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Disclosures Practices of BASEL Norms Adopted by Indian Banking Sector: A Comparative Study of Indian Public and Private Sector Banks

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ABSTRACT

In the present scenario, for the healthy economy, it is necessary that the banking system grows fast and should be stable. For the development of any country, the banking sector plays an important role. One of the most important aspects of the financial sector is the banking sector. Today, in this competitive environment, adaptation of the BASEL norms by Indian banking sector will help in making globally competitive and also help them in managing their risk in a better way. By keeping this point, this research paper highlights the existence of the BASEL Accords for the Indian banking sector. This research paper helps in having a deeper understanding of the emergence of Basel banking norms (Basel I), and the evolution of the subsequent regulations (Basel II and Basel III). This research paper also describes the difference between the Basel I, Basel II and Basel III. This research paper also highlights the disclosure practices adopted by the Indian public and private sector banks. It is concluded that the private sector banks disclosing the BASEL III requirements better than the public sector banks.

Keyword: Basel Norms, Countercyclical Buffer, Net Stable Funding Ratio, Liquidity Coverage Ratio, Capital Conservation Buffer.

I. INTRODUCTION

(a) About Basel Norms

Basel Norms comprises two words BASEL + NORMS. Basel is a name of the city in Switzerland where the headquarter of Bureau of International Settlement is established and norms mean rules and regulations. BASEL Norms are mainly developed to ensure that financial institutions have enough capital to meet the unexpected losses or expenses.

The Bank for International Settlement was established on 17 May 1930 which is world oldest international financial organization. It mainly has two offices located in Hong Kong and Mexico City. Covering from all over the world, there are 60 member countries in Bank for International Settlement which also covers 95% of the world's GDP.

BASEL Committee on Banking Supervision (BCBS) was established in 1974 by the Governor of the central banks of a group of 10 countries (initially) to develop banking supervisory regulations. Stefan Ingves is the chairman of the BCBS. The main aim of the BCBS is to accept the challenges as regard to risks and its help in management faced by the banking sector and to provide better supervisory and regulatory standards and guidelines for diminishing these risks so that they function properly.

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Some Important terms used in the Basel norms are as follows:

(i) Capital Adequacy Ratio (CAR): CAR is the percentage of capital maintained by the banks to bear the losses exposed to various risks. Banks have to maintain certain percentage of capital to absorb the sudden shocks. It is calculated by

 $\textit{Capital Adequacy Ratio} = \frac{\textit{Tier 1 Capital} + \textit{Tier 2 Capital}}{\textit{Risk Weighted Assets}} * 100$

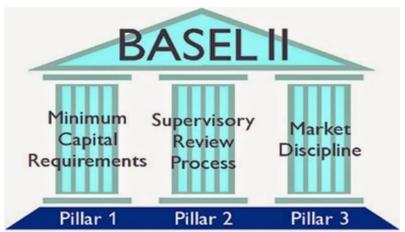
- (ii) **Risk-Weighted Assets (RWA):** Risk-weighted assets are of two types of assets namely, banks assets and off-balance sheet assets. Banks provide weightage of risk to various assets according to the rules and regulations set up by the BCBS.
- (iii) **Tier 1 Capital:** Shareholder's fund and Retained earnings are the part of Tier 1 capital. It is anticipated capital to measure the financial health of banks. It is used when banks can absorb losses without interrupting business operations.

(iv) **Tier 2 Capital:** It includes Reserves and surplus and subordinated debts. It is also known as supplementary capital because it is less reliable than Tier 1 capital.

II. BASEL NORMS I

BASEL I was introduced by BCBS in 1988.It includes only credit risk.The minimum capital requirement was 8% of RWA. India adopted BASELI in 1999.

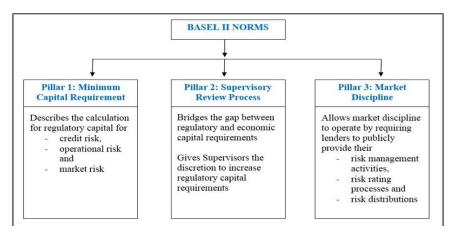
III. BASEL NORMS II



By overcoming the limitations of BASEL I, BASEL II was introduced in 2002. Banks should maintain a minimum capital requirement of 8% of RWA which is same as in BASEL I.In this, all the three types of risks were considered i.e. Market risks, Credit Risks and Operational Risks

which is helpful in maintaining proper risk management techniques to minimizing the risks. The banks should disclose all the materiality facts and their risk. BASEL II fully implemented in India in 2009. In BASEL II, there are three pillars, i.e.

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- (a) Pillar 1: Minimum Capital Requirement which means banks should maintain a minimum capital i.e., 8% of risk-weighted assets.
- (b) Pillar 2: Supervisory Review Process means the banks should monitor the various risk to
- minimize the risk or to maintain the minimum capital requirement.
- (c) Pillar 3: Market Discipline which means for better management banks should disclose their risk exposure to the central bank i.e., RBI

IV. BASEL NORM III



After the Global Economic Crisis in 2007-2008, it felt necessary that the strict norms should be maintained to avoid the financial stress. In December 2010, BASEL III was introduced. It is popularly known as III BASEL Accord. It major aim to strengthen the banking financial position to prevent such a financial crisis. "BASEL III is a comprehensive set of reforms measures developed by the BASEL Committee on Banking Supervision and risk management of the banking sector" (BCBS).

It helps in improving risk management and governance. In BASEL III, the minimum capital requirement is 10.5% of Risk Weighted Assets. In India, BASEL III will be fully implemented by 31 March, 2020. The main focus of the BASEL III is on the capital and liquidity. Capital ensures the long-term solvency position of the banks while Liquidity ensures the ability to pay off short-term economic and financial stress.

(a) **Liquidity Rules:** There are two rules regarding liquidity which are as follows:

(i) Liquidity Coverage Ratio (LCR): It is used to safeguard the banks against continued financial stress for 30 days.

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- (ii) Net Stable Funding Ratio (NSFR): By maintaining a required amount of stable funding at a minimum of 100%, financial liquidity risk profile of the long-term stability can be met.
- **(b) Capital Rules:** There are two rules regarding capital which are as follows:
 - (i) Capital Conservation Buffer: At the time of low financial stress, a buffer of 2.5% (entirely out of Tier I capital) above minimum capital requirement can be used. At the times of reduced buffers, it discourages distribution of earnings as a signal of financial strength.
 - (ii) Countercyclical Buffer: When there is a threat of financial distress due to the excess credit growth, national authorities can be enacted this buffer.

Basel I Basel I Basel I Basel II Basel II Min Capital Require ment. Capital Require ment. Credit Risk. Credit Risk. Credit risk. Credit risk. Credit risk. Multiple Approach for measurement and capital calculation Multiple Approach of the risk and then capital calculation.

V. DIFFERENCE BETWEEN BASEL I, II AND III

Basis of Difference	BASEL I	BASEL II	BASEL III	
Pillars	No pillar	3 Pillars	3 Pillars	
Type of Risk	BASEL I has Credit Risk	BASEL II have Credit	BASEL III have Credit	
		Risk, Market Risk and	Risk, Market Risk and	
		Operational Risk.	Operational Risk.	
Minimum Capital	Minimum capital	Minimum capital	Minimum capital	
Requirement	requirement is 8% of RWA	requirement is 8% of RWA	requirement is 10.5% of RWA	

BASEL III
disclosures of the various selected Indian Public and Private Banks:

Name of Bank	Sector	Minimum Capital Requirement by	Minimum Capital maintained by banks		Disclosure under the head
		BASEL III	2018	2017	neuu
ICICI	Private	10.5%	18.42%	17.39%	Management's Discussion and Analysis
Bank of Baroda	Public	10.5%	12.13%	12.24%	Schedule 18, Notes to Accounts under Financial Statement
Axis	Private	10.5%	16.57%	14.95%	Liabilities and Shareholder's Fund under the Management's Discussion and Analysis
Punjab National Bank	Public	10.5%	9.22%	11.98%	Director's Report Progress at a Glance
State Bank of India	Public	10.5%	12.74%	13.56%	Financial highlights: 10 years at a Glance
Yes Bank	Private	10.5%	18.4%	17.0%	Schedules
Canara Bank	Public	10.5%	13.22%	12.86%	Capital and Reserve under Financial Performance
Kodak Mahindra Bank	Private	10.5%	18.22%	16.77%	Schedule 18, Notes to Accounts under Financial Statement

VI. INFERENCE

The present research paper describes the understanding of BASEL Accords and way of disclosing practices adopted by the various banks. This paper primarily focuses on the disclosure practices adopted by the Indian Public and Private sector banks and the comparison between the capital adequacy ratio of 2018 and 2017. It is analyzed that the private sector banks are disclosing the BASEL norms requirement much better than the public sector banks. Also, in private sector banks, there is a rise in CAR as compared to the previous year while in public sector banks; there is a fall in the CAR as compared to the previous year. Hence, it can be concluded that the implementation of the BASEL Accords by the Indian banking sector has resulted in better performance of the banks. Also, the public sector should fully disclose the requirement of BASEL III in proper and better manner.

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Evaluation of Aspiring Entrepreneurs – A Holistic Model for Incubator Managers and Angel Investors

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ABSTRACT

Business Incubators is one of the topics in entrepreneurship that has attracted the attention of researchers since the last three few decades. Although the topic of Business Incubators is well explored, there is a research gap in the area of assessment of entrepreneurs by incubator managers and angel investors. The present study attempts to fill that gap by developing a model and instruments to make an assessment of aspiring entrepreneurs. The present study is conceptual in nature and uses primary and secondary data for exploring the assessment of entrepreneurs. The focus on analysis was on what factors matter for selection of aspiring entrepreneurs and identify. Personal Interviews were carried out with thirty angel investors in Telangana and Andhra Pradesh asking them as to how they would make an assessment of aspiring entrepreneurs who would approach them for funding. The present study focused on developing a holistic model that would focus both on individual and business level. The study makes contribution in three dimensions namely Scholarly, Business and Social. There are three major limitations for the stud. First, the study does not suggest methods to cross check the self- reported scores on the instruments. Second, the RCPGI Model is not empirical tested. Third, the RCPGI model works well only with startups operated by teams. The present study offers scope for further research and provides directions for future research.

Key Words: Entrepreneurs, Evaluation, Incubation, Angel, Investors

I. INTRODUCTION

During the last two decades the emergence of business incubators in different parts of the world is one of the most important developments that took place in the field of entrepreneurship. A business incubator is an organisation that supports, mentors, funds and collaborates with new business especially start-ups. Business Incubators across various locations even within the same country vary from each other based on their business philosophy, strategies and processes. According to Wired magazine, the concept of business incubator was developed by Joseph L Mancuso in 1959 when he started Batavia Industrial Centre in New York. Some of the major services offered by incubators include Advice on Market Research, Help for filing patents, providing functional and industry specific training, providing access to angel investors and venture capitalists and mentoring on business aspects. Business Incubators can be broadly classified into four types namely Traditional Incubators, Industry Specific Incubators, Stage Based Incubators and Technology Oriented Incubators.

