involving the ability to order prescriptions via internet-based firms. With the advent of technology, automation and artificial intelligence, the Indian consumer market is accelerating towards digitalized operations. Buying online is

the latest fashion amongst Indian consumers. Internet pharmacies (e-pharmacies, cyber pharmacies), the most common fast-developing commercial activity, provide a variety of health and beauty products as well as prescription drugs. Each serves the consumers either with drugs, having a valid prescription, or online consultations for prescribing and dispensing medicines, and some dispense medications without a prescription. It, often, acts as a second doctor or second opinion for desperate patients. It also gives an insight into patient problems, as well as the drugs that could cure them (Chaturvedi, Kumar, & Noida, 2015).

With the increasing trend towards buying online, the need for online pharmacies has arisen. Besides that, government initiatives and programs have fuelled the growth of online markets, particularly for rural services (where more than 60% of the Indian population resides). These initiatives have led to the promotion of generic medicines, telemedicine and e-healthcare services (Reddy, M. V. Siva Prasada, Raj Vaidya, Manjiri Gharat, Dr. Subhash Mondal, 2007). The laws governing pharmacies in India are derived from the Drugs and Cosmetics Act 1940, the Drugs and Cosmetics Rules 1945, the Pharmacy Act 1948, the Indian Medical Act 1956, and the Code of Ethics Regulations 2002 etc. E-pharmacies come beneath the orbit of the Drugs and Cosmetics Act 1940, and the Information Technology Act 2000. The current Drugs and Cosmetics Act 1940 doesn't distinguish between online and offline pharmacies, and there is lack of proper regulatory checks and balances for exercising regulatory control over e-pharmacies. (VP & BK, 2016) In 2015, the office of the Drugs Controller General issued a notification clarifying the Act 1945, about the sale and distribution of drugs, to comply with the Act 1940 and Rules 1945, framed for offline pharmacies. Recently, an amendment to the Drugs and Cosmetic Rules 1945 (the "Draft e-pharmacy Rules") was published by the Department of Health and Family Welfare under the Ministry of Health and Family Welfare (the "Ministry of Health") on August 28, 2018, primarily setting out the requirements and conditions for the sale of drugs by an "e-pharmacy". Objections and suggestions to the Draft E-pharmacy Rules were invited from the general public until October 12, 2018, which would be considered by the Central Government before finalizing the regime governing this sector<sup>4</sup>.

Online pharmacy is gradually achieving advantages over the traditional product-centered and patient-centered approach. Though slow in evolving, factors like time constraints faced by pharmacists, information deficits concerning specific patients and their unique needs, and the limits of the physical settings in which pharmacists practice pose significant barriers to the maturation of new-era pharmaceutical care. There is a very real possibility that the logistics of traditional health care will prevent pharmacists from re-professionalizing to accept responsibility for the outcomes of drug therapy. Internet pharmacy has the potential to overcome barriers that exist within traditional pharmacy practice, thereby enabling success with pharmaceutical care (Brushwood, 2001).

### **1. Overview of the Indian offline pharmacy sector**

India presently has over 850,000 pharmacy retail stores. They are able to meet only 60% of domestic therapeutic demands. (Thai News Service Group, 2018) These traditional bricks-and-mortar retail pharmacies are currently responsible for 99% of the pharmaceutical sales annually, with online pharmacy contributing only 1% of the total therapeutic sales. The traditional role of pharmacists in community settings is the dispensing of medicines. Selling of medicines without prescription and cash memo, storage of medicines under improper conditions, running pharmacies even without the physical presence of a pharmacist is not uncommon in the current situation.

The Indian offline pharmacy system itself poses a number of patient safety concerns in its function and practice (VP & BK, 2016). Offline pharmacists don't check prescriptions properly and retain a copy of the prescription. Sometimes they deliver and sell medicines without a prescription. According to the rules, one registered pharmacist is required to run a pharmacy. But many pharmacies are run by an incompetent owner and staff. One pharmacist serves at more than one pharmacy store or sells his license to other pharmacies for money. All these could be solved in case of e-pharmacies, as transparency is there. The problem of a doctor's bad handwriting could be solved by e-prescription. However, the rate of error in e-prescriptions is quite alarming. Unfortunately, not much research has not been done in this area in India. Indian law, even now, does not permit e-prescription mode. Medication errors are another un-investigated area, accountable for many casualties even in the United States, (Odukoya, Stone, & Chui, 2014) occurring in the both in offline and online system.

### **2. Consumer vulnerability**

Pharmaceutical consumer vulnerability is a contemporary phenomenon. This phenomenon is becoming more complex and threatening in terms of emerging business models. It requires consistent monitoring, and that means that it has to be analysed in view of newly emerging situations and circumstances. Research into the vulnerability of pharmaceutical consumers is absolutely essential.

Pharmaceutical consumer vulnerability is determined by processes of globalization and market integration, which have a direct impact on manufacturing and consumption of pharmaceuticals. The majority of pharmaceuticals are already marketed internationally, and that significantly increases the probability that consumer vulnerability in general, as well as vulnerability of consumers to certain pharmaceuticals, may appear on an international scale. Another peculiarity of globalization is heavy concentration of pharmaceutical manufacturing and merging of pharmaceutical manufacturers. Globalization brings market expansion and that provokes a string of mergers which then operate internationally. It means that the vulnerability of pharmaceutical consumers will be largely determined by large pharmaceutical businesses. Furthermore, globalization fosters other new conditions previously unknown or of little importance. These new

conditions and circumstances require a new approach to consumer vulnerability in the context of globalization. Thus, processes of globalization and market integration and their impact should be viewed as a very important factor, which predetermines the necessity of research into pharmaceutical consumer vulnerability (Taylor, Melnikas, & Smaliukiene, 2010).

The vulnerability of pharmaceutical consumers is increasingly influenced by rapid scientific and technological advancement and changes in lifestyle. The world is witnessing very rapid changes in the pharmaceutical business. New manufacturing and treatment technologies and new drugs emerge all the time, and that may cause new and previously unknown forms of consumer vulnerability. New pharmaceuticals may spread much more rapidly than the various preventative and safety measures

Eventually, the new forms of consumer social vulnerability spring up. Modern society witnesses growing socio-economic differentiation, which takes new forms and is observed in separate countries or regions as well as internationally. The cost of living and purchasing power differ a lot in various countries where the same pharmaceuticals are marketed, and that certainly has an impact on consumer vulnerability. In addition to this, different countries pursue rather different state policies in the field of pharmacy and in general health care. All this predetermines the necessity of rather specific and constantly renewed research aimed at establishing the link between consumer vulnerability and various forms of socio-economic differentiation in a society<sup>5</sup>. This aspect is of special importance in the countries of Central and Eastern Europe: socio-economic development in these countries fosters growing socio-economic and perceptual differentiation, and that has a direct impact on consumption of pharmaceuticals.

### 3. *Resultant issues in e-pharmacy*

An online pharmacy is a virtual platform that sells pharmaceutical products, including prescription-only drugs via online ordering and mail delivery. Many of them behave like a proper “pharmacy” but are not licensed. The online sale of drugs started in the late 1990s, particularly in the US, and eventually the FDA implemented an entire section dedicated to “Buying medicines over the internet”. Simultaneously, The World Health Organization (WHO) has found itself faced with this issue in the context of counterfeit medicines, which “pose a public health risk”. Sale over the internet could facilitate access and thus led to the abuse of prescription drugs. At the moment, it is very difficult to estimate the number of online pharmacies and people buying online, the volume of drugs traded, and the revenue and profits generated by such hidden business. Moreover, the geographical distribution of the phenomenon seems to be very heterogeneous. With regard to the number of online pharmacies in India, the offline pharmacist association alleges that there are nearly 3500 websites engaged in sale of medicines online<sup>6</sup>. Potentially there is a great chance of lack of proper transfer of information about the drug to the buyers,

and the misuse of patients’ medical, financial and electronic information.

There are several factors which fuel the gearing up of e-pharmacies such as the increased number of netizens, patients with long term illness, and an increase in chronic diseases. According to the Indian standards, online pharmacies appear as a potential disruptor at several levels related to both individual and public health (Orizio, Merla, Schulz, & Gelatti, 2011). At the individual level, this phenomenon can influence the doctor-patient relationship. At the public health level, since each country has a unique system, access to drugs from abroad can disrupt the delicate equilibrium that leads to a certain drug price on the basis of taxation, co-payment, reimbursement, and negotiation with industry. However promising a technological approach may be, online pharmacy raises a variety of ethical and legal concerns. Furthermore, the validity of online prescriptions and pharmacies is questionable if proper checks and balances are not in place, as we find in many cases in the India digital world<sup>7</sup>. Recent studies point towards the following alarming inherent issues of Indian consumer vulnerability.

#### 4. *Emergence of illicit online pharmacies*

With the emergence of e-commerce, there has been a proliferation of illicit online pharmacies that threaten international patient safety by marketing medicines without a prescription directly to the patient. E-pharmacy business is growing very fast in India, although a regulation mechanism has not yet been determined. The success of the model is not guaranteed, due to the unclear regulatory regime, but it increases in volume day by day. It seems that e-pharmacies may not abide by the regulations and may bypass them. The regulatory authorities find it difficult to control, monitor and track the sale of drugs via the internet due to the lack of clear guidelines in India<sup>8</sup>. E-pharmacy may prove to be a dangerous trend if not regulated properly.

#### 5. *Weak legal framework*

Due to the lack of a legal framework, noted above, there is an increased opportunity for the rise of illicit online pharmacies. Illicit online pharmacies can supply counterfeit drugs, and can promote irrational use of drugs through self-medication and other related unethical practices. The main concerns associated with e-pharmacies are drug abuse, misuse, antibiotic resistance, addiction to pain killers, CNS (central nervous system) depressants, etc.