Frenkel, Shafer and Miller (2005) explore the functions of technological incubators in the context of Irael. The study focuses on distinguishing between public technological incubators and private technological incubators. Frenkel, Shafer and Miller (2005) demonstrated that the role of public incubators is significant although the private incubators have entered into the domain of technological incubation.

Chandra, He and Fealey (2007) conducted a study on business incubation in the geo context of china. The study focuses on the financial services aspect of the business incubators. Mc Adam, Galbarith, McAdam and Humphreys (2006) conducted a review of prevailing studies pertaining to processes and networks. The study attempts to provide future directions for research. Lalkaka (2002) explored the potential for the growth of incubators and suggested that effectiveness and efficiency have to be achieved by incubators through continuous learning aand sophisticated processes. Ndabeni(2008) explored the growth of SMEs in the context of South Africa as facilitated by small business incubators.

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Lesakova (2012) examined the contribution of incubators in providing help to small and medium enterprises. Thobekani, Zinzi, Eugine & Welcom (2016) explored the topic of business incubators with the aim of suggesting strategies to enhance the effectiveness of business incubators. The study suggests that future researchers on two aspects pertaining to business incubation namely model of incubation and self-sustainability. Semra F. Ascigil and Nace R. Magner (2009) conducted a study on incubators in the geo context of Turkey with a focus on social capital. The study uses data from 53 owners businesses in five incubators, and evidence supporting the absence of relation between social capital and skill utilization.

Mahmood, Jamil and Yasir (2017) investigated the contribution of business incubators in the context of Pakistan. The study attempted to find whether

business incubators have played a significant role in the Promotion of entrepreneurship in the context of Pakistan. The results of the study indicate that business incubators are strong on consultancy and networking services but are weak to entrepreneurs whereas on training, infrastructure and marketing. AL-Mubaraki, Busler and Al-Ajmei (2013) conducted a qualitative study on incubators with a focus on economy, policy, industry and culture. The study identified a few challenges faced by incubators, which if resolved can lead to development of entrepreneurship. Adlesic and Alenka (2012) conducted a study on social capital in the context of business incubators. The study was conducted in Slovenia with data collected from 125 incubators.

Mukhove Masutha and Christian M. Rogerson (2014) conducted a study in the context of South Africa with a focus on evolution, present development, institutional issues and geographical spread of incubators. Lange (2018) explores into the value perceived by entrepreneurs about incubators and accelerators. The results of the study indicatethat the value perceived by entrepreneurs about incubators and accelerators emerges from two important factors namely knowledge and culture. Tsaplin and Pozdeeva (2017) conducted a study on strategies of incubators in three geo contexts namely USA, Germany and Russia. The study collected primary data from experts associated with start-ups. The results of the study indicate that USA provider a much stronger support for start-ups than that provided by Russia and Germany. Gozali, Masrom, Haron, and Teuku Yuri M. Zagloel (2015) explore the various factors contributing to the success of the incubators in public universities in Indonesia. The study developed a model for successful operation of e-business incubators.

Hidayat & Andri (2017) conducted a study on business incubators in the context of Indonesia with a focus on collaborative learning model. Wang, Cheng and Wang (2013) explored the impact of government policy on the research and development capabilities of university incubators.

Kurya Khan and Gustafsson, (2018) explored the contribution of incubators in enhancing the speed of internationalisation. Prevailing studies have focused on various areas of incubation and incubators including inception of incubators, regulatory issues, impact of incubators, and evolution of incubators. There are very few studies in the area of assessment of entrepreneurs by incubator managers and angel investors. Also these studies have not developed a model and instruments to make an assessment of aspiring entrepreneurs. There is a research gap in the area in the area of assessment of entrepreneurs by

incubator managers and angel investors. The present study attempts to fill this research gap.

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II. METHODOLOGY

The present study is conceptual in nature and uses primary and secondary data for exploring the assessment of entrepreneurs. Data about the challenges faced by various incubators and angel investors was collected through online sources, journals and industry reports. The focus on analysis was on what factors matter for selection of aspiring entrepreneurs and identify. Personal Interviews were carried out with thirty angel investors in Telangana and Andhra Pradesh asking them as to how they would make an assessment of aspiring entrepreneurs who would approach them for funding. The present study focused on developing a holistic model that would focus both on individual and business level. The instruments used to measure entrepreneurial entrepreneurial propensity, intention entrepreneurial potential have been taken from Ramana (forthcoming). The business level assessment using RCPGI model is adapted from Ramana (forthcoming). Also, discussions were carried out with forty entrepreneurs to identify the criteria to be considered for making an assessment of aspiring entrepreneurs with the aim of predicting their entrepreneurial success. The five criteria that were found to be common as mentioned by angel investors and entrepreneurs were closely related to Personality Traits, Business Specific Education, Prior Work Experience, Connections in the Market, Professional Affiliations/Memberships in Business Associations. However, keeping the average profile of aspiring entrepreneurs who seek the support of incubators and angel investors, personality and prior work experience were considered to be critical in developing a model for the holistic assessment.

III. CONSTRUCTS AND THEORETICAL FRAMEWORK

The three important constructs that contribute to entrepreneurial success are entrepreneurial propensity. intention entrepreneurial entrepreneurial potential. Entrepreneurial Propensity is the willingness of an individual(s) to start and operate one's own business (Ramana, 2008). Entrepreneurial Intention is the combination of behavior and actions that are most likely to result in starting a new business. Entrepreneurial Potential is the ability of an individual(s) to start and operate one's own business (Ramana, forthcoming). A combination of these three constructs enhances the chances of success of an aspiring entrepreneur. The instruments for measuring entrepreneurial propensity,

entrepreneurial potential, and entrepreneurial intention. Exhibit 1, Exhibit 2 and Exhibit 3 respectively. To help individuals make a self-assessment of their suitability for a career in entrepreneurial Potential can be measured and Entrepreneurial Potential can be measured and analysed through start-up matrix (Ramana, forthcoming). Apart from the assessment of aspiring

entrepreneurs, a major challenge for incubators, angel investors and even aspiring entrepreneurs is making a choice between two or among many equally attractive business ideas. The present study proposes a theoretical framework that comprises of a two-stage process. See **Figure 1** for the Start-up Assessment Model.

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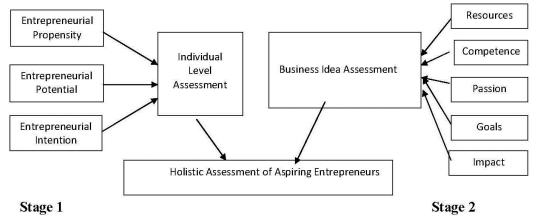


Fig. 1. Start-up Assessment Model Source: Adapted from Ramana (forthcoming)

RCPGI Model can be used to evaluate the suitability of ideas based on the five parameters namely resources, competence, passion, goals and impact. In RCPGI model, R stands for Resources, C stands for Competence, P stands for Passion, G stands for Goals and I stands for Impact. For each idea, RCPGI model can be used to evaluate your business idea. For each of the parameters, the following questions need to be asked for conducting the process of assessment.

(a) Resources

- (i) What are the resources including time, money, people, and connections in the market available to the entrepreneur(s)?
- (ii) On a scale of 1 to 5, how well does the resources available to the entrepreneur(s) match with the idea chosen for the start-up

(b) Competence

- (i) What is the competence of the entrepreneur(s) pursuing the business idea?
- (ii) On a scale of 1 to 5, How well does the competence of the entrepreneur(s) match with the business idea chosen for the start-up?

(c) Passion

- (i) What is (are) the passion(s) of the entrepreneur?
- (ii) On a scale of 1 to 5, how well does the passion(s) of the entrepreneur(s) match with the business idea chosen for the start-up?

(d) Goals

(i) What is (are) the goal(s) of the entrepreneur(s)?

(ii) On a scale of 1 to 5, how well does the goal(s) of the entrepreneur(s) match with the business idea chosen for the start-up?

(e) Impact

- (i) What is the impact created by the products and services offered by the start-up on the society?
- (ii) On a scale of 1-5, how well does this impact contribute to the overall wellbeing of the society?

Refer to **Exhibit 5** for the application of RCPGI Model to various business ideas. A comparison of scores of various business ideas, which appear to be equally attractive, will help incubator mangers and angel investors in their funding decisions.

IV. IMPLICATIONS/ CONTRIBUTION OF THE STUDY

The study makes contribution in three dimensions namely Scholarly, **Business** and Social. Academicians and researchers can use the model and assessment approach to further explore into various aspects of incubation, especially matching funds with the potential start-ups who are mentored and supported by incubators. Practitioners, especially incubator managers and angle investors can enhance the effectiveness of their decision making in the context of screening entrepreneurs with the aim of funding their start-ups. Individuals aspiring to become entrepreneurs can learn about new venture

creation, especially team building and practical approach through RCPGI Model and the constructs of Entrepreneurial Propensity, Entrepreneurial Intention and Entrepreneurial Potential. This in turn promotes the spirit of entrepreneurship, which contributes to the overall development of the communities, especially in which the start-ups carry out their operations. The present study is in agreement with earlier studies emphasizing the importance of personality (Example: Bhide 2000 and Rauch, 2000) and is in contradiction with Gartner (1985) study that emphasized on the process of entrepreneurship and not personality of the entrepreneur.

V. LIMITATIONS OF THE STUDY

The present study has at least three major limitations. First, the study does not suggest any method to cross check the self- reported scores on the instruments for Entrepreneurial Propensity, Entrepreneurial Intention and Entrepreneurial Potential. This is very important because aspiring entrepreneurs have varying levels of Entrepreneurial Propensity, Entrepreneurial Intention and Entrepreneurial Potential and that based incubator managers and angel investors have to make their funding decisions based on these criteria. There is a possibility that many aspiring entrepreneurs are not clear about their goals and the outcomes that they are seeking out their entrepreneurial career. Also many aspiring entrepreneurs may not be as serious about pursuing entrepreneurship as a career as they appear to be especially during entrepreneurial assessment. The open ended questions mentioned in Exhibit 4 may not be comprehensive and that they may not be enough to crosscheck the self-reported scores.

Second, the RCPGI Model has not been tested empirically and may not encompass all the important aspects for assessment of start-up entrepreneurs. Most importantly it is extremely difficult to apply RCPGI Model to the fullest extent because of the complexity involved in measuring passion and impact. Third, RCPGI Model does not work well with start-ups that are solo operations. Obviously a start-up with a team gets a higher overall rating on RCPGI model that a start-up that is run as a solo operation. The resources and competence of a team is generally higher than a single individual.

VI. FUTURE DIRECTIONS FOR RESEARCH

The present study offers a lot of scope for further research. Future researchers can explore further the process of entrepreneurial assessment with a focus on predicting entrepreneurial success of aspiring entrepreneurs. Enhancing the efficiency and effectiveness of incubators is another area that can be further explored. Future researchers can also examine the specific training and education pertaining to start-ups.