The basic characteristics of a country’s online pharmacies should be carefully scrutinized before validating its operations. There should be an enforceable legal framework regulating features and facts such as year of data collection, willingness to dispense pharmaceuticals with or without a prescription, availability of a physician’s assistance or online medical consultation, disclosure of contact details, geographical location, delivery conditions, types of medicines available, availability of drug information, prices of online drugs and overall costs, sales-promotion strategies, 24/7 customer service, how long websites were accessible, privacy and disclaimer statements, date of last website update,

and presence of quality certifications. Globally, this has been continued as a stigma, even in developed countries.

1. Patient safety (drug abuse, self-medication):

The online market has undoubted advantages for patients: access to drugs for the disabled or housebound, access 24 hours a day, a virtually unlimited number of products available, relative privacy. Patients may feel freer to ask questions about embarrassing issues, and about more affordable prices. On the other hand, direct access to health services, especially drugs, poses a hazard to consumers because it is difficult to determine whether drugs purchased online are counterfeit, unapproved, or illegal (Orizio, Merla, Schulz, & Gelatti, 2011). Besides that, the inappropriate use of medicines, the limited or non-existent opportunity for advice (which blurs the line between wilful abuse and unknowing misuse), and the risk of increased antibiotic resistance arising from their misuse have conjointly been recommended as negative consequences of online purchase of medication.

One of the major risks posed by online pharmacies is drug misuse. Prescription requirement and use of online questionnaires (used as a tool to issue over-the-counter medicines) can be linked in order to avoid the possible misuse of drugs. In the context of the doctor-patient relationship, drugs purchased online can have acute effects, and even chronic and irreversible ones, and nowadays doctors should always investigate the use of non-prescribed substances in their anamnesis. Drug misuse can result from self-medication. In this context drug data displayed by online pharmacies is meant to be a tool to assist customers to bear in mind the risks that are exposed to ones taking a specific drug. The awareness of risk on the part of patients may be compromised by the non-availability of information and by marketing strategies. The online pharmacies have the tendency to market their products as if they were any other commodity. Indeed, drug demand is inflated not just by advertising the economic advantages of online purchase. There are many triggers causing a person to buy online, not just a cheaper purchase, especially in countries where drug prices are often negotiated, and could be of confidentiality or willingness to avoid the doctor (Orizio et al., 2011).

Social media has had a devastating impact on prescription-drug abuse among youth and adolescents. It is a recognized as a national public health crisis in developed countries (Katsuki, Mackey, & Cuomo, 2015). Vulnerability is at an all-time high among youth, especially in terms of drug usage. Youth and adolescent non-medical use of prescription medications (NUPM) has become a national epidemic in America, as youth and adolescents increasingly engage in online communities, social relationships, and conversations about NUPM via popular social media platforms such as Twitter. The strategy of “inveillance” to collect data is necessary in order to tailor future public health interventions to combat prescription drug abuse among this vulnerable population (Katsuki et al., 2015). However, little is known about the association between promotion of NUPM behaviour and access via the popular social media microblogging site, Twitter, in India.

## 6. Public threat through Terrorism

In American domestic social policy there has been enacted a policy on Illicit Drugs and the Terrorist Threat, ‘Causal Links and Implications for Domestic Drug Control Policy’ (Kleiman, 2004). The international traffic in illicit medicines contributes to the danger of act of terrorism. The main mechanisms are supplying money, creating chaos and instability, supporting corruption, providing “cover” and sustaining common infrastructures for illicit activity, and for contending the law enforcement and intelligence attention. Terrorism does not “naturally” generate money. Terrorist money flows down the organization from organizers to foot militants and their families. The money eventually comes from donors, from extortion victims, from theft or robbery victims, and from the illicit market including drug transactions.

2. Medication errors:

The Institute of Medicine’s 2000 report on the quality of care in the United States found that over one million injuries and at least 44,000 deaths occur annually as a result of medical errors. Medication errors are a major category of medical errors that cause over 7000 deaths per year in US. Medication errors are a frequent type of medical error that can induce adverse drug events, lead to inappropriate medication use, and cause harm to patients (Odukoya et al., 2013). Consequently, medication errors are associated with increased length of hospitalization and higher costs of hospital treatment. Prescription errors are a subcategory of medication errors that are often encountered in community pharmacies. Of the over 3.5 billion prescriptions received in community pharmacies annually, it is estimated that prescription error rates range from as low as 0.23% to as high as 11%. Despite the recent introduction of electronic prescribing (e-prescribing) in community pharmacies, the rate of medication errors has remained the same.

One purpose of e-prescribing is to reduce medication errors. The few studies that have explored e-prescribing in community pharmacies indicate that its benefits include elimination of medication errors caused by illegible physician handwriting. However, these studies were conducted, when e-prescribing was not yet implemented or used by most community pharmacies, particularly independently-owned pharmacies. Although errors associated with illegible handwriting were eliminated by e-prescribing, the technology also introduced new kinds of e-prescribing errors related to incorrect entry of drug information. Careful examination of e-prescribing use in healthcare settings is imperative to ensure that this technology guarantees patient safety rather than causing added burdens or unintended consequences (E. Ammenwerth, P. Schnell-Inderst, C. Machan, & U. Siebert, 2008). In fact, India is far behind to make such research on consequential impact of e- prescription errors, since digital pharmacy is still in premature stage.

## 7. Privacy Concerns

Privacy issues are about the confidentiality of consumers’ data and personal data protection. The proof suggests that online pharmacies (or ones plausible to be such) might be a tool for information fishing or fraud after they don’t deliver the merchandise (sometimes charging the consumer anyway), or

when they send something different from what was ordered. Both ways, it becomes a matter of privacy as well a matter of security. This could even mean that stealing cash from vulnerable customers could lead on to them to be unable to afford the drug or to possess to wait to get it elsewhere, therefore posing snags of denial or delay of care.

Besides that, a variety of issues related to e-commerce practices can also have an impact on the online pharmacy industry as it operates in the context of the global online economy, especially the legal and moral aspects of privacy. Every time an individual interacts with the Web, she or he leaves behind a trail of extraordinarily detailed information about their identity, preferences, hobbies, buying habits, financial status, and even medical records. This private information of customers can be — and actually is — used and abused (Kuzma, 2006). In fact, we may find a negotiation between two dimensions of e-pharmacy, on the one side being concerns with privacy and safety, and on the other side being factors such as convenience, cost, and 24-hour access.

### III. CONCLUSION

Online pharmacies are an emerging phenomenon, arising from a 'legally grey' area and spreading, despite partial regulation. Due to intrinsic consumer vulnerabilities coupled to the impalpable and transitory nature of the Web and its international dimension, the Indian market sector is suspicious of the envisaged edges to society of online pharmacy. To reinforce the advantages and minimize the risks of on-line pharmacies, a two-level approach could be adopted. The primary level ought to target on policy, with laws regulating this phenomena at a national and international level, which can improve client service, health care provisions, and qualitative communication amongst patients and health scientists. (Chondrocoukis, 2004). The second level has to target on the individual. This approach ought to aim to extend health literacy, required for making appropriate health options, recognizing risks and creating (Kuzma, 2011) the foremost of the multitude of opportunities offered by the globe of drugs (Orizio et al).

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# Online Gaming Addiction Crisis

## A study among students of Kerala

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**Abstract:** Gaming addiction has become a subject of accelerating analysis interest. The last decade has witnessed a major increase within the range of empirical studies examining varied aspects of problematic video game play and game addiction. The research is focused on the study and analysis of data collected from students who play online video games. This study was carried out in order to analyze the characteristics of game addiction among the students and how it impacts their health, relationships and the academics. To achieve the objective, data from students of schools and colleges were collected using structured questionnaire administered online. The research suggests that it is necessary to activate the patterns of social communication networks such as friendly footing, taking more responsibilities, and highlighting social life to diminish game addiction.

**Keywords:** Gaming addiction, video games, students.

### I. INTRODUCTION

Game which is considered to be equal to the history of humanity is an indispensable factor for Human beings; because, game is one of the major instruments of leisure which is a component forming the society. Oxford dictionary (2014) defined effect as a change that is a result or consequence of an action or other cause while Cambridge dictionary (2014) defined effect as the result of a particular influence. The definition of addiction according to the Oxford dictionary (2014) is the fact or condition of being addicted to a particular substance or activity. Other definition defined addiction as the state of being enslaved to a habit or practice or to something that is psychologically or physically habit-forming, as narcotics, to such an extent that its cessation causes severe trauma.

Online video game is defined as a video game played over some form of computer network. This network is usually the internet or equivalent technology, but games have always used whatever technology was current for example modems before the Internet, and hard wired terminals before modems. Online gaming is also a technology rather than a genre that it is a mechanism for connecting players together rather than a particular pattern of gameplay.

In this new era of technology, video gaming has become more popular among students and youth as it can be played whether on smartphone, tablet or computer. As it become accessible almost anywhere at any time, all range of age are now

possible to be addicted into playing online video game which at the end of the day they become less care about themselves, their performance at school or workplace and their social life. In addition to that, player can also now access their game progress anywhere they went as most of the online gaming nowadays enable player to store and save their data on cloud storage. Several types of online gaming are massively multiplayer online games (MMOGs) and massively multiplayer online role-playing game (MMORPGs) which involves millions player playing the game at the same time. Online game are now also come in many genre such as action, adventure, simulator and many more when the functions of game which every living creature game are considered; the topics such as socialization, participation, learning, entertainment, relaxation, creativity, dreaming, imitating and recreation come into prominence.

While games are shaped in accordance with time and place, they make progress parallel with technique and technology of the period. For that reason, game instruments and game types continuously change and transform. On the other hand, games change their form and content characteristics in accordance the characteristics of the society. Furthermore, changes are not only seen in the societies but also among the individuals that form the societies. Social accumulation of knowledge and personal characteristics of the individuals lies behind changes. As well as every structure and function which is dynamic, interactive and continuous undergoes transformation; on the other hand, the contents, types, the individuals, groups and societies also undergo changes. Accordingly, the development of information technologies, computer, internet and mobile phones which is the new communication platform also changed perceptions and apprehension in the concept of game. As well as the capitalist system covers every field, it has established an industry considering the world of games within the structure of market and this industry found its place within the patterns of cultural industry. Thus, games are no longer just games and they have become supporters or transmitters of different ideologies.