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Exhibit 1 Instrument for Entrepreneurial Propensity

Strongly agree 5, Agree 4, neither agree nor disagree 3, Disagree 2, strongly disagree 1

- (a) At some stage of an individual's career, starting and operating one's own business is the only option to get a sense of achievement.
- (b) There is as much risk and uncertainty associated with a job as with a business
- (c) The freedom, financial gain and career satisfaction obtained through operating one' own business can never be achieved through a job.
- (d) I don't like reporting to others
- (e) One of the ways you can have your own identity is through ownership of your own business.

Source: Adapted From Ramana (forthcoming)

Exhibit 2 Instrument for Entrepreneurial Potential

Strongly agree 5, Agree 4, neither agree nor disagree 3, Disagree 2, strongly disagree 1

- (i) I am highly energetic and can work for long
- (ii) I strongly believe in my capabilities
- (iii) I set Specific, Measurable, Acceptable, Realistic and Time based goals
- (iv) I have a long term view of my career
- (v) Achievement is a greater motivation for me than money
- (vi) I have a high level of determination
- (vii)I take criticism to my advantage
- (viii) I learn from failure and move on without losing hope
- (ix) I bounce back easily from failure
- (x) I seek personal responsibility
- (xi) I develop my own standards
- (xii) I compete with myself
- (xiii) I care for people and am deeply concerned about them
- (xiv) I have a high level of commitment
- (xv) I know how to use resources

Source: Adapted From Ramana (forthcoming)

Exhibit 3 Instrument for Entrepreneurial Intention

- (i) I have enough motivation to start and operate my own business
- (ii) I believe that I have a great idea that will assure feasibility
- (iii) I am passionate about my idea
- (iv) I wish to transform my idea into a successful business
- (v) I believe that my family, friends and support systems will provide me encouragement for starting and growing my business

Source: Adapted From Ramana (forthcoming)

Exhibit 4 Open-ended questions for Entrepreneurial Assessment

(i) How do you react to a situation when you do not find enough Information on your business idea?

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- (ii) How do you respond to a lucrative job offer with a salary much more that of your expected profit from your new business for the first few years?
- (iii) How do you compare reporting in business (to customers, government officials and suppliers) versus reporting to bosses in a job? What is the difference?
- (iv) How do you tackle the different challenges in starting and operating your own business?
- (v) What will you do to overcome the negative effects of failure?

Source: Adapted From Ramana (forthcoming)

Exhibit 5
Idea Assessment using RCPGI model

S.No.	Idea	Score on Resources (On a scale of 1 to 5)	Score on Competence (On a scale of 1 to 5)	Score on Passion (On a scale of 1 to 5)	Score on Goals (On a scale of 1 to 5)	Score on Impact (On a scale of 1 to 5)	Total Score (On a scale of 1 to 5)
1.	Idea 1						
2.	Idea 2						
3.	Idea 3						
4.	Idea 4						
5.	Idea 5						

Source: Adapted from Ramana (forthcoming)

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Study of Customer Satisfaction and Loyalty W.R.T. the Service Quality Determinants of Organized Retail Apparel Stores in Ahmadabad

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ABSTRACT

India has witnessed tremendous increase in the new retail formats in apparel stores sector, in the last decade. Big corporate houses have diversified themselves and have entered retail business in India with introduction of new retail formats such as department stores, discount stores, organized retail stores, and even the whole malls where majority of their product portfolio is apparels. Past research has shown that the retail format that has gained the interest of big corporate is the big shopping complexes, organized retail stores or the shopping malls. Various aspects of these organized retail stores/shopping malls affect the perception of the customers related to the service quality of these stores. The service quality perceived or experienced by the customers is believed to directly affect their satisfaction and loyalty towards the store. It is assumed that more the satisfaction of the customer, higher is the probability of the customer becoming loyal to the store resulting in repeat patronage. This research was aimed to investigate the relationship between various determinants of service quality of the organized retail apparel store and the customer satisfaction & loyalty. The respondents were selected from Ahmadabad city. Data was collected with the help of "Service Quality of Retail Stores" scale, developed by Dabholkar et. al (1996). The statements for constructs of customer satisfaction and loyalty were developed on the basis of the literature review. Structural Equation Modeling was employed to identify the relationship between the service quality dimensions of the store and the satisfaction and loyalty of the customers towards these stores in Ahmadabad city. This study will help the managers of organized retail apparel stores to understand the relationship between the determinants of service quality and the customers' satisfaction and loyalty which will enable them in decision making related to improving the quality of the service in their stores with respect to various determinants of service quality.

Keywords: Organized Retail, Apparel Stores, Service Quality, Satisfaction, Loyalty

I. INTRODUCTION

Retailing is one of the oldest form of making the products and services available for consumption, to the retail customers. Organized retailing is the upgraded version of the old format of retailing. The developing and the developed economies have witnessed major transformations in retailing formats. In the emerging economy, such as India, consumers have various avenues to satisfy their shopping needs. The nearby areas located in their close vicinity were the ideal choice for the consumers for their shopping, in previous decades (Mai et al.2003; Srivastava, 2008). However, big corporate houses have understood the benefits and the potential of the organizaed retailing and have penetrated into Indian retail industry. Unlike, previous decades, now the consumer have various formats available (such as shopping center, malls, super markets etc) to satisfy their needs and wants for the purchase and consumption of the products and/or services. These formats are categorized as organized retail store and are the modern adaptation of the traditional marketplace. The current economic boom in India has given pace for the emergence of the organized retail. India has witnessed tremendous growth in the organized retail segement and it is assumed to grow at a much faster pace in the near future.

Organized retail stores are expected to provide delighted shopping experiences to customers which ultimately may lead to customer satisfaction and loyalty towards the store. Consumers have witnessed various advantages of organized retail stores over traditional ones. These benefits include the comfort, more variety of products, ambience, style and speed. Organized retail format provides consumer more convenience, better services and choice along with enhanced experienced, as compared to that of traditional retailing. Emergence of organized retail stores have given more avenues to the consumers and to decide where to shop from, has become a key decision for them (Nevin & Houston, 1980; Kirkup & Rafiq, 1999). This has resulted for the marketer to take crucial decisions in order to differentiate its retail store from that of competitors. Due to intense competition in organized retail apparel stores, customers have more options for apparel purchase and hence easilty switch retailers. This has resulted in critical situation faced by retailers to retain their customers for longer durations. It has become imperative to provide high quality services within the store to enhace in-store customer satisfaction leading to store loyalty (Koo&Kim, 2013).

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Retailers, in order to be successful, must create higher levels of satisfaction leading to sustainable customer loyalty which is one of the measuable outcomes of maintaining profitable relationships with customers. However, customer loyalty is time-specific and may change during the course of time. Loyalty can be attained for time-periods of indefinite length (Rust & Zahorik, 1993).

The retail store's differentitation strategy's success depends on several factors. However, one of the crucial factors is the abiilty of the retail store to provide the customer an enriched experience while they visit and shop from the store along with the store's ability to fulfill the commitments to the consumers. It results in the long-term and profitable association of the consumer with the store. Store fulfill its commitments to the customer with the help of service quality dimensions. Service quality plays an integral part in terms of deriving satisfaction amongst the consumers. Assessment of the quality of service delivered must conform the consumers' expectations. Customer experience on the dimensions of Service Quality leads to the satisfaction or dissatisfaction amongst them in relation to the store. Satisfaction level derived by the consumers will result in the loyalty towards the store.

This study seeks to investigate the effect of various determinants of service quality of the organized retail apparel store and its relationship with the customer loyalty & satisfaction. This research offers an understanding of the service quality dimensions in relation to the organized retail stores with the help of the conceptual framework. Study addresses the following question: Do the service quality dimensions in organized retail stores linked with customer satisfaction and loyalty? The results of the study provide implications not only for the academicians but also to the marketers for better utilization of organized retail strategies.

II. REVIEW OF LITERATURE

Customer loyalty is always been considered to be of utmost importance for the marketers. This is due to the fact that marketers place lot of efforts to make the customer loyal. Loyal customers are easy to retain and provide major contribution in enhancing the product or service sales, directly or indirectly. Loyal customers play an important role in promoting the organization and its products or services by positive word of mouth publicity and on social media. They also provide references to the organization which leads the marketers to tap the untouched customers in more strategic way.

However, defining loyalty is a complex task (Javalgi & Moberg, 1997). American Marketing Association has defined loyalty as "a situation in which a consumer generally buys the same manufacturer-

oriented product or service repeatedly over time rather than buying from multiple suppliers within that category".

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Substantial evidence of empirical work is available in relation to assessment of the customer satisfaction with respect to their shopping experience with the retail store. Past research posited that positive levels of satisfaction with in-store experience enhances customer satisfaction leading to store loyalty (Terblanche & Boshoff, 2006). A direct relationship was found between attitudes of customers in relation to service quality experienced by them within the store and their satisfaction loyalty towards that store for their shopping requirements (Freymann & Cuffe, 2010). Customer preferences also changes due to presence and increase in the number of organized retail stores (Roslin & Melewar, 2008). It is the need of the hour that the retailer must focus on the buying experience of the consumers, in order to be in successful highly competitive markets (Kamaladevi, 2009). Due to increased competition and rapidly changing marketing environment, it has become extremely importanct for the marketer to create customer loyalty which is considered to be one of the most important intagible asset for any organization to frame and implement their marketing strategy (Moisescu, 2014).

Even after the increase in the availablity of the products and servcies, customer satisfaction has been witnessed downward trend. This is due to the reason, that retailers are not able to manage the dimensions of service quality in order to match the expectation of the customers. It was also found that the satisfaction derived by the customers is not only dependent on the product purchased from the retail store, but also on the quality of interaction a customer has experienced with the employees of the store (Goff et al., 1997)

Ryu & Han, (2010) posited that service quality is prerequisite condition for consumer satisfaction, i.e. service quality is a predictor of consumer satisfaction. If the service quality dimensions are taken care of, it results in positive experiences and leads to the repurchase intentions amongst consumers. Reserachers also asserted that there is positive relationship between service quality and repurchase intention. Customer satisfaction was also found to have positive and dependent relationship on service quality (Fen & Lian, 2007; Ažman & Gomišček, 2014). It was found that the customer generalized the negative experience with one service centre to all other servcie centres of specific brands in the automotive industry. Experience with the store was found to have direct impact on customers' repurcahse intentions. Previous research supports service quality as the influencing factor leading to the consumer satisfation, consequently leading to consumer loyalty (Nikou et al., 2016;

Khanam, 2017). It was postied that marketers must focus on enhancing customer satisfaction which will lead them to become loyal towards that store (Kim & Stoel, 2004).

Dimensions of service quality and its effect on consumer loyalty were tested in the research done by Molina et al.(2009).Researchers theorizes that service quality dimensions influences customer loyalty towards retails stores.Singh & Prashar (2014) found that variuos factors such as ambience provided in the store, convenience of shopping, customer centric approach of retail store employees, marketing focus, safety and security features employed by stores influences the customers' shopping experience in malls in Mumbai. Another research posited that loyalty is the outcome of satisfaction derived out of the quality of service experienced by the consumers (Orel & Kara, 2014).