With the development of technology and market economy; the welfare levels of the society increased and positive developments were experienced on one hand and negative results also occurred when technique and technology were used on the other hand. When it is considered

from the point of mass communication, media is the most important source of information especially in the information societies. For that reason, the target group becomes highly dependent on media. While the individuals use media in order to understand the society they live in better and shape their lives while the contents which media presents become irrevocable. This situation which change according to the instruments, change the perception of time and place through computer and internet and maximizes the interaction.

II. LITERATURE REVIEW

In the studies of addiction, there are numerous studies from television to internet, from computer to mobile phones or the contents of mass communication instruments. Those studies differ not only from subjects and content but also manners of approaching. Foremost of the changes is that it is not a concept of solely on communication field but also concerns other fields. When the researches related to the field are analyzed, publication activities are observed during late 80's and early 90's. Among the first researchers of the field, Shotton enabled the formation of new initiations in the fields of computer technologies and addiction in 1989. Thus, the addiction which forms with computer and computer activities is regarded as if it is like other types of addiction (drugs and narcotics) (King et al., 2010: 3).

In the study of Salguero and Moran (2002) which they executed on the video game addiction of the young between the ages of 13 and 18 in Spain; 97% of the participants were determined to play video games within a year, 57% of them regularly play video games. 73% of the subjects were discovered to play computer games, 37% of them played games using game consoles and 7% of them played internet games. According to the research, it was observed that the frequency of playing games and playing games regularly increased and men played more games than women.

In Taiwanese; Ko et al., (2005) who research the addiction of high school students for online games found that boys are more addicted than girls, girls spent more time than boys, *Prominent studies in this field across the globe*

boys played for will to succeed while girls play to make friends.

In Holland, Rooij et al., (2010) who studies the addiction of the secondary education students (13-16) found that the rate of children that can be determined as the addicts of online games was about %. This rate represents the 1.5% of the children in the same age group who live in Holland. Nevertheless, the users are discussed in two groups: the first group consists of severely addicted online game users while the second group contains severe but not addicted online game users. In the research, the effects of addiction to games on psycho-social health of children were determined to be comparatively less.

In a study which Desai et al., executed on 4028 adolescents who play computer games in high school or experience problems due to the computer games in the same year; half of the participants stated that they played computer games and boys played computers more than girls. About 5% of the participants are the problematic users of computer games. Playing games is generally more common among the boys while playing games is related to more reflexive behaviors and they have less internalization symptoms. The girls who state that they play games don't experience depression; on the contrary, they cut up rough and display a behavior up to bringing guns to school. On the other hand, there is a negative relationship between playing computer games and smoking regularly.

In a research carried out by Jeoung and Kim in 2011 on 600 subjects from secondary and high school students (ages 12-18) in South Korea; high school students were found to be more addict

than secondary school students while boys are more addict than girls. In the study which the role of parents, friends and teachers were considered as variants; the relationships between adolescent and parents were determined to be more significant patterns from the point of addiction. The adolescents with positive relations with parents were observed to have negative addiction patterns.

Sl no	Authors	Year	Study	Outcome of the study
1	Chappell et al.	2006	EverQuest - It's just a computer game right? An interpretive phenomenological analysis of online gaming addiction. <i>International Journal of Mental Health and Addiction</i> , 4, 205 - 216.	Online gamers who viewed themselves as playing excessively (EverQuest in this particular study) appeared to show several core components of addiction such as mood modification, tolerance, withdrawal symptoms, cravings, and relapse.
2	Griffiths	2008	In <i>Children's Learning in a Digital World</i> . Malden: Blackwell Publishing, 85 - 103.	Excessive use of technology is relatively rare. Compared to females, males are more likely to develop a gaming addiction. Boys are more likely to play aggressive or violent games while girls are more likely to play platform and puzzle games.

3	Klaus et al.	2008	Computer game addiction: A psychopathological symptom complex in adolescence. <i>Psychiatrische Praxis</i> , 35, 226 - 232.	In a sample of German teens, 6.3% of subjects fulfilled the authors' diagnostic criteria for gaming addiction. These adolescents were mostly male and had low educational backgrounds. They tended to use computer gaming as a method of managing their moods.
4	Wood et al.	2008	Problems with the concept of video game 'addiction': Some case study examples. <i>International Journal of Mental Health and Addiction</i> , 6, 169 - 178.	It is possible that excessive video game play is caused by poor time management skills and an avoidance of other problems, rather than inherent addictive qualities of the games.
5	Ko, C. et al.	2009	Brain activities associated with gaming urge of online gaming addiction. <i>Journal of Psychiatric Research</i> , 43, 739-747.	Regions of the brain associated with cravings in substance abuse also appear to be activated in gaming addicts when they view images of video games.
6	Hussain et al.	2009	Excessive use of massively multi-player online role-playing games: A pilot study. <i>International Journal of Mental Health and Addiction</i> , 7, 563-571.	In a volunteer sample, 41% of online gamers acknowledged that they use gaming as an escape. In the same sample, 7% were viewed as "dependent". These gamers possessed several behavioral attributes that are related to more well established forms of addiction (e.g., mood modification, tolerance, & relapse).
7	Hsu et al.	2009	Exploring user experiences as predictors of MMORPG addiction. <i>Computers and Education</i> , 53, 990 - 999.	Online gaming addiction can be predicted by five critical factors: Curiosity, role-playing, obligation, belonging, and reward.
8	Rehbein et al.	2009	Excessive video game playing and video game addiction in adolescence: Results of a German nationwide survey. <i>Die Psychiatrie: Grundlagen &amp; Perspektiven</i> , 6, 140 - 146.	In a large German study (more than 15,000 participants) 3% of male students and 0.3% of female student were viewed as having a computer gaming addiction.
9	Mehroof, M et al.	2010	Online gaming addiction: The role of sensation seeking, self-control, neuroticism, aggression, state anxiety, and trait anxiety. <i>Cyberpsychology, Behavior, and Social Networking</i> , 13, 313-316.	Personality traits like trait anxiety, sensation seeking, neuroticism, and aggression appear to be related to the development of gaming addiction

10	Griffiths, M et al.	2010	The role of context in online gaming excess and addiction: Some case study evidence.	There is a difference between "excessive gaming" and "addictive gaming". Two gamers may play for an identical number of hours each day, but their psychological motivation and the meaning that gaming has within their lives can be very different. Gaming addiction should be defined by how much the game negatively impacts others areas of life, not by how much time is spent playing.
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*Online gaming Addiction*

Online game addiction generally refers to an excessive, unhealthy amount of playing computer games. Rather than engaging in the real world, an addicted user devotes the majority of his or her time to gaming ( Conrad, 2011). The issue of game addiction is getting spread widely and uncontrollable. Gaming addiction became a mysterious problem which is still difficult to be treated, more terrifying than alcohol or drugs addiction. Whereas, in fact, Dr.ShumailaYousafzai (2009) from Cardiff Business School said popular online video games warned players not to overuse their products. These warning messages also suggest that the online video game industry might know how high the percentage of over-users is, how much time gamers spend playing and what specific features make a particular game more engrossing and addictive than others (Yousafzai, 2009). In other hand, Cyber psychologist DrZaheerHussain, from the University of Derby, said warning messages were not enough. As a first step online game developers and publishers need to look into the structural features of the game design, for example the character development, rapid absorption

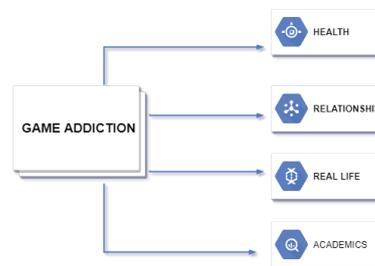
rate, and multiplayer features which could make them addictive and or problematic for some gamers (Hussain, 2008). Parents across the globe are increasingly concerned about their son’s online gaming habits. They are sure that there is a problem but counselors unfamiliar with online gaming addiction don’t understand how seductive they can be (Young, 2009, p.4). Fraser (2012) mentions that kids are among the most vulnerable to video game addiction, experts said, and may become violent when their "drug" is taken away. Video game and Internet addiction usually point to other mental problems including anxiety, depression and trouble forming healthy relationships. Kimberli Young (2009, p.12) says, not only are children, teenagers, and college students affected by online gaming addiction, but a growing number of adults are becoming hooked to online gaming. While such cases are rare, mental-health professionals say the fantasy worlds offered by computer and video games can become the stuff of very real addictions that destroy marriages and careers. People of all ages are quickly becoming immersed in this virtual fantasy world whereby they can easily escape problems in their lives. As in any treatment program, the primary step to take in the path, according to Kimberly (2009, p.18), to recovery is to

accept and not refute “denial,” a defense mechanism that addicts frequently employ and that effectively stops them from accepting treatment. Once this obstacle is conquered, treatment can be performed more effectively than it would otherwise. Tracy Miller (2013) add because computer game addiction is a new development in the world of mental health, treatments are not as well established as those for depression, anxiety, anger, etc. Most interventions take a cognitive-behavioral approach which involve changing how the addict thinks about the addiction.

III. Research Problem

With the onset of wide availability of smart phones at moderate price and reduced data rates with the onset of ‘Reliance Jio’ telecom and the revolution it unleashed in telecom industry, the proximity to internet and easily available online games called on gaming enthusiasts exponentially. The group that is of very proximity to new gadgets and online fads are students and youth. The online gaming has caught these tech savvy students on fire. Gaming addiction is not yet classified as a mental health disorder or "true" addiction like gambling or alcohol addiction. However, some gamers clearly struggle to keep their playing habits under control and may place more importance on their gaming accomplishments than their happiness and success in the real world like academic achievement, friendships, relationships, career advancement and health.

Proposed Model



Hypothesis Developed

H1: Gaming Addiction is positively related to Deterioration of Health of Students

H2: Gaming Addiction is positively related to Interpersonal Relationship of Students  
 H3: Gaming Addiction is positively related to Real Life association of Students  
 H4: Gaming Addiction is positively related to Deterioration of Academics of Students

Gaming Addiction and Interpersonal Relationship was correlated and it was found that there is a moderately high positive correlation of 0.661 between gaming addiction and Health deterioration. Hence H2: Gaming Addiction is positively related to Interpersonal Relationship of Students is accepted.

Research Methodology

Initially, literature review was conducted to study the online gaming and its prevalence among students. Video game addiction Test (VAT) scale developed by Van Rooji, A. J. Schoenmakers et.al (2012) was used for developing structured questionnaire. The scale items were validated during questionnaire designing. Structured questionnaire was framed and respondents were found out from student community who play online games. Out of which were retained after filtering the initial set of questions.

IV. Data analysis and results

Socio demographic characteristics.

Category	Particulars	Percentage	Number	
Gender	Male	61.6	101	
	Female	38.4	63	
	Total	100		
Age	Below 15	1.2	2	
	16-20	18.9	31	
	21-25	73.2	120	
	Above 25	6.7	11	
	Total	100	164	
Education	SSLC	1.8	3	
	Plus two	7.3	12	
	Under Graduate	40.2	66	
	Post Graduate	24.4	40	
	Diploma	1.2	2	
	Professional course	24.4	40	
	Others	0.7	1	
		Total	100	164
	Course	Arts	8.5	14
Science		15.2	25	
Commerce		50.6	83	
Engineering		12.2	20	
Medical		1.3	2	
Others		12.2	20	
		Total	100	164
Annual Family income	Below 2L	36.6	60	
	Between 2L and 4L	24.4	40	
	Between 4L and 6L	19.5	32	
	Between 6L and 8L	8.5	14	
	Above 8L	11	18	
	Total	100	164	

Correlation between Gaming Addiction and Health was computed and it was found that there is a moderate positive correlation of 0.576 between gaming addiction and Health deterioration. Hence H1: Gaming Addiction is positively related to Deterioration of Health of Students is accepted.

Correlations

	GA	H
Pearson Correlation	1	.576**
G A Sig. (2-tailed)		.000
N	152	151
Pearson Correlation	.576**	1
H Sig. (2-tailed)	.000	
N	151	152

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

Correlations

	GA	RE
Pearson Correlation	1	.661**
C A Sig. (2-tailed)		.000
N	152	152
Pearson Correlation	.661**	1
R E Sig. (2-tailed)	.000	
N	152	153

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

The correlation analysis between Gaming addiction and Real Life association is moderate positive correlation of 0.597 between gaming addiction and Health deterioration. Hence H2: Gaming Addiction is positively related to Real Life association of Students is accepted.

Correlations

	GA	RL
Pearson Correlation	1	.597**
C A Sig. (2-tailed)		.000
N	152	152
Pearson Correlation	.597**	1
R L Sig. (2-tailed)	.000	
N	152	153

Correlation between Gaming Addiction and Academic Aptitude was computed and it was found that there is a moderate positively high correlation of 0.602 between gaming addiction and Deterioration of Academics. Hence H1: Gaming Addiction is positively related to Deterioration of Academics of Students is accepted.

Correlations

	GA	A
Pearson Correlation	1	.602**
G A Sig. (2-tailed)		.000
N	152	151
Pearson Correlation	.602**	1
A Sig. (2-tailed)	.000	
N	151	151

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

Regression Analysis

In table 4, which depicts the model summary, the R value represents the simple correlation and is 0.707 which indicates a high degree of correlation. The R square value indicates the extend to which the total variation in the dependent variable, Game Addiction, can be explained by the independent variables, Health Deterioration, Real life association, Interpersonal Relationship and Academic Aptitude. In this case, 50% can be explained, which is reasonably high and thereby indicates the model fit.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.707 <sup>a</sup>	.499	.486	.51248

a. Predictors: (Constant), AA, ARE, ARL, AH

Table 5 indicates that the regression model predicts the dependent variable significantly well. This indicates the statistical significance of the regression model. Here, p is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

ANOVA<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	38.265	4	9.566	36.424	.000 <sup>b</sup>
Residual	38.345	146	.263		
Total	76.610	150			

a. Dependent Variable: AGA

b. Predictors: (Constant), AA, ARE, ARL, AH

Table 6 provides us with the necessary information to predict Gaming Addiction from independent variables, Health Deterioration, Real life association, Interpersonal Relationship and Academic Aptitude and also it determines whether income contributes statistically significantly to the model, as the p value is less than 0.05. We see that Interpersonal Relationship is the factor which is of highly impacted by Gaming Addiction and followed by Academic Aptitude.

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	.972	.227		4.272	.000
AH	-.002	.068	-.003	-.033	.974
ARE	.293	.073	.374	4.039	.000
ARL	.133	.063	.192	2.113	.036
AA	.198	.080	.233	2.476	.014

a. Dependent Variable: AGA

V. Findings & Discussions

The study was conducted among students of Kerala to understand the online gaming addiction and the factors influencing it. The analysis is in accordance with the other others who had done the study in the area. It was seen that boys are more prone to gaming addiction than girls. The family income has no much significance in gaming addiction and mobile phone is the widely used gadget for gaming. Boys are addicted to rough, interactive games like PUBG, GTA and MINI MILITIA whereas girls are more interested in soft and self-achievement games like candy crush and 8 ball pool. Students in their undergraduate are more addicted to games. Of their age most of the undergraduate students own a mobile phone also as they find ample time amidst their academic schedule than post graduate and Plus two students.

VI. Managerial Implications

Study throws light on the major factors contributing to the gaming addiction among students of Kerala. The analysis reveals that there is high chance of deterioration of relationships with increased gaming addiction. The academic interest of students are deteriorating as the addiction increases. Our findings can provide guidelines for society to develop more effective ways to reduce the levels of addiction to some applications among students. First, because social deficiencies expressed as need for relationship and escapism are important drivers of excessive online game playing and addiction, from a society's perspective, methods for reducing these needs should be devised. For example, cities can invest in offline opportunities for adolescents to interact face-to face and escape reality (e.g., more parks, sports clubs, and community centers). Focusing on prevention and harm reduction factors, our study indicates that attention switching, rationalization/education, costs, and parental monitoring can alleviate one's level of addiction (directly, or indirectly through game playing). Thus, parents and teachers (and possibly employers in the case of adults) should (1) encourage and support alternative activities (e.g.,

sports), (2) educate people about the potential problems of excessive online game playing (e.g., by having classes on the topic), (3) increase the perceived cost of playing online games, by, for example, controlling and monitoring one's allowance, or from a government perspective, taxing these games (Ponicki et al, 2007), and (4) actively and passively monitor online gamer activities (e.g., by checking game logs).

## VI. CONCLUSION

This study proposed, tested and validated a model that focuses on key factors that motivate and online game playing and addiction among students. The findings point to key motivating functional needs, and suggest that various prevention/harm reduction strategies may counterbalance these motivations, and be efficacious in reducing online game playing and addiction. It hence implies that families, teachers, government sand regulators may help preventing and reducing the harm of game addiction through for example, education, cost increases, and providing access to alternative activities. Given the tremendous growth of this industry and the potential consequences of online game addiction, more research on this topic is expected.

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# Impact of Information and Communications Technology Enabled Teaching on Teacher's Motivation in Government Schools of Rural Bengaluru

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**Abstract** --The process of blending media and technology into school's curriculum is much slower than what most people expect. There is a preponderance of the use of ICT to "learn" from media wherein student is exposed to media via computer technology. The impact of the computer based instruction in schools has shown performance improvement in the standardised achievement tests and increased levels of motivation among children. The factors that support or prevent teachers from using ICT in their classroom can be looked from the perspective of the DeLone and McLean Model of Information Success and Technology Acceptance Model (TAM) frameworks. This paper tries to understand the impact on the motivation of teachers of Government Schools for adopting ICT enabled teaching and learning.

**Keywords** – ICT, Motivation, Technology Acceptance Model

## I. Introduction

The Department of School Education and Literacy in the Ministry of Human Resource Development, Government of India drafted a policy in 2009, to assist states in making optimal use of Information and Communications Technology (ICT) in school education. The policy proposes guidelines for implementing ICT in schools in three stages namely "ICT literacy and competency enhancement; ICT enabled teaching-learning; Introduction of ICT related elective subjects at secondary school level". ICT enabled teaching is the main focus area as far as this study is concerned, hence the policy guidelines with respect to this aspect in the policy document has been reproduced below.

ICT enabled teaching methodology comprises of a various tools, techniques and resources designed to improve the "quality and efficiency" of the teaching- learning process. Teachers using this methodology have various options like Projecting media to support a lesson, Multimedia self-learning modules and simulation software to deploy the ICT tools to enable effective learning. Each such device or strategies involve changes in the classroom to bring out the effectiveness of the ICT enabled teaching learning methodology. Accessibility to a wide range of such tools to enable teaching learning process can help in catalysing the transformation of traditional classrooms into SMART classrooms.

Those teachers, upon acquiring a basic competency to handle these resources, are encouraged to adopt ICT enabled practices in the regular teaching process. Digital repositories can make a wide range of appropriate software applications, tools and resources to be made available to the teachers. The teachers are encouraged to participate in the selection and critical evaluation of digital content and resources. The teachers are also

encouraged to prepare and share their resources with their colleagues through the digital repositories. Initially teachers will be using the computer labs for imparting lessons but gradually more classrooms will be transformed to SMART classrooms equipped with ICT enabled tools.