It is evident from the past research that consumers place varied importance to different store-attributes (Paul et al., 2016). Saravanakumar & Jayakrishnan (2014) found that only two dimensions of service quality (out of total five dimensions), i.e. reliability and empathy were positively affecting the customer loyatly. Another research in the cab industry in India found that empathy, responsiveness, and tangibles were positively affecting consumer satisfaction. Other dimensions were found to have no significant impact on consumer satisfaction (Sharma & Das, 2017). Other researchers have also found positive relationship between all the dimensions of service quality and consumer satisfaction (Ali & Raza, 2015; Garga & Bambale, 2016).

III. RATIONALE OF THE STUDY AND RESEARCH OBJECTIVE

Number of organized retail apparel stores in India are in nascent stage and hence not much research work is available in Indian context. Majority of the studies in organized retail stores are being conducted in US and European markets as shopping mall concept in western countries is already in maturity stage. Indian researchers in recent past have checked the attitudes of shoppers towards shopping malls (Swaminathan & 2008). relationship between Vani. environment and patronage intentions (Tripathi & Siddiqui, 2008). However, studies in relation to service quality dimensions of organized retail apparel stores and its influence on satisfaction and loyalty were not found in Indian context during review of literature. Hence a gap was identified to understand how the service quality dimensions are related to the satisfaction derived by the consumers leading to the loyalty towards the organized retail apparel store in Indian context.

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This research thus aimed to investigate the relationship between various determinants of service quality of the organized retail apparel store and the customer satisfaction& loyalty.

IV. RESEARCH METHODOLOGY

The unit of analysis in this study is the individual consumer who purchases apparels from organized retail apparel store. The respondents were selected from Ahmadabad city. To collect data, "Service Quality of Retail Stores" scale, developed by Dabholkar et. al (1996) was employed. The statements for constructs of customer satisfaction and loyalty, were developed on the basis of the literature review. Data was collected on five point Likert Scale ranging from 1 to 5 where score of 1 represents "Strong Disagreement" and score of 5 represents "Strong Agreement" with the given statement. Since the neutral point on the scale was 3, means of the statements having scored more than 3 reflects agreement of consumer towards that particular statement. Demographic information of respondents was also collected to make sure that sample elements were true representative of the target population. Structural Equation Modeling was employed to identify the relationship between the service quality dimensions of the store and the satisfaction & loyalty of the customers towards these stores in Ahmadabad city.

Population for this research was defined as people who visits organized retail apparel store for purchase and actually carry out shopping. 294 Sample elements were selected as per the convenience of the researcher from the organized retail apparel store in Ahmadabad. Five malls viz., Central, Brand Factory, Pantaloons, Shoppers Stop and Westside were selected from the city of Ahmadabad for the current study. The stores selected were identical in terms of size, age and consumer-mix. Due care was taken while selecting respondent for the study. Only those respondents were selected who had at least one shopping bag while coming out of the store. Mall intercept method was employed to select the respondents from these stores.

V. DATA ANALYSIS AND STRUCTUAL MODEL

Demographic details of consumers is given in the Table No. 1:

Table 1
Demographic details of Consumers

		Frequency	Percent
Gender	Male	160	54.4
Gender	Female	134	45.6
	15 years to 25 years	84	28.6
	26 years to 30 years	40	13.6
	31 years to 35 years	33	11.2
	36 years to 40 years	39	13.3
Age Group	41 years to 45 years	37	12.6
	46 years to 50 years	25	8.5
	51 years to 55 years	15	5.1
	56 years to 60 years	10	3.4
	61 years and above	11	3.7
	Under-Graduate	50	17.0
E4	Graduate	141	48.0
Educational Qualification	Post-Graduate	77	26.2
	Professional	26	8.8
	Student	78	26.5
	Housewife (Homemaker)	59	20.1
Occumation	Service	84	28.6
Occupation	Self-Employed	22	7.5
	Business	20	6.8
	Professional	31	10.5
	< Rs. 2 Lacs	141	48.0
V (D-)	Rs.2 Lacs < Rs.5 Lacs	55	18.7
Yearly Income (Rs.)	Rs.5 Lacs < Rs.8 Lacs	48	16.3
	Rs. ≥ 8 Lacs	50	17.0

Initially, service quality of retail stores scale had total 28 statements and the satisfaction & loyalty dimension has 8 and 5 statements respectively. Hence the total number of items considered was 41. The reliability of these 41 statements were checked with

the help of coefficient alpha (Cronbach, 1951) in accordance with recommendations given by Churchill Jr. (1979). Cronbach's (1951) alpha value forinitial 41 statements was found to be 0.960 (as shown in Table 2) indicating high reliability.

ISSN: 2349-4190

Table 2
Reliability Statistics of initial 41 items

Cronbach's Alpha	N of Items
.960	41

Observed KMO value of MSA (0.944) is greater than 0.8 (as shown in Table 3 below), as recommended by Hair et al., (2009), indicating meritorious according to the researchers. Field (2009) also suggested that

KMO value of MSA greater than 0.9 is considered to be 'superb'. Also Bartlett's test of sphericity was found to be significant indicating good factor structure for the items under study.

Table 3
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.944
Bartlett's Test of Sphericity	Approx. Chi-Square	9100.297
	df	820
	Sig.	.000

All items were found to have the communalities to be greater than recommended value of 0.5 (as shown in Table 2 below) indicating good factor structure,

according to recommendations given by Hair et al., (2009). The mean and standard deviation for the items are also shown below in Table 4.

Table 4
Communalities, Mean and Standard Deviation
Communalities

	Communalit			
	Initial	Extraction	Mean	Std. Deviation
PA1. The store has modern-looking	1.000	.709	4.25	.994
fixtures for placement of apparels.				
PA2. Store's physical facilities are	1.000	.662	4.18	.905
visually appealing.				
PA3. The resources related with the	1.000	.562	3.74	.928
store's service (catalogs, POP displays,				
billing counters or shopping bags) are				
visually appealing.				
PA4. The public areas in the store	1.000	.742	3.45	1.251
(restrooms, trial rooms, fitting rooms)				
are clean, attractive, and easy to access.				
PA5. Layout of the store makes it easy	1.000	.663	3.90	.879
for the customers to locate what they				
need.				
PA6. Layout of the store provides	1.000	.548	3.88	.864
sufficient convenience for the customers				
to move around in the store.				
REL1. Store is reliable in fulfilling its	1.000	.533	3.84	.886
promises to do something in stipulated				
time period.				
REL2. Store is reliable in providing	1.000	.557	3.94	.836
services in expected time duration.				
REL3. Store performs the service right	1.000	.622	3.83	.945
the first time.				
REL4. Store's merchandise is sufficient	1.000	.616	4.08	.942
to satisfy what customer is looking for.				
REL5. Store's sales transactions and	1.000	.611	4.18	.982
records are free of error.				
PI1. Employees in the store possess	1.000	.558	3.77	.934
sufficient knowledge to answer the				
questions raised by customers.				
PI2. Employees' behavior helps in	1.000	.592	3.40	1.053
boosting the confidence of customer.				
PI3. The transaction in this store are	1.000	.629	4.12	.866
safe and trust worthy from the				
customers' point of view.				
PI4. Prompt services are provided by	1.000	.594	3.92	.878
the employees to the customer.				
PI5. Employees provide exact	1.000	.615	3.88	.801
information to the customers, regarding				
the time required for performance of the				
services in the store.				
PI6. Customers' requests are promptly	1.000	.631	3.84	.859
addressed/responded by the employees				
of the store.				
PI7. Individual attention is provided by	1.000	.619	3.25	1.138
the employees of the store.			_	
PI8. Employees' behavior is courteous	1.000	.560	3.67	.860
with the customers.				
PI9. Customers are well treated by the	1.000	.571	3.53	.933
employees over the phone call.				

PS1. Returns and exchanges are willingly handled by the store.	1.000	.719	3.92	.863
PS2. The store shows a sincere attention in solving the customer problem.	1.000	.665	3.94	.855
PS3. Employees handle the customer complaints directly and on priority.	1.000	.653	3.84	.957
PO1. High quality merchandise are offered by the store.	1.000	.734	4.46	.873
PO2. Convenient parking space, for the customers has been arranged by the store	1.000	.734	4.35	1.146
PO3. Operating hours of the stores are convenient to their customers.	1.000	.751	4.48	.955
PO4. Store accepts electronic modes of payment (credit/debit cards, e-wallets etc.).	1.000	.736	4.62	.900
PO5. Store has tied up with banks for its own credit card.	1.000	.640	4.22	1.047
SA1. You were welcomed when you enter the store.	1.000	.721	3.10	1.328
SA2. The outfitted mannequins were helpful in harmonizing the effect of the store	1.000	.641	3.51	.948
SA3. The wait time at the Billing counter was reasonable	1.000	.576	3.57	.946
SA4. Store has reasonable return/exchange policy	1.000	.640	3.82	.901
SA5. I could get so involved that I forgot everything else.	1.000	.572	3.11	1.144
SA6. I am very satisfied with the shopping experience at the store.	1.000	.684	4.07	.891
SA7. Sufficient product range was available at store that matched with my requirement.	1.000	.701	4.23	.965
SA8. I am overall satisfied with the store	1.000	.703	4.22	.877
LOY1. Based on my shopping experience, I would purchase again from the same store.	1.000	.810	4.27	.952
LOY2. I would recommend others to purchase from this store	1.000	.817	4.17	.964
LOY3. I feel more attached to this store as compared to other stores	1.000	.815	4.08	.941
LOY4. I say positive things about the store to others	1.000	.802	4.19	.946
LOY5. I will prefer this store when I want to purchase apparels	1.000	.755	4.26	.953

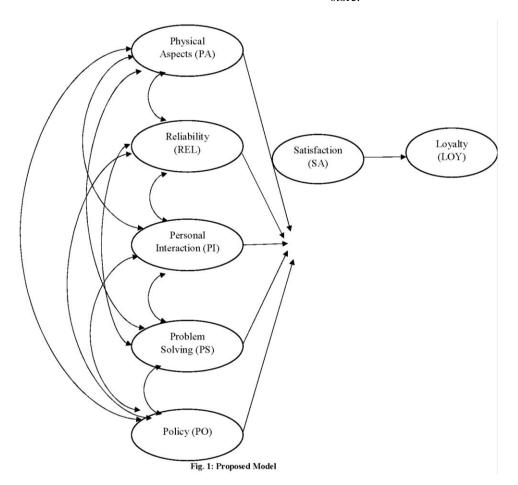
The statements shown in above table were tested for the overall fit, validity and reliability of the model with the help of Structural Equation Modelling (SEM). Following model was proposed to be tested. Hypotheses to be tested are as mentioned below:

- (i) $H1_0$: Physical Aspects (PA) of the store does not significantly affect the Satisfaction (SA) of consumers towards the store.
- (ii) H2₀: Reliability (REL) of the store does not significantly affect the Satisfaction (SA) of consumers towards the store.
- (iii) H_03 : Personal Interaction (PI) with the employees of the store does not

- significantly affect the Satisfaction (SA) of consumers towards the store.
- (iv) H₀4: Problem Solving (PS) of the store does not significantly affect the Satisfaction (SA) of consumers towards the store.
- (v) H_05 : Policy (PO) of the store does not significantly affect the Satisfaction (SA) of consumers towards the store.