## II. Literature Review

ICT can be deployed to bring rural development in the field of education that "allows for interactive, visually appealing contents that greatly enhance students' interest in learning and retention" (Singh, 2006). ICT can be deployed to bring rural development in the field of education by "allowing greater decentralization through the use of community partners who can act as teachers for smaller educational modules" (Dossani et al. 2005). The Partners in the community "subsumes all the objectives of the service being provided earlier by the government, and is not intended to compromise on them". The potential benefits expected from include, 'cost effectiveness, higher productivity, accelerated delivery, clear customer focus and enhanced social service'. According to the community dimension representing the Technology Community Management (TCM) model, the community factors have been translated into three claims that suggest having an impact on education in a developing country like India. The three claims of Ownership, Needs and Training can be translated into "a need for provision of unbiased technology access to children, a need for maximizing application of local language within technology and content and the need of equipping teachers' with technological skills while creating positive attitude towards technology adoption" (Ale & Chib, 2011).

Shukla and Yadav (2013) the author tries to find out the perception of government and non-government teachers towards constructivist approach of teaching, whether the gender of the teachers have an influence on constructivist approach of teaching and teachers training have an influence towards constructivist approach of teaching. The authors conclude that though the gender does not influence constructivist approach of teaching, however Training of teachers plays important role in perceiving and understanding the constructivist approach of teaching.

Albirini (2006) in his article the author cites 'Teachers attitude is considered an important predictor of the use of new technology in educational settings. Their attitude towards use of computer enabled teaching methodology can play an important role in the acceptance and actual use of computers'.

## III. Rationale for the Study

In Karnataka several joint initiatives between private partners and Government of Karnataka for example, partnership between Azim Premji Foundation and Government of Karnataka saw

several Computer Aided Learning centres set up across the state over the recent years to bring in quality and efficiency in the teaching learning process and transform the traditional classrooms into smart classrooms. Understanding the motivation of teachers of Government Schools to adopt ICT enabled teaching and learning methodology have a significant implication on the success of the PPP initiatives to have ICT enabled classrooms.

#### IV. Research Objective

To assess the impact of the use of ICT enabled teaching methods by teachers on their motivation to use the ICT enabled teaching learning methodology.

#### V. Scope of the study

In Karnataka 72% of the schools are Government Institutions (either directly or indirectly managed), which cater to significant amount of students in the state. This research is limited to Government Schools of rural Bengaluru.

#### VI. Sample and Sampling Technique

This research involves teachers of 106 schools in the four blocks of rural Bangalore viz. Devanahalli, Doddaballapura, Hoskote and Nelamangala that have ICT enabled systems and have been using it for at least two academic years. A Purposive sampling technique is used to select the teachers.

#### VII. Respondent Profile

The profile of teachers who were part of this study is highly diverse. Teachers from both genders, different age groups, teaching different subjects were represented and their views on ICT enabled teaching learning were recorded. The selection of teacher was based on the criteria that the teacher has undergone the mandatory six days orientation programme on the integration of ICT enabled teaching learning to classroom teaching organized by District Institute of Education and Training (DIET). The objective of the orientation programme was to address the key issues of integration of ICT enabled teaching to classroom with a note of the coverage of more number of students. It also addressed the issues of maintenance of computers along with developing the skill to use computers.

#### VIII. Research Frameworks used

##### 8.1 DeLone & McLean Model of Information Success framework

The framework is used to test the association between system use and individual impact this was identified as one of the measures of the D & M IS Success model. The infusion of media and technology into schools but the process is much slower than slower than what most people expect. There is a preponderance of the use of ICT to “learn” from media wherein student is exposed to media via computer technology. The impact of the computer based instruction in schools showed improvement performance in the standardised achievement tests and increased levels of motivation among children. In addition teachers have been able to complete a given set of educational objectives in lesser time than while teaching without computer (Reeves, 1998). This impact is brought out in the present study as the effort and performance expectancy dimension of ICT enabled teaching learning methodology for both teachers as well as students.

##### 8.2 Technology Acceptance Model (TAM)

Technology Acceptance Model theorizes that an individual’s behavioural intention to use a system is determined by two factors, “Perceived usefulness”, is the extent of a person’s attitude to use the system and believe that the system will enhance their performance and “Perceived ease of use” which is defined as the person’s belief that using the system is less stressful and he is less reluctant to use the system. The factors that support or prevent teachers and students from using ICT in their classroom can be brought under the two critical factors

based on TAM model. The “Perceived Usefulness and Perceived Ease of use” constructs of TAM model have been brought out in this study as the attitude and social influence dimension and anxiety dimension of using the ICT enabled teaching learning methodology in both teachers as well as students.

#### IX. Tools for Data Collection

To capture their motivation to adopt ICT enabled teaching. The questionnaire that is also adapted from different forms that capture different factors that influence their Attitude and Social influence (Webstar & Hackley, 1997), Anxiety (Barbeite & Weiss, 2004), Effort and Performance expectation (Arbaugh, 2000) that have an influence on teachers motivation. The use of Webstar and Hackley questionnaire to measure the attitude and social influence in teachers is an adaption of the questionnaire proposed by Gattiker and Hlavka to measure the same dimension with some minor modification to measure attitude towards using technology in education from an instructor perspective.

**Table 1 Dimension and Reliability - Teachers**

Dimension	Reliability
Attitude and Social influence	0.83
Anxiety	0.86
Effort and Performance expectancy	0.91

#### X. Statistical Tools

This research used ‘Statistical Package for Social Sciences Version 20’ for statistical analysis. Data were analyzed by using several tests like Descriptive Statistics to summarize the responses of teachers of Government schools on the ICT enabled teaching learning programme offered through PPP in the Government Schools of Rural Bangalore. The technique of factor analysis is used to extract the important factors on the basis of responses given by the teachers to test the validity of the dimensions. One- Way ANOVA is used to find any significant differences in the dimensions of Attitude and Social Influence, Anxiety and Effort and Performance expectancy of teachers’ across gender, age group and possession of a personal computer. Correlation was used to determine the correlation between the dependent variable viz. teachers’ motivation and the independent variables and finally Step Wise multiple regression analysis tests was done to prove the impact of the factors on teachers’ motivation to use an ICT enabled teaching learning methodology.

#### XI Conclusion

The analysis of the data revealed teachers had a positive attitude towards technology use in education.

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# Transaction Analysis Regarding Behavioural Pattern of Students: A Basic Study

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**Abstract**—In order for a student to learn and succeed within a classroom setting, a good and effective teacher is needed to facilitate the learning process. For a teacher to improve their performance, appropriate psychological theories should be studied and utilised, and the theory of Transactional Analysis offers faculties and trainers a means through which they can better understand what happens within the classroom on a social level. Transactional Analysis was developed by Eric Berne, and has been defined as 'a theory of personality and a systematic psychotherapy for personal growth and change' (Joines and Stewart 1987, p.3), and a knowledge of this theory is very useful in promoting communication skills, as 'transactions' refer to the communication exchanges which take place between people. This theory can assist faculties and trainers in enhancing their ability to direct transactions which occur within the classroom setting, thus creating a constructive outcome for both themselves and their learners. In learning to effectively apply transactional analysis, a teacher or trainer may gain more of an insight into the workings of human relationships. The investigators made an attempt to study the behavioural pattern of student via transaction analysis - ego states and co-related them with the behavioural pattern of students as perceived by their faculties. To conduct the study, primary data were collected from students through questionnaire method. The study concluded that we could have an insight into student's behavioural patterns using Transaction Analysis tool.

**Keywords:** Ego State, transactions.

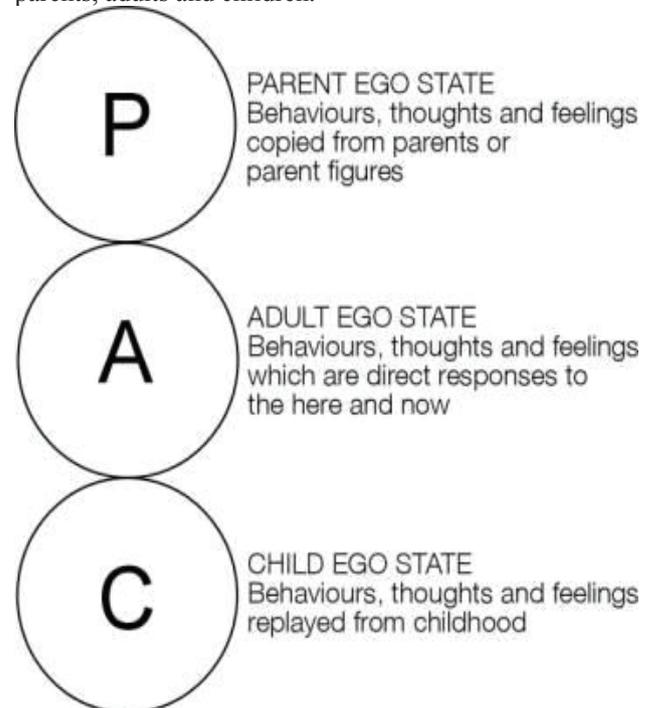
## I. INTRODUCTION

Transactional Analysis is a theory developed by Dr. Eric Berne in the 1950s.

Transactional Analysis is a social psychology and a method to improve communication. The theory outlines how we have developed and treat ourselves, how we relate and communicate with others, and offers suggestions and interventions which will enable us to change and grow.

Berne devised the concept of ego states to help explain how we are made up, and how we relate to others. These are drawn as three stacked circles and they are one of the building blocks of Transactional Analysis. They categorise the ways we think, feel and behave and are called Parent, Adult, and Child. Each ego state is given a

capital letter to denote the difference between actual parents, adults and children.



### A. Parent ego state

This is a set of feelings, thinking and behaviour that we have copied from our parents and significant others.

As we grow up we take in ideas, beliefs, feelings and behaviours from our parents and caretakers. If we live in an extended family then there are more people to learn and take in from. When we do this, it is called introjection and it is just as if we take in the whole of the care giver. For example, we may notice that we are saying things just as our father, mother, grandmother may have done, even though, consciously, we don't want to. We do this as we have lived with this person so long that we automatically reproduce certain things that were said to us, or treat others as we might have been treated.

### B. Adult ego state

The Adult ego state is about direct responses to the here and now. We deal with things that are going on today in ways that are not unhealthily influenced by our past.

The Adult ego state is about being spontaneous and aware with the capacity for intimacy. When in our Adult we are able to see people as they are, rather than what we project onto them. We ask for information rather than stay scared and rather than make assumptions. Taking the best from the past and using it appropriately in the present is an integration of the positive aspects of both our Parent and Child ego states. So this can be called the Integrating Adult. Integrating means that we are constantly updating ourselves through our everyday experiences and using this to inform us.

In this structural model, the Integrating Adult ego state circle is placed in the middle to show how it needs to orchestrate between the Parent and the Child ego states. For example, the internal Parent ego state may beat up on the internal Child, saying "You are no good, look at what you did wrong again, you are useless". The Child may then respond with "I am no good, look how useless I am, I never get anything right". Many people hardly hear this kind of internal dialogue as it goes on so much they might just believe life is this way. An effective Integrating Adult ego state can intervene between the Parent and Child ego states. This might be done by stating that this kind of parenting is not helpful and asking if it is prepared to learn another way. Alternatively, the Integrating Adult ego state can just stop any negative dialogue and decide to develop another positive Parent ego state perhaps taken in from other people they have met over the years.

### C. Child ego state

The Child ego state is a set of behaviours, thoughts and feelings which are replayed from our own childhood.

Perhaps the boss calls us into his or her office, we may immediately get a churning in our stomach and wonder what we have done wrong. If this were explored we might remember the time the head teacher called us in to tell us off. Of course, not everything in the Child ego state is negative. We might go into someone's house and smell a lovely smell and remember our grandmother's house when we were little, and all the same warm feelings we had at six years of age may come flooding back. Both the Parent and Child ego states are constantly being updated.

The process of analysing personality in terms of ego states is called structural analysis.

Once a teacher is made aware of the ego states model, there are ways in which the knowledge is beneficial to them within the learning environment. For example, when dealing with conflict within the classroom, it is clear from these definitions that it can be very beneficial for faculties to adopt the Adult ego state and to be able to recognise the ego states of their students. Faculties should also be able to identify the psychological games which students may play when they are in the Child ego state, and should consequently try to teach students to operate within the Adult. Furthermore, if a teacher is in

the Parent ego state and a student is in the Child, a conflict will surely arise.

Not only can transactional analysis guide the teacher through transactions with students, but it can also assist in planning transactions by identifying which ego state a particular person is operating within and furthermore by inviting them to switch to a different ego state - one which will be more beneficial in a lesson. This way, a teacher is potentially able to resolve unacceptable behaviour. In conclusion, when examining and evaluating these concepts of transactional analysis, we can see that it is a tool which can be of great use to faculties within the classroom and can greatly assist in communicating with their learners.

## II. CONCEPTUAL FRAME WORK REVIEW

Transactional analysis integrates the theories of psychology and psychotherapy as it has its elements

of psychoanalytic, humanist and cognitive ideas.

According to the International Transactional Analysis Association [7] TA 'is a theory of personality and a systematic psychotherapy for personal growth and personal change'.

As a theory of personality, TA describes how people are structured psychologically. It uses what is perhaps its best known model, the ego-state (Parent-Adult-Child) model, to do this. The same model helps explain how people function and express their personality in their behaviour [7]

1. As Berne set his Psychology up, there are four life positions that a person can hold, and holding a particular psychological position has profound implications for how an individual operationalizes his or her life. The positions are stated as:
2. I'm OK and you are OK. This is the healthiest position about life and it means that I feel good about myself and that I feel good about others and their competence.
3. I'm OK and you are not OK. In this position I feel good about myself but I see others as damaged or less than and it is usually not healthy,
4. I'm not OK and you are OK. In this position the person sees him/herself as the weak partner in relationships as the others in life are definitely better than the self. The person who holds this position will unconsciously accept abuse as OK.
5. I'm not OK and you are not OK. This is the worst position to be in as it means that I believe that I am in a terrible state and the rest of the world is as bad. Consequently, there is no hope for any ultimate supports.[8]

## III. OBJECTIVES

1. To study the Behavioural pattern of Students.

## IV. NEED OF THE STUDY

The study envisages to find out whether we could understand the behavioural patterns of students through Transactional Analysis tools, so that faculties could have

a better insight regarding each student even before they interact.

Currently with 4 months semester pattern a teacher needs at least 1-3 months to understand a student.

V. LIMITATIONS OF THE STUDY

Utmost care has been taken with regard to collection, classification and analysis of data. However, the study is subject to the following limitations

- Study fully depends upon the honesty and seriousness of the students while answering TA questionnaire
- The study concentrated only on the behaviour pattern of students as per the TA Tools and questionnaire
- There could be a change in the behavioural pattern of students as they grow up
- The time taken for data collection is very short.

VI. METHOD OF STUDY

The study on the problem was conducted by collecting, analysing and interpretation of primary data. Primary data was collected by questionnaire method. To collect primary data, sample of 31 respondents selected from the BBA class of Naipunnya School of Management Studies-Cherthala, Alapuzha district, Kerala, India. The study mainly based on the analysis and interpretation of primary data. The primary data mainly consist of 60 Question of objective type statements, which respondents were asked to mark “+” if you agree to the statement or to mark “-“if you do not agree. All Questions were shown on the projector screen and was translated to Malayalam orally for better understanding. To correlate and substantiate, the same students name was presented as a list to those faculties who taught them during their 1<sup>st</sup> semester and asked them to mark each student as serious and childish according to their understanding of last 4 months.

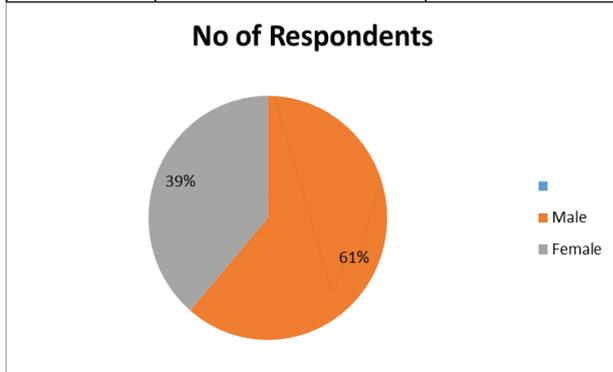
VII. RESULTS

The main results from the collection, analysis and interpretation of primary data are given below;

A. Primary data

**Table 1 Gender wise classification of Respondents**

Gender	No of Respondents	Percentage
Male	19	61%
Female	12	39%
Total	31	100%

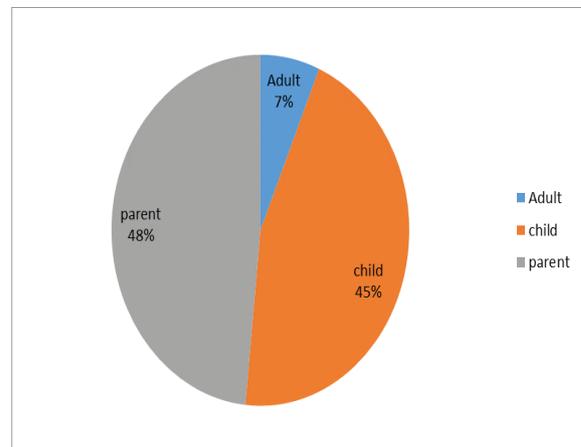


1. Points obtained by respondents as per Transaction Analysis tool (ref. table 2)

**Table 2**

Student no	Adult	Child	Parent	Prominent
1	70	100	95	Child
2	80	100	95	Child
3	80	100	95	Child
4	80	100	95	Child
5	80	80	100	Parent
6	55	50	95	Parent
7	80	100	90	Child
8	80	50	95	Parent
9	8	95	100	Parent
10	70	100	90	Child
11	80	90	70	Child
12	40	80	90	Parent
13	80	65	100	Parent
14	80	40	60	Adult
15	80	40	60	Adult
16	70	65	80	Parent
17	70	100	95	Child
18	40	40	90	Parent
19	40	65	100	Parent
20	40	80	95	Parent
21	80	80	100	Parent
22	55	50	100	Parent
23	70	40	100	Parent
24	90	90	100	Parent
25	70	100	95	Child
26	40	90	95	Parent
27	55	100	95	Child
28	90	100	95	Child
29	40	100	90	Child
30	70	100	95	Child
31	80	100	90	Child

Graphical representation of respondent’s category



As per the above table we could see the dominant behavioural type among the students are “Parent”, however percentage of “Child” ego state is almost equal. We could interpret that even though most of the students

have reached an age of 18, their behaviour is childish, which a teacher need to understand while dealing with them.

2. Student’s Behavioural pattern as per their faculty’s perception

**Table 3**

Student No	Faculty 1	Faculty 2	Faculty 3	Faculty 4	Faculty 5
1	S	c	c		c
2	S	c	c	c	c
3	c	c	c	c	c
4	c	c	c	c	c
5	s	s	s	c	s
6	s	s	s		s
7	s	c	s		c
8	s	s	s		s
9	s	c	c		s
10	s	c	c	s	c
11	c	c	s	c	C
12	s	s	s	c	S
13	c	c	s		S
14	c	s	s		S
15	c	s	s	c	S
16	s	c	s		S
17	s	c	c	c	C
18	s	c	s	c	S
19	s	s	s	s	S
20	s	c	c		C
21	s	c	s	s	S
22	c	c	s	s	S
23	s	s	c	c	S
24	s	s	s		S
25	s	c	c		C
26	s	s	s		S
27	s	c	c	c	C
28	s	c	c	c	C
29	c	s	c		C
30	c	c	c	s	C
31	s	c	c		C

The above table shows whether the students are “Serious” (noted by “s”) or “Childish” (noted as “c”) as per the faculties, here we have avoided the TA pattern of “Adult” and considered them to be “serious” to avoid confusion.