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(vi) H_06 : Satisfaction (SA) of consumers from the store does not significantly affect the Loyalty (LOY) of consumers towards the store.



SEM was conducted in accordance with the recommendation given by Anderson & Gerbing (1988) Bagozzi & Youjae (1988), and Hair et al., (2009). Initial result of SEM revealed some of the statements having standardized regression weights of less than 0.5. Those statements were removed and

SEM was re-run till all the statements loadings (standardized regression weights) were greater than 0.5. The number of final statements retained in the service quality of retail store scale and their reliability statistics are given in below Table No. 5.

Table 5
Reliability Statistics

	Reliability Statistics	
Dimension	Cronbach's Alpha	No. of Items
Physical Aspects (PA)	.842	4
Reliability (REL)	.832	5
Personal Interaction (PI)	.850	6
Problem Solving (PS)	.845	3
Policy (PO)	.887	5
Satisfaction (SA)	.868	4
Loyalty (LOY)	.940	5

The high reliability of scale items gave strong justification for the strength of the scale items. Strong motivation was provided, due to high reliability of scale items, to assess the measurement properties for the proposed model. The measurement properties were assessed in accordance with recommendations given by Anderson & Gerbing (1988) and Bagozzi & Youjae (1988). The measurement model yielded a Chi-square value of 1359.825 with 448 degrees of freedom (p=0.000 < 0.05). The ratio of Chi-square to the degrees of freedom was found to be 3.035 which is smaller than the recommended value of 5 (Bagozzi & Youjae, 1988). In addition, the other fit indices (GFI = 0.866, AGFI = 0.824, NFI = 0.824, CFI = 0.874, and RMSEA = 0.083) satisfied the recommended values according to Hooper et al.(2008); Hair et al.(2009).

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The convergent validity of the model is tested in accordance with the recommendations given by Hair et al.(2009). Researchers specified for evaluating the convergent validity of the measurement model:

- (i) Factor loading for each statement must be greater than 0.5, for them to be statistically significant.
- (ii) t-values must be higher than 1.96 or lower than -1.96 at 95% significance level.
- (iii) Value of composite reliability (CR) must be greater than 0.7
- (iv) Values of average varaince extracted (AVE) must be greater than 0.5.

Table 6
Convergent Validity Outcome

Construct	Items	Item Loadings	t-values	Composite Reliability (CR)	AVE
Physical Aspects	PA1	0.857	-	0.846	0.581
(PA)	PA2	0.829	17.052		
	PA5	0.700	13.735		
	PA6	0.641	11.898		
Reliability (REL)	R1	0.674	10.482	0.833	0.500
• , , , ,	R2	0.713	11.022		
	R3	0.704	10.904		
	R4	0.755	11.594		
	R5	0.684	-		
Personal	PI1	0.687	11.063	0.863	0.512
Interaction (PI)	PI3	0.694	_		
	PI4	0.741	11.884		
	PI5	0.700	11.265		
	PI6	0.739	11.849		
	PI8	0.732	10.207		
Problem Solving	PS1	0.801	-	0.849	0.653
(PS)	PS2	0.841	15.429		
	PS3	0.781	14.178		
Policy (PO)	PO1	0.843	-	0.898	0.640
-	PO2	0.792	16.313		
	PO3	0.862	18.694		
	PO4	0.843	18.015		
	PO5	0.640	12.081		
Satisfaction (SA)	SA4	0.692	13.250	0.877	0.642
	SA6	0.837	17.463		
	SA7	0.830	17.252		
	SA8	0.836	-		
Loyalty (LOY)	LOY1	0.879	-	0.939	0.755
	LOY2	0.881	21.461		
	LOY3	0.861	20.784		
	LOY4	0.879	21.379		
	LOY5	0.844	19.704		

Table 6 above shows that all factor loadings are greater than 0.5 and are statistically significant (t-values are greater than 1.96) indicating half or more of the variance in all the indicators are explained by

their respective latent constructs. All factors were found to have AVE values greater than recommended value of 0.5 indicating strong relatedness of the construct to their respective indicators. Composite

Reliability (CR) values were also found to have values greater than the recommended value of 0.7 indicating adequate convergent validity.

Once the convergent validity is established, the model was tested for discriminant validity in accordance with the recommendations given by Bove

et al.(2009). To satisfy the discriminant validity, it is recommended that the average AVE of two constructs must exceed the square of their correlation. Discriminant validity test outcome is shown in Table 7 below.

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Table 7
Discriminant Validity Outcome

Pair of Construct	Average AVE of two	Square Correlation
	constructs	
Physical Aspects (PA) - Reliability (REL)	0.541	0.526
Physical Aspects (PA) - Personal Interaction (PI)	0.547	0.479
Physical Aspects (PA) - Problem Solving (PS)	0.617	0.404
Physical Aspects (PA) - Policy (PO)	0.611	0.596
Reliability (REL) - Personal Interaction (PI)	0.506	0.501
Reliability (REL) - Problem Solving (PS)	0.577	0.536
Reliability (REL) - Policy (PO)	0.570	0.513
Personal Interaction (PI) - Problem Solving (PS)	0.583	0.542
Personal Interaction (PI) - Policy (PO)	0.576	0.497
Problem Solving (PS) - Policy (PO)	0.647	0.561

Above table shows that for all the pair of constructs, the average AVE values are greater than their squared correlations, indicating discriminant validity of the model.

The model exhibits good fit with thte data (ratio of Chi-square to d.f. = 3.035, GFI = 0.866, AGFI = 0.824, NFI = 0.824, CFI = 0.874, and RMSEA = 0.083. Standardized path coefficients for each of the path are provided in below Table 8.

Table 8 Output of SEM

Path	Standardized Coefficient	t-value
Physical Aspects (PA) → Satisfaction (SA)	0.433	3.230
Reliability (REL) → Satisfaction (SA)	0.023	0.160
Personal Interaction (PI) → Satisfaction (SA)	0.254	2.103
Problem Solving → Satisfaction (SA)	0.134	1.174
Policy (PO) → Satisfaction (SA)	0.623	5.852
Satisfaction (SA) → Loyalty (LOY)	0.866	15.616

From the above table, it can be concluded that:

- (i) Physical Aspects (PA) of the store significantly affects the Satisfaction (SA) of consumers (t=3.230, p<0.05), hypothesis H_01 supported.
- (ii) Personal Interaction (PI) with the employees of the store significantly affects the Satisfaction (SA) of consumers (t=2.103, p<0.05), hypothesis H_03 supported.
- (iii) Policy (PO) of the store significantly affects the Satisfaction (SA) of consumers (t=5.852, p<0.05), hypothesis H_05 supported.

(iv) Satisfaction (SA) of consumers significantly affects the Loyalty (LOY) of consumers towards the store (t=15.616, p<0.05), hypothesis H_06 supported.

However, Reliability (REL) and Problem Solving (PS) were found to have no significant effect on Satisfaction (SA) of consumers from the store, with t=0.160, p>0.05 and t=1.174, p>0.05 respectively for Reliability and Problem Solving. Hence hypothesis H_02 and H_04 are not supported.

The model fit indixes are shown in below table.

Table 9
Model fit indexes

Widei	III III III III III III III III III II				
Fit Indexes					
Ratio of Chi-square to d.f.	3.035				
Goodness-of-fit index (GFI)	0.866				
Adjusted GFI (AGFI)	0.824				

Normed Fit Index (NFI)	0.824
Comparative Fit Index (CFI)	0.874
Root Mean Square of Error Approximation (RMSEA)	0.083

The final structural model (output of SEM) is shown at fig.2

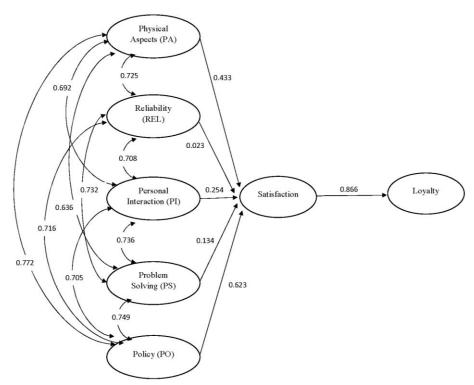


Fig.2: Structural Equation Model

VI. DISCUSSION AND IMPLICATION OF THE STUDY

This study was undertaken to identify the effect of constructs of service quality of retail store scales on the satisfaction derived by consumers from the organized retail apparel store. It was also tested how the satisfaction derived by consumers is related to the loyalty towards the store.

Reliability analysis of constructs revealed high reliability of the constructs. The model was also found to have good fit. It was found that three constructs of Service Quality of Retail Stores scale, viz. Physical Aspects (PA), Personal Interaction (PI), and Policy (PO), significantly affect the satisfaction of consumers towards retail store. It was also found that satisfaction derived by the consumers from the store significantly affects their loyalty towards the store. The findings are in consonance with earlier studies (Terblanche & Boshoff, 2006; Freymann & Cuffe, 2010; (Goff eta 1., 1997; Ryu & Han, 2010). However, previous studies were silent on which dimensions of service quality significantly affects the satisfaction and how satisfaction derived by consumers lead them to become loyal towards the store. Current study has revealed that not all

dimensions of service quality of the retail store is significantly affecting the satisfaction derived by the consumers while shopping from these organized retail store, adding to the body of knowledge. This has implications for the marketers to focus more on the dimensions which are found to have significant impact on the satisfaction. Also, earlier studies were focussed on identification of factors affecting the satisfaction of consumer from the retail store. However, the studies were limited to general retail store and shopping malls. The current study was focussed to identify the dimensions of service quality affecting the satisfaction derived out the shopping experience of consumers from the organized retail apparel store, while earlier studies have discussed the findings related to shopping malls and not focussed for one type of particular organized reails store (such as organized retail apparel store taken in the current study). The current study also developed and tested the structural equation model and has revealed that satisfaction derived by consumers due to the dimensionsion of service quality of retail stores has strong significant impact on their loyalty towards the store, which can be utilized the marketer to formulate their strategy in more efficient manner by focusing more on the factors having significant impact on

satisfaction ultimately leading to their loyalty towards the store.

VII. CONCLUSION

Organized retail apparel store invests heavily towards making them more ornate. To achieve this objective. they become more competition-centric than customer-centric. Due to huge investment, marketers strive hard to generate revenue over and above the break-even. Research in past has already suggested that if the customers can be made loyal for longer duration, it's very easy for the marketer to generate revenue as compared to that of finding new customers and converting them into their portfolio. Past research suggest that marketer must strive to enhance the customer loyalty by focusing on factors which are adding to the satisfaction, ultimately making the customer loyal towards the store. Hence it is imperative for the marketer to understand the factors affecting the consumer satisfaction for organized retail apparel stores.

The research gained an understanding of the factors affecting the satisfaction of consumers shopping from organized retail apparel store in Ahmadabad. Study attempts to measure the impact of these factors on the satisfaction derived and how satisfaction derived from the store affects the loyalty of consumers towards the store. Marketers may be interested in a model that can make use of such information in evaluating the satisfaction level and the factor influencing the satisfaction of consumers. This study also has marketing implication in terms of the impact of satisfaction on the loyalty of consumers. Study revealed that the loyalty towards the store is highly related to the satisfaction derived by the consumers in terms of constructs of service quality of the store. The constructs found to have significant impact on the satisfaction may interest the marketers to focus on these factors and develop their strategy to enhance the consumer satisfaction which ultimately lead to the consumers' lovalty towards the store. It will help the marketers to develop deep relationships with the consumers and will result in repeat purchase by their consumers. Consumer getting satisfaction out of the store may become loyal and will help the store to get more consumers in their portfolio by positive wordof-mouth publicity.

This model tested in the research will serve as a useful tool for the marketers to devise their strategy to enhance consumer satisfaction leading to loyalty. The findings also suggest that physical aspects of the store, personal interaction of consumers with the employees of the store and the policy of store in resolving consumer issues are to be taken care of to enhance satisfaction to the higher levels. Once the consumers derive satisfaction from the store in

relation to the mentioned factors, it may develop strong loyalty of consumers towards the store, ultimately enhancing the store revenues. Store developer or the marketers may consider the integrated view of the factors affecting satisfaction and loyalty, as suggested by the model developed in this research, and work on the strategies to improve the satisfaction of consumers leading to their loyalty towards the store.

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VIII. LIMITATIONS AND SCOPE FOR FUTURE STUDIES

This study focuses on satisfaction and loyalty of consumer (in relation to constructs of Service Quality of Retail Store Scale) towards organized retail apparel stores in Ahmadabad. However, for future research, other factors of the store, past experience of consumers, effect of psychological factors and promotional schemes of the store on the satisfaction derived by consumers can be incorporated.

The data in this study was collected from the residents of Ahmadabad city only. As India has vast diversity in culture and socio-economic factors, further studies with examination of more diverse factors can be undertaken to verify the regional differences and to enhance the generalizability of the findings. The model tested in this research can be extrapolated in other parts of the country. Further studies may focus on collecting data (at different point of time and for different segment of consumers) from organized retails stores across major cities of India where organized retail store concept is considered to be old enough for such studies to be undertaken. Researchers may get interesting results in relation to the understanding of whether the satisfaction and loyalty towards the store varies with place, time and consumer demographics.

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Comparison of Fear of Failure between Senior National Level Elite and Non-Elite Boys Mallakhamb Players

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ABSTRACT

Failure is known as the state or condition of not meeting a desirable or intended objective, and may be viewed as the opposite of success. Loss or failure is something that is looked down upon and sportspersons begin to fear it even at a young age. The Purpose of the study was to compare the fear of failure the among Senior National level elite and non-elite boys Mallakhamb players. The subjects of the study were twenty three senior national level elite and non-elite Boys Mallakhamb players, who participated 33rd senior national Mallakhamb Championships held at Ujjain in the year February, 2017. The fear of failure questionnaire (FOFQ) consisting of 48 items and constructed by Shukla (2015) was used for the purpose of data collection. To assess the fear of failure of elite and non-elite boys on six dimensions of senior National level above 18 years, mean and standard deviation, t-ratio were computed. Results of study revealed that Senior National level elite and non-elite boys mallakhamb players were found similar on six dimensions of fear of failure i.e. goal setting, self-adequacy, uncertain future, self-control, self-evaluation and coping strategies.

Keywords: Fear, Failure, Success, Mallakhamb, Boys, National level

I. INTRODUCTION

Mallakhamb could be a pure Indian game. It's a sport that mixes numerous exercises that improve speed, flexibility, strength, concentration, coordination and gracefulness. Along with neuromuscular development, areas of personal character, discipline and self-motivation are powerfully increased. Turning into prime player is not for everybody. It improves the concentration, helps enhancing immunity power, will increase the competitive spirit,

Sport represents a major accomplishment domain for kids and adolescents (Treasure, 2001), being a extremely competitive field, wherever considerations regarding performance failure and negative social analysis are the foremost predominant sources of worry for young athletes (Passer, 1983). Fear of failure analysis in sport domain has been related to cases of burnout (Rainey, 1995), youth drop out, barriers to sport participation (Orlick, 1974), misuse by athletes (Anshel, 1991), and athletic stress (Gould, Horn, & Spreeman, 1983).

Many psychological studies have shown the concern of failure is preferred barrier to personal success. we have a tendency to concern regarding failure as a result of we do not separate task from ourselves and thus our self worth is in danger anytime we have a tendency to decide to do something we actually need to realize. In different words we have a tendency to area unit afraid being humiliated; as a result of at the sub-conscious level we have a tendency to link failure to humiliation. So, however will we overcome concern of failure and its misguided companion humiliation? Admit you're afraid to fail, understand

that each time you fail, you have got become a stronger author, acknowledge that every failure brings you one step nearer to success, understand the educational expertise and reject the illusion of humiliation. The person additional powerfully intended to avoid failure, instead of to realize success, tends to be additional unrealistic in aspiration.

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Fear could be a subjective feeling that has its roots within the surroundings and triggers physiological changes (e.g., exaggerated pulse rate, muscle tension), resulting in sure consequences in behavior (Gray, 1987). Concern as a construct exists from infancy to adulthood (Field & Lawson, 2003).

Fear of failure so, happens because of the contestant activating feelings and thoughts connected to things that are terrifying. This is often on account of attainable failure and inability to fulfill internal standards in those things. Athletes could any build evaluations of events and knowledge an associated anxiety supported which means they attach to those things. Thereby, Associate in Nursing dislike interpretation of the results of failure (E.g. my coach can lose faith in me if I do not win) leads people to concern failure itself (Willow & Metzler, 2002; Conroy, Poczwardowski & Henschen, 2001).

II. METHODOLGY

(a) Selection of Subjects-The subjects of the study were twenty three senior national level elite and non-elite Boys Mallakhamb player, who participated 33rd senior national Mallakhamb Championships held at Ujjain in the year

February, 2017. Boys Mallakhamb players were selected during Senior National Mallakhamb championship. M \pm SD of senior age of boy's category was 21.52 \pm 2.41 years.

- (b) Instrumentation-The fear of failure questionnaire (FOFQ) is a sport-specific scale consisting of 48 items which was constructed by Shukla (2015). It is a multidimensional inventory that measures the psychological characteristics of athletes on six subscales; Goal Setting, Self Control, Self Adequacy, Self Evaluation, uncertain Future and Coping Strategy.
- (c) Statistical Analysis-To assess the fear of failure

of elite and non-elite boys on six dimensions of senior National level above 18 years, mean, standard deviation and t-ratio were computed.

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III. RESULTS

To find out the significance of difference between means of six dimensions of fear of failure of elite and non-elite boys Mallakhamb players, mean, SD and tratio were computed and data pertaining to this has been presented in Table 1 to 6 and depicted in figure 1 to 6.

Table 1 Significance of Differences between Mean Scores of Senior National Level Elte and Non-Elite Boys Mallakhamb Players on Goal Setting Dimension of Fear of Failure

Dimensions of Fear of Failure	Sex	Mean	MD	σ	t-ratio
				DM	
Goal Satting	Elite	17.25	2.34	1.52	1.54
Goal Setting	Non-Elite	14.91			

Insignificant at .05 level,, t .05 (21) = 2.08

Table 1 indicates that senior national level elite and non-elite boys Mallakhamb players did not differ significantly in their goal setting, dimension of fear of failure, as the obtained t-value of 1.54, was less than the required t .05

(21) = 2.08.

The graphical representation of mean scores of goal setting dimension of fear of failure is depicted in Figure 1

Table 2 Significance of Differences between Mean Scores of Senior National Level Elte and Non-Elite Boys Mallakhamb Players on Goal Setting Dimension of Fear of Failure

Dimensions of Fear of Failure	Sex	Mean	MD	σ	t-ratio
				DM	
Self Adequacy	Elite Non-Elite	19.58 19.27	0.31	1.23	0.25

Insignificant at .05 level,, t.05(21) = 2.08

Table 2 indicates that senior national level elite and non-elite boys Mallakhamb players did not differ significantly in their self adequacy dimension of fear of failure, as the obtained t-value of 0.25 was less than the

required t.05(21) = 2.08.

The graphical representation of mean scores of goal setting dimension of fear of failure is depicted in Figure 2

Table 3
Significance of Differences between Mean Scores of Senior National Level Elte and Non-Elite Boys Mallakhamb
Players on Goal Setting Dimension of Fear of Failure

Dimensions of Fear of Failure	Sex	Mean	MD	σ DM	t-ratio
Uncertain Future	Elite Non-Elite	14.42 16.45	2.03	2.10	0.96

Insignificant at .05 level,, t .05 (21) = 2.08

Table 3 indicates that senior national level elite and non-elite boys Mallakhamb players did not differ significantly in their uncertain future dimension of fear of failure, as the obtained t-value of 1, 0.96 was less than the

required t.05(21) = 2.08.

The graphical representation of mean scores of goal setting dimension of fear of failure is depicted in Figure 3

Table 4
Significance of Differences between Mean Scores of Senior National Level Elte and Non-Elite Boys Mallakhamb
Players on Goal Setting Dimension of Fear of Failure

Dimensions of Fear of Failure	Sex	Mean	MD	σ DM	t-ratio
Self Control	Elite Non-Elite	12.08 13.55	1.47	1.49	0.98

Insignificant at .05 level, t .05 (21) = 2.08

Table 4 indicates that senior national level elite and non-elite boys Mallakhamb players did not differ significantly in their self control dimension of fear of failure, as the obtained t-value of 0.98 was less than the required t .05

(21) = 2.08.

The graphical representation of mean scores of goal setting dimension of fear of failure is depicted in Figure 4

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Table 5
Significance of Differences between Mean Scores of Senior National Level Elte and Non-Elite Boys Mallakhamb
Players on Goal Setting Dimension of Fear of Failure

Dimensions of Fear of Failure	Sex	Mean	MD	σ DM	t-ratio
Self Evaluation	Elite Non-Elite	12.42 11.73	0.69	1.26	0.55

Insignificant at .05 level, t .05 (21) = 2.08

Table 5 indicates that senior national level elite and non-elite boys Mallakhamb players did not differ significantly in their self evaluation dimension of fear of failure, as the obtained t-value of 0.55 was less than the

required t.05(21) = 2.08.