3. Students Behaviour as per faculties (a common ground on maximum number)

**Table 4**

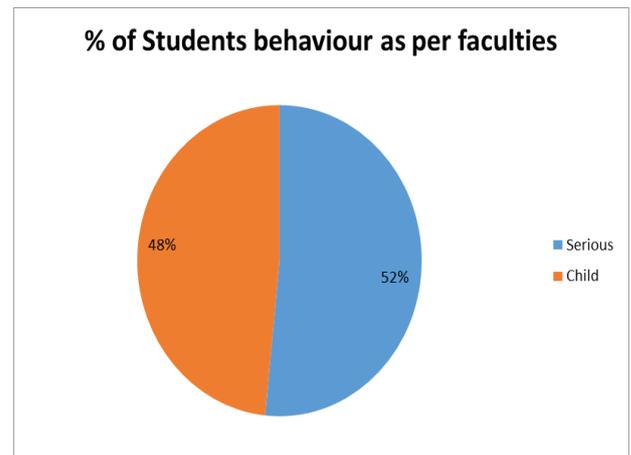
Student No	Average as per faculties
1	C
2	C
3	C
4	C
5	S
6	S
7	C
8	S
9	C
10	C
11	C
12	S
13	S

14	S
15	S
16	S
17	C
18	S
19	S
20	S
21	S
22	S
23	S
24	S
25	C
26	S
27	C
28	C
29	C
30	C
31	C

4. Summary Table of Respondents Behaviour as perceived by faculties

**Table 5**

SL No.	Type	Total Number	Percentage
1	Serious	16	52%
2	Child	15	48%



From the above graph we could see that, on a common ground, the behaviour of students as per the understanding of faculties and as per our analysis through Transaction Analysis tool resembles.

5. Comparing Students Behaviour pattern as per TA tool and Faculties perception

**Table 6**

Student No	Average as per faculties	Prominent Behaviour type as per TA tool	Deviation
1	C	Child	+
2	C	Child	+
3	C	Child	+

4	C	Child	+
5	S	Parent	+
6	S	Parent	+
7	C	Child	+
8	S	Parent	+
9	C	Parent	-
10	C	Child	+
11	C	Child	+
12	S	Parent	+
13	S	Parent	+
14	S	Adult	-
15	S	Adult	-
16	S	Parent	+
17	C	Child	+
18	S	Parent	+
19	S	Parent	+
20	S	Parent	+
21	S	Parent	+
22	S	Parent	+
23	S	Parent	+
24	S	Parent	+
25	C	Child	+
26	S	Parent	+
27	C	Child	+
28	C	Child	+
29	C	Child	+
30	C	Child	+
31	C	Child	+

In the above table we have denoted “+” while there is no deviation, and “-“when there is deviation.

If we check the degree of correlation on above table using concurrent deviation method.

$$r = \pm\sqrt{\pm(2C - N)/N}$$

Where

r = coefficient of correlation

C= No of deviations

N =No of Comparison

So

$$r = \pm\sqrt{\pm(2 * 28 - 31)/31}$$

$$r = 0.90 (90\%)$$

From the above r value, we can see that

*B. A very high positive correlation exist between the perception of faculties and as per the result obtained with the Transaction Analysis tool (Questionnaire)*

Which cements our hypothesis that we could find the behaviour of students through Transaction Analysis tool, as it has a very high positive correlation with the behaviour pattern of students as per the faculties.

However, while we check the correlation of students behaviour as per TA tool and individual faculties perception we could find very high correlation with the perception of class teacher and there exist very low correlation with some other teachers as follows:

6. Comparing Students Behaviour pattern as per TA tool and Class Teacher

**Table 7**

Student no	Prominent		Deviation
	Class Teacher	Behaviour type as per TA tool	
1	c	Child	+
2	c	Child	+
3	c	Child	+
4	c	Child	+
5	s	Parent	+
6	s	Parent	+
7	c	Child	+
8	s	Parent	+
9	s	Parent	+
10	c	Child	+
11	c	Child	+
12	s	Parent	+
13	s	Parent	+
14	s	Adult	+
15	s	Adult	+
16	s	Parent	+
17	c	Child	+
18	s	Parent	+
19	s	Parent	+
20	c	Parent	-
21	s	Parent	+
22	s	Parent	+
23	s	Parent	+
24	s	Parent	+
25	c	Child	+
26	s	Parent	+
27	c	Child	+
28	c	Child	+
29	c	Child	+
30	c	Child	+
31	c	Child	+

If we check the degree of correlation on above table using concurrent deviation method

$$r = \pm\sqrt{\pm(2C - N)/N}$$

Here

C = 30

N = 31

$$r = \pm\sqrt{\pm(2 * 30 - 31)/31}$$

$$r = 0.9354 (94\%)$$

From the above r value, we can see that

A very high positive correlation exists between the perception of class teacher and as per the result obtained with the Transaction Analysis tool (Questionnaire).

Here the correlation is higher than the average, as the class teacher knows the students better than the other teachers.

However a class teacher, who does not teach in the class may not have the same level of positive correlation. Which gives us more hope and trust that the transaction analysis tools can help us to a major extent to understand and convey the behavioural patterns of students.

#### 7. Comparing Students Behaviour pattern as per TA tool and another Teacher

Here the correlation is lower than the average, as this teacher does not know the students well.

Here the understanding of the teacher about the students are very narrow and communication on the most of the cases are with opposite behavioural patterns and leads to conflicts.

Which shows why there are lesser conflict between class teacher and students while comparing with other teachers.

#### VIII. FINDINGS

- A positive and high correlation between TA tool finding and faculties group average perception, shows that we could find the behaviour pattern of students even from the first day of their admission
- Difference in correlation between individual faculties perception with TA tool shows that every teacher may not understand the students perfectly and hence the reason for more conflicts
- However a class teacher, who does not teach in the class may not have the same level of positive correlation, as she /he does not interact with the students much.

#### IX. SUGGESTIONS

- Transaction Analysis of 1<sup>st</sup> semester students while they join will give faculties an insight into their behavioural patterns.

- Faculties should have basic understanding of Transaction Analysis, which can definitely improve teacher student relation.
- Psychological training for faculties will go a long way in reducing conflict between faculties and students.
- In our analysis, we found that some teachers were not able to identify the students by their names, hence we suggest the teachers to communicate with students by calling their names, which will give more attachment for the student to the teacher.

#### X. CONCLUSION

- More psychological tools like Transaction Analysis should to use by teachers and institution to have better understanding of students.
- Conflict happens due to less understanding of each other.
- A better understanding to behavioural pattern of students, can surely customize our teaching patterns and individual attentions.
- Faculties should understand that Transaction Analysis, which can definitely improve teacher student relation.

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# Antecedents & Outcomes of Organizational Innovation: A Conceptual review

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**Abstract**—Innovativeness and the ability to innovate are more important contributors to corporate performance than any other traditional business orientation approaches. Innovation improves the performance of any organization and thereby improve the quality of the workforce which results in a better position in the market. This study introduces a conceptual framework of antecedents and outcomes of organizational innovation. Moreover, this study elaborates the various dimensions of antecedents and outcomes at organizational and individual levels. This paper advocates a holistic perspective on organizational innovation orientation by incorporating systematically reviewed literature. It offers updated conceptualisation of organizational innovation orientation and discussion of the internal organisational and external factors that can help in creating innovative businesses.

**Keywords**— Organizational Innovation, Performance, Antecedents, outcomes

## I. INTRODUCTION

Innovation has been defined as “the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization or wider society” [1]. This definition includes a component of applicability, the need to put the idea into practice [2], including different phases, from the generation of a new idea to its development and application. The most frequently mentioned motivation for innovation was improving performance, expressed in terms of effectiveness or efficiency. Another motivation was to inculcate more participation and cooperation for instance through involving employees [3]. Improvements of efficiency and effectiveness is often related as a consequence of organizational innovation [4].

In the outset of this innovation era, this paper is trying pour some light on organizational innovation referring to what precedes and to the proceeds of innovation. This context coins a few questions which need to be addressed. What are the antecedents of organizational innovation? How vast and complex are these factors? What are the results of innovation in an organization? In order to find answers to these questions a systematic review of literature has been conducted and relevant factors on either sides have been

identified and compiled. These findings in turn conceptualized to form a framework and is supposed to provide an insight on the causes and effects of organizational innovation.

## II. ANTECEDENTS OF ORGANIZATIONAL INNOVATION

Relevance of innovation for organizational success, profitability and adaptation had fuelled research on its main antecedents. Recent reviews [5], summarized main antecedents for innovation, including personal factors (personality, motivation orientation values, self-concept and identity, emotions and affective variables), tasks variables (job attributes and task demands), as well as social and organizational context variables (leadership and social influences). Antecedents can, depending on their level and the specific context, be either a driver or a barrier. For instance, risk-averse organizational administration culture as a key aspect that hindered innovation [6]. Conversely, other authors have identified a learning culture favouring innovation [7]. These antecedents have been categorized to four main categories on four levels:

- Environmental level: external context
- Organizational level: aspects that include the structural and cultural features of an organization
- Innovation level: intrinsic attributes of an innovation
- Individual/ employee level: characteristics of individuals who innovate

### A. Antecedents related to the environmental level

These antecedents were linked to the specific context in which an organization is operated. Innovations are locally embedded and the result of co-evolution between different demands and pressures that stem from different but closely related environments such as public, political and media environments [8].

When further reflecting on antecedents related to the environmental level, we see that environmental antecedents such as media attention and political aspects are the most often mentioned ([6] and [9]). Further, participation with

other partners and the adoption of their norms is frequently noted [10], which could also reflect the relevance of environments

Finally, regulatory aspects were also identified. In general, regulation is considered to hamper innovation [11]. However, Rogers-Dillon (1999) argued that the prevailing wisdom, that limiting the federal role in welfare will free states to be more innovative, can be over simplistic.