The graphical representation of mean scores of goal setting dimension of fear of failure is depicted in Figure 5

Table 6
Significance of Differences between Mean Scores of Senior National Level Elte and Non-Elite Boys Mallakhamb
Players on Goal Setting Dimension of Fear of Failure

Dimensions of Fear of Failure	Sex	Mean	MD	σ DM	t-ratio
Coping Strategies	Elite Non-Elite	10.75 10.18	0.57	157	0.36

Insignificant at .05 level, t .05 (21) = 2.08

Table 6 indicates that senior national level elite and non-elite boys Mallakhamb players did not differ significantly in their coping strategies dimension of fear of failure, as the obtained t-value of 0.36 was less than the required t .05 (21) = 2.08.

The graphical representation of mean scores of goal setting dimension of fear of failure is depicted in Figure 6

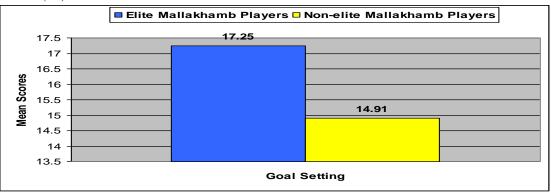


Fig. 1

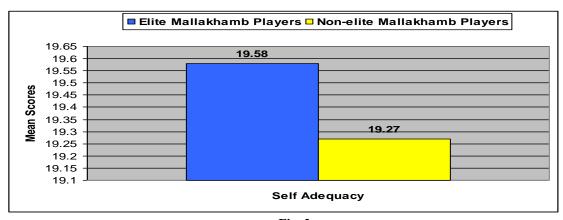


Fig. 2

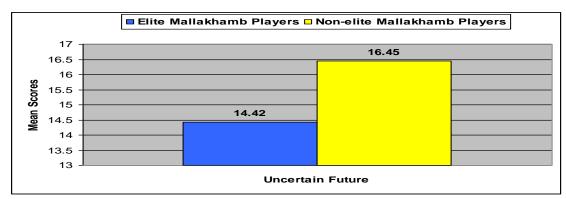


Fig. 3

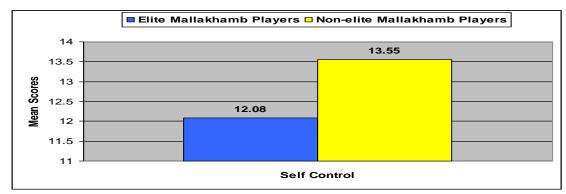


Fig. 4

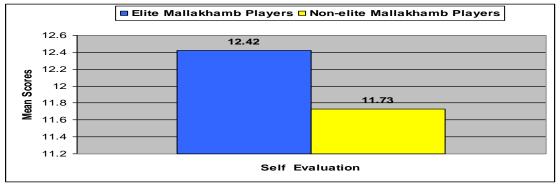


Fig. 5

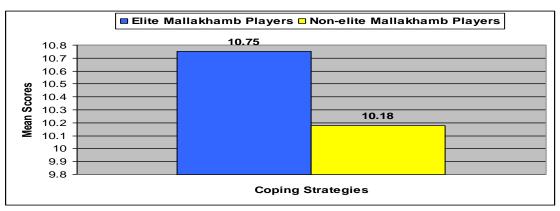


Fig. 6

IV. DISCUSSION

The senior national level girls Mallakhamb players expressed insignificant mean differences on self adequacy (0.34), uncertain future (1.67), self control (0.33), and coping strategies (0.75) dimensions of fear of failure. But they had significant difference in goal setting (3.63) and self evaluation (2.06) dimensions of fear of failure. When the elite and non-elite boys Mallakhamb players compared together on six dimensions of fear of failure, The t-ratio indicated that the elite and non-elite senior national level boys Mallakhamb players did not differ significantly in all the strategies dimensions of fear of failure i.e. goal setting, self adequacy, uncertain future, self control, self evaluation and coping strategies.

It was hypothesized that there would be no significance of difference in fear of failure. between elite and non-elite Boys Mallakhamb players of different age groups, is accepted, as the senior national level elite and non-elite boys Mallakhamb players had insignificant differences in goal setting, self adequacy, uncertain future, self control, self evaluation and coping strategies dimensions of fear of failure,

V. CONCLUSION

Senior National level elite and non-elite Boys Mallakhamb players were found similar on goal setting, self adequacy, uncertain future, self control, self evaluation and coping strategies dimensions of fear of failure.

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Analysis of Threats Posed by SNSs with Reference To Level of Its Awareness among People

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ABSTRACT

With an easy availability of internet and growing awareness about the uses and facilities provided by the social networking sites, not only youth but people of all ages are getting attracted towards these social networking sites. Though the awareness about the use and facilities is increasing but the awareness about the threats posed by these social networking sites to the safety and security of the user and the measures to safeguard oneself from these threats are still lacking. The SNS providers have also made the process of signing into these sites a very easy task but understanding their privacy settings is not a childs play. People, in a wish to know people of diverse cultures and many only in a wish to increase the number of friends in their friend list keep on accepting friendship requests from unknown people. While doing so, most of the time they are unaware that this small act may make them a victim of cyber-crime. In order to protect users of SNSs from cyber-crime, efforts are required to be made both by SNS providers and users of SNSs. SNS providers can make privacy settings more user friendly and can create awareness about use of privacy settings.

Keywords-Social Networking sites, awareness, virtual world, cybercrime, user friendly and Privacy

I. INTRODUCTION

Social networking sites provide a virtual world where people can meet their friends, relatives and even more than billions of unknown people at the place of their convenience and at any time of the day. Along with the benefit of instant communication one can also remain updated about various trends in society through SNSs. Humans are social animals and social networking sites have made it very easy for them to pursue their social lives. In today's fast moving world, no one has time to visit all their friends at their places. SNSs provide a one-step solution to the problem of shortage of time and growing distances. All you have to do is to create an account on SNS and you can get all updates about friends and relatives at your place. While enjoying the benefits of

SNSs one should not forget about various threats SNSs may pose to their security. One should think twice before performing any action on SNSs as that action may facilitate cyber-crime. SNSs provide various privacy setting options using which the chances of cyber-crime can be reduced to a large extent. Some of the widely used social networking sites are Facebook, Twitter, Instagram, Snapchat etc.

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Number of users active on social networking sites in rapidly increasing. As per a report by Dave Chaffey, in Global social media research summary 2018, facebook had largest number of active users i.e. over 2 billion users followed by youtube and then whatsapp.

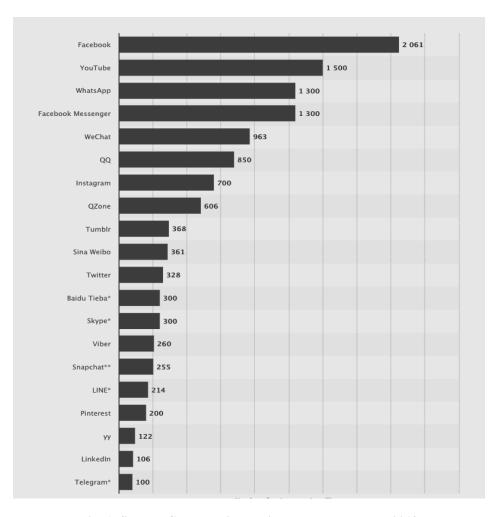


Fig. 1: Source: Global social media research summary 2018

Fig. 1 shows number of users active on some of the most popular social networking sites. QZone, Instagram, QQ, WeChat, all had above 6 million users.

Facebook is an American Social Networking Site based in California. It was founded on 4 February, 2004 and its founders were Mark Zuckerberg, Eduardo Saverin, Andrew McCollum, Dustin Moskovitz and Chris Hughes. Initially the membership for facebook was limited to only Harvard students.

Twitter is a social networking site where people can interact with each other through messages called tweets. It is based in San Francisco and has more than 25 offices all over the world. It was founded on 21 March, 2006 by Jack Dorsey, Noah Glass, Biz Stone and Evan Williams. The website became popular very quickly and was given a title "SMS of the Internet".

Instagram is an application widely used for sharing photographs and videos either publically or to certain followers who have been approved to view the posted content. It was founded on 6 October, 2010 by Kevin Systrom and Mike Krieger. Its ownership is with Facebook.

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Snapchat is an application for sharing photographs created by Evan Spiegel, Bobby Murphy, and Reggie Brown and was released in September, 2011.

II. LITERATURE REVIEW

Mafaisu Chewae, Sameer Hayikader, Muhamad Hairulnizam Hasan, Jamaludin Ibrahim(2015) have reported that communication and interaction have become a very easy task due to development of technology and growing awareness about social networks. They believe that people are concerned about their privacy on social networking sites.

Dr. Saswati Gangopadhyay(2014) found that people of age between 15 and 25 are active users of social networking sites. For them social networking means some of the widely used social networking sites like facebook, instagram etc where they can find friends and can interacts with them 24*7. Mobile phones are a great back up for this 24*7 trend. They

do not hesitate in sharing their private information with even unknown people on these social networking sites. Hence, awareness needs to be created amongst them in order to prevent cybercrime.

Aamir Suhial (2015) stressed that there is a need to protect personal information of user of SNSs and highlighted that a new privacy system should be developed and it should be supported by mobile internet devices. According to him, in order to secure private information of user of SNS, some trust factor algorithm should be used to check history of person sending friend request to existing user of SNS.

Roshan Jabee and M. Afshar Alam(2016) are of the view that there should be some default settings of Facebook to avoid cyber-attacks and disclosure of user's personal information publicly. As per their report, 92% users of facebook are students. Out of total users of facebook 77.05% are satisfied with its default settings but still are of the view that the default settings can be improved further. 49% users have complete faith in privacy settings of facebook and 40% do not have any trust. And 24% users have experienced privacy breach while using facebook.

Abhishek Kumar, Subham Kumar Gupta, Animesh Kumar Rai, Sapna Sinha(2013) have suggested solution to security issues of social networking sites. According to them, complete knowledge on part of the user is the only solution. They have suggested that one should be careful while making friends on social networking sites and while posting their personal information. They have also put forward architecture for secure communication between the users and secure request-response architecture for exchange of information between the users.

Wajeb Gharibi and Maha Shaabi (2012) are of the view that, although social networking sites are providing advanced technology to facilitate communication and interaction but attention is still required towards the matter of privacy and security issues raised by these social networking sites. They believe that new type of security risks are raising along with advancement of technology. They suggest that information security professionals, government officials and other intelligence agencies should develop new tools in order to prevent and adapt to the future potential risks and threats.

Vinod L. Mane and Kalyan D. Bamane reported that with development of technology, world is coming together through technology. But it is bringing with it its own drawbacks. Information becomes available to people who are not trustworthy and health social networking sites are also playing a great role in providing personal information about people. They suggest that in order to safeguard

oneself from becoming victim, one should be careful while sharing information on social networking sites.