#### *B. Antecedents related to the organizational level*

Many of the antecedents found in our review can be linked to the organizational context [12], highlighted how determinants such as slack resources and professionalism are positively connected to the adoption of innovations. Organizational antecedents reflect the structural and cultural features of an organization.

First of all, the availability of organizational resources, especially in terms of organizational 'slack' for instance size, personnel are the most frequently mentioned antecedent. For instance, Walker (2006) argues that the larger an organization is, the more 'slack' it has because it has more opportunities to bring ideas as well as a larger range of relevant skills that can be exploited. Besides size, other often-discussed slack antecedents are organizational wealth and capacity [13] and the presence of talented employees in the organization [14].

Secondly, studies have frequently examined the kind of leader required, such as leaders who 'have a vision' and are 'credible' [15]. The degree of risk aversion is also mentioned in various studies, including in the description of an administrative culture that hampers innovation [16]. Several publications also considered, given the importance of 'trial and error' in exploring new ideas, that a learning cultural environment was necessary for innovation to be promoted [17].

#### *C. Antecedents related to the innovation characteristics*

In this section, we analyse the antecedents identified in our review that are related to the characteristics or key attributes of innovations. The main point of reference in these studies is an innovation's intrinsic characteristics as outlined in Rogers' Diffusion of Innovations Theory (2003).

Relative to the previous two dimensions, we found that there has been less empirical attention given to the influence of characteristics of the innovation itself. Only a few studies, often when discussing the adoption and diffusion of innovations, mentioned them as being relevant. The innovation characteristics most often mentioned were an innovation's perceived ease-of-use ([3] and [12]), its relative advantage, its trialability and its compatibility [18].

#### *D. Antecedents related to the individual level*

Borins (2000) who highlights the importance of creative individual entrepreneurs who are able to break through a risk-averse administrative culture. This finding also aligns with the notion of empowered employees, who are frequently mentioned as an important source of successful innovation.

In addition, we observe that job-related skills are highly valued [19]. When combining these findings with results from the previous section (organization-level antecedents), we see that agents have an important role in enabling innovation both on the organizational level (encompassing a strong focus on leadership) and the individual level (where there is a strong focus on innovative employees and their characteristics).

### III. ORGANIZATIONAL INNOVATION OUTCOMES

Kuipers et al. (2014), define the outcomes of an innovation as the 'substantive results of the implementation of an innovation that can be intended or unintended and positive or negative'. Studies often record, in line with the goals, increased effectiveness and efficiency [20]. Other outcomes, such as achieving citizen satisfaction, were less often reported. Only a few studies describe the pursuit of performance features as relevant outcomes. For instance, the study by Pope et al. (2006) examined the way UK National Health Service (NHS) treatment centres reduced waiting lists for elective care. This outcome can be considered as both user oriented (people get improved services) and efficiency focused (providing services with less effort).

Organizational innovation outcomes can be classified in to mainly three sections as OI and performance, OI and competitive advantage, OI and capability development

#### *A. OI and Performance*

It is argued that the concept of performance and outcomes are often not well defined or specified ([22] and [23]) and that convenience often guides the choice of measure of performance ([24] and [25]).

Few studies utilised wholly subjective measures of performance ([52], [53], [44], [45] and [51]). An equally common approach to measuring innovation orientation through subjective performance measures only was to use both subjective and objective measures of performance, where there are studies identified a range of performance measures ([49], [34], [38], [54] and [36])

#### *B. Organizational innovation as a source of sustainable competitive advantage*

Although the factors discussed above represent potentially important antecedents of a firm's inclination to organizational innovation, Mol and Birkinshaw's model neglects other relevant sets of determinants. One of these neglected sets describes the firm's competitive environment.

Organizational innovation represents an important source of sustainable competitive advantage ([26] and [27]). This type of innovation has the potential to significantly increase firm performance. Reducing production and transaction costs, improving labor productivity, helping to gain access to non-tradable assets (such as non-codified external knowledge), and building of value adding capabilities all contribute to achieving this goal ([26] and [27])

Additionally, specific characteristics of this innovation type make such comparative advantage in firm performance hard to imitate and, therefore, sustainable. In contrast to technological innovation, organizational innovation cannot rely on patents to prevent spill overs and imitation [28]. However, organizational innovations usually reflect a high degree of idiosyncrasy and complexity. They are typically specific to organizational context and tightly entangled with the structures and resources of the implementing firm. In addition, a high degree of tacitness characterizes the knowledge resources of innovative organizational practices, which makes them generally difficult to understand and assimilate for outside observers ([29] and [30]). Combination of these factors more than compensate for the weak legal protection regime due to the lack of patentability. Together they form a strong socio-technological protection regime favouring a long-lasting lead resulting from superior organizational practices.

This advantageous effect of organizational innovation should be especially relevant on markets with fierce competition, as success on these markets crucially depends on the firm's competitive position. The relevance of innovative organizational practices and their effects as a source of competitive advantage should expand as other sources of competitive edge fail. This failure is the case on markets offering little possibility of product differentiation (i.e., markets on which a firm's products are easily substitutable by competitors' products), or on markets exhibiting rapid technological evolution and short product life cycles in which technological forms of competitive advantage (e.g., superior products or production processes protected by patents or trade secrets) give only a short-term edge.

*C. OI and Capability Related Outcomes*

Internal capability-related outcomes were also well represented within the studies examined and again innovation orientation was linked with a wide range of outcomes and internal capabilities; process performance [33], service delivery [34], emergent strategy development [31], competitive strategy development [32], customer knowledge management [35], internal integration and adoption of new processes [36], high supply chain management competences ([37] and [38]), procedural and declarative memory on projects [39], influence tactics [40], marketing capabilities [41], mass customisation [42] and technology commercialisation capability/R&D [43]. Few of these studies then linked these internal capability developments to organisational performance measures( [33],[43], [41],[38] ,[45],[36], and[44] )

The role of innovation orientation as a moderating factor between concepts and performance measures was also considered in a number of studies ([47] [46] and [44]). In the study by Bhaskaran (2006), innovation orientation was empirically found to have a moderating effect on profitability in highly competitive and dynamic markets. Interestingly, only a small number of studies ([46], [47]; [48]; and [49]) highlighted that innovation orientation had a negative impact upon any of the measures of performance identified

IV. CONCEPTUAL FRAMEWORK

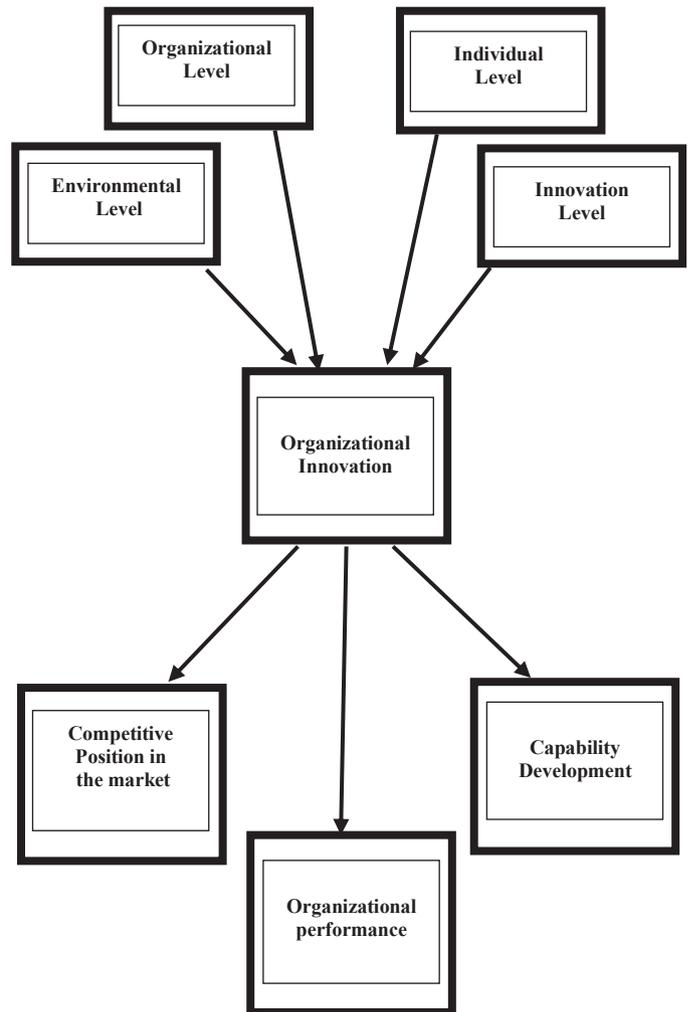


Fig. 1 Conceptual frame work of antecedents and outcomes of organizational innovation

V. CONCLUSION AND FUTURE RESEARCH AGENDA

This article intend to present a systematic review of the literature on the antecedents and outcomes of organizational innovation. The aim was to take stock of the available empirical knowledge by integrating the insights developed elsewhere and to develop a research agenda for the future, thereby contributing to the further institutionalization of the innovation theme in organizations.

More studies are found to have used qualitative methods, such as interviews or focus groups. Quantitative studies, and mixed-method studies, were less to be found. It was also noticed that the main body of knowledge is focused on internal-driven, process innovations which are often administrative in nature while innovation was often weakly conceptualized. Furthermore, outcomes are often not reported, limiting what we know about the effects of innovation efforts.

It was found that possible connections between antecedents were often ignored and addressed independently. Only a few

studies exclusively explored the combined effects, for example the combination of environmental and organizational antecedents [9]. Moreover, when analysing antecedents in future research, it would be desirable to analyse the process dynamics that occurs between antecedents. For instance, which antecedents are initially employed, and why so? Do organizations start innovations to attain competitive advantage [54] and then accordingly adapt their organizational structure?

Future research on organizational innovations should employ multi-method studies. Possibilities for connecting organisational innovation research to existing theories could be explored. A gap in understanding of innovation processes across different cultural contexts is evident. Therefore future studies could purposefully connect different types of cultures to the extent that innovativeness is seen in the organizational level as well as to the antecedents that shape organizational innovations and their outcomes.

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