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Amitha C.A. and Dr.Sr.V.J.Kochuthresia (2016) have concluded in their study that, pattern of interaction of students with their family changes when they use SNSs. They confirmed that that 52% of students are using SNSs for two or more which is hampering their daily activities. As per their study 57% of students are not even aware of the security and privacy. Concerns associated with use of SNSs. In view of above situation, they have suggested that awareness about security and privacy concern and danger that are associated with pleasure of using SNSs should be created by school authorities through training and awareness programmes.

Prof. Biren Patel and Viraj Kothari(2017) have stressed that end, having proper knowledge about the ways in with one can be fooled on social networking sites is the only solution to the problems related to security and privacy on SNSs. They have suggested remaining alert while performing any activity on SNSs. Moreover, they have put forward and architecture for secure communication between the users and secure request response architecture for exchanging information between users.

L.S.Y. Dehigaspege, U.A.A.S. Hamy, H.A.H. Shehan, S.A. Dissanayake, H.P. Dangalla, W.H.I. Wijewantha and Dhishan Dhammearatchi(2016) have introduces an algorithm to prevent the cyberattacks by making use of voice recognition methodology for login and CAPTHAs to identify the spam bots. They have also suggested that location from where SNS is being accessed should be located using GPS.

III. HISTORY OF SOCIAL NETWORKING SITES

Idea of having a platform where people could meet their friends, relatives and even strangers in a virtual world can be traced back some 21 years when Andrew Weinreich launched a SNSs called SixDegrees in 1997. It allowed people to add friends and relatives to a list. The site gain popularity at a very fast pace. This is evident from the fact that almost a year after the launch of the site, it had more than 1 million users and that too in an area when not many people were online and the idea of making friends with strangers was not much acceptable. In Spite of all this, the site could not maintain its popularity for long and had to be shut down in 2001. According to Andrew Weinreich, reason behind failure of Six Degrees was the fact that it was ahead of its time.

After the shutdown of Six Degrees, the next SNS that attracted attention of huge mass of population was

Ryze.com. It was launched in 2001. Adrian Scott was its creator. It was launched with an aim to link business professionals, especially new entrepreneurs.

Between 1997 and 2001 many other SNSs were also launched like Asian Avenue, Llive Journal, LunarStorm, Black Planet, MiGenete, CyWorld etc.

Soon after the success of Ryze.com, in 2002 a new SNS came up in market. It was Friendster founder by Jonathan Abrams. It is a social gaming site but initially it was a social networking service website. Ryze.com had a great influence on Friendster.com.

Then came MySpace to join the league of popular SNSs. It was founded by Chris DeWolfe, Tom Anderson and Jon Hart on 1 August, 2013. It allowed users to connect with friends, read blogs, share photos and videos on a user-submitted network.

After MySpace, Orkut was founded in 2004. It was developed by Orkut Büyükkökten. It allowed user to make friends with people all around the world. Features and outlook of orkut has changed many times over time in order to make it safer and more user friendly.

After Myspace, Facebook came up as a turning point in history of Social networking sites. It came up as one of the most users friendly SNS where one could connect with friends, relatives, and strangers and can remain updated about people in their friend list. Users can join group of users having common interest and can get updates about topic of their interest. It was founded in 2004 by Mark Zuckerberg, Dustin Moskovitz, Eduardo Saverin, Andrew McCollum, Chris Hughes.

Since the launch of Six Degrees, many developers have been inspired to develop sites where user can connect to people all over the world and the trend is still continuing. Almost every day one can come across a new social networking site. Though, the level of reliability of those SNSs varies from site to site

IV. THREATS POSED BY SOCIAL NETWORKING SITES

Threats posed by social networking sites are generally classified under 4 categories:

(a) Threats related to privacy of the user

- (i) Generally, users do not hesitate in sharing their photographs on social networking sites. Using these photos, criminals can peep into the lives of the user and collect information about them using face recognition technology.
- (ii) Using Content Based Image retrieval, location of the user can be identified. This

can encourage stalking, undesirable marketing, blackmailing and much more.

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- (iii) Using the tagging feature provided by social networking sites, adversary can harm image of well-known personalities by tagging them in pictures with they do not control.
- (iv) Some of the informations or comments posted by the user on the SNSs can never be deleted. This can work as a digital dossier.

(b) Threats from SNS variants of traditional network and information security threats

(i) Spamming on Social networking sites may create traffic overload. This may lead to loss of trust in that site and can lead to Phishing and diversion of user's attention to pornographic sites.

(c) Threats to identity of user

- (i) Phishing is a process in which a person disguised himself as a legitimate entity and tries to obtain sensitive information using false mails. Such false mails will generally direct the user to visit some website where they will be asked to fill in some of their personal information which is captured and exploited.
- (ii) Leakage of personal information is also a great threat.
- (iii) Fake profiles can be created to impersonate a person and damage his reputation. This is called profile squatting.

(d) Social threats

(i) Information shared by users on social networking sites can be used for stalking on the user.

V. REMEDIES AGAINST THREATS POSED BY SNSs

- (a) Users of SNSs should spare time to understand privacy settings of the site they are using and should set them as per their requirement before performing any action on SNSs.
- (b) Users should avoid posting sensitive information on SNSs as such information is already known to their friends. But posting it on SNSs may attract adversary.
- (c) Users should protect their account with a strong password and keep changing it from time to time.
- (d) User may also link their account on SNSs with their email ID.
- (e) One should avoid adding people to their friend list who are not known to them.
- (f) Campaigns to create awareness should be launched in educational institutions.

(g) Legislations should be made to make it compulsory for SNS to provide strong inbuilt privacy settings.

VI. METHODOLOGY

The present study is exploratory in nature. For the purpose of research, existing literature on the topic was extensively analysed. Secondary data was collected from various websites in form of research papers and reports on related topics. Various keywords related to the topic were used for this purpose. Downloaded research papers were subjected to qualitative analysis using Qualitative Data Analysis software NVivo 11 by QSR international. Using this software text documents, audio files,

spreadsheets, databases, digital photos, documents, PDFs, bibliographical data, web pages and social media data can be imported, sorted and analysed. The software was used to find area of topic in which not much research has been done and the area that deserves attention.

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VII. FINDINGS AND DISCUSSION

Forty nine papers were imported in Nvivo plus software and were analysed using various tools. Word frequency query was run on these papers to find out 100 most frequently repeated words with their synonyms. Length of required words was set to 5 letters. Results of word frequency query in form of word cloud is as follows:



Fig. 1: Word Cloud of Most frequently used words

List of 20 most frequently used words and number of times they have been used in the selected papers is as follows:

Table 1
Twenty most frequently used words in the literature

Word	Length	Count	Weighted Percentage (%)
social	6	4070	2.28
networking	10	3157	1.77
privacy	7	2981	1.60

information	11	2498	1.33
users	5	2087	1.15
facebook	8	1541	0.86
sites	5	1636	0.82
security	8	1624	0.74
study	5	2126	0.73
personal	8	1388	0.64
settings	8	1748	0.63
friends	7	1122	0.58
issues	6	2206	0.55
using	5	1404	0.50
media	5	871	0.49
number	6	1510	0.49
online	6	850	0.48
concerns	8	1324	0.45
profile	7	784	0.44
access	6	1033	0.44

Network, social and privacy are the most widely used words throughout the selected literature. Word 'awareness' has not occupied any position amongst the 20 top most frequently used words. This shows that in existing literature not much attention has been paid towards the aspect of level of awareness about privacy amongst users. Moreover, some research on the existing as well as desired settings in SNSs also deserves attention.

VIII. CONCLUSION

In an era where social networking sites are still evolving, trusting completely on SNSs is not recommended. Though SNSs provide various benefits but the threats posed by SNSs seem to be larger than benefits. If proper attention is not paid while using SNSs then it can lead to situations which could be even life threatening. One should remain very careful while using SNSs and it should not be used for passing time as it is being done these days. From the reviewed literature, it is clear that not many

people are aware of the threats posed to their privacy by SNSs and not many pay heed to privacy settings of SNSs. Privacy settings of SNSs should be made user friendly and users should be made aware about them by posting videos about privacy settings on SNSs. Educational institutions should make efforts to reduce the influence of SNSs on minds of children and they should be made aware of risks posed by social networking sites.

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Lastly, one's safety and security is his own responsibility. One should not forget that their every action counts and has consequences, whether good or bad. Rule for using SNSs is no exception to this general rule.

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A Study of Financial Performance of Nationalized Commercial Banks in India by CAMEL Model

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ABSTRACT

The study aims to evaluate the financial performance of commercial banks in India. Sample of six Commercial Banks (three Public and three Private sectors) are taken and the data for the study is from 2008-09 to 2017-18. The banks include Axis Bank, Bank of Baroda, Corporation bank, HDFC Bank, ICICI Bank and State Bank of India. The data is collected from published annual reports, websites of the respective banks, and from Reserve Bank of India. Calculations are done for measuring the aspects of financial performance of banks by applying CAMEL Model which includes capital adequacy, asset quality, management efficiency, earning quality and liquidity. The significance of the parameters of the CAMEL model were tested by using ANOVA, it is found that State Bank of India in public sector and HDFC bank in private sector performed significantly well in nearly all the aspects of CAMEL. However, the performance of Bank of Baroda in public sector and Axis bank in private sector witnessed the maximum growth of their prices and returns at the BSE.

Key Words: Banking, CAMEL Model, Financial Performance, Capital Adequacy, NPA.

I. INTRODUCTION

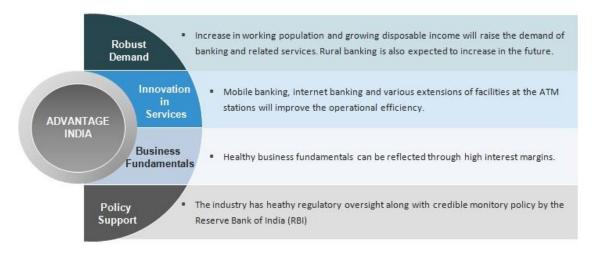
As per the Reserve Bank of India (RBI), India's banking sector is sufficiently capitalized and well-regulated. The financial and economic conditions in the country are far superior to any other country in the world. Indian banking industry has recently witnessed the roll out of innovative banking models like payments and small finance banks. The digital payments system in India has evolved the most among 25 countries with India's Immediate Payment Service (IMPS) being the only system at level 5 in the Faster Payments Innovation Index (FPII). RBI's new measures may go a long way in helping the restructuring of the domestic banking industry.

Enhanced spending on infrastructure, speedy implementation of projects and continuation of reforms are expected to provide further impetus to

growth. All these factors suggest that India's banking sector is also poised for robust growth as the rapidly growing business would turn to banks for their credit needs.

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Also, the advancements in technology have brought the mobile and internet banking services to the fore. The banking sector is laying greater emphasis on providing improved services to their clients and also upgrading their technology infrastructure, in order to enhance the customer's overall experience as well as give banks a competitive edge. As the figure below shows the advantages of Banking sector in India, this Research Paper is therefore an attempt to evaluate the financial performance of the selected Public and private sector Banks in the sample period of 10 Years.



Source: www.ibef.org
Fig.1 Advancement in Banking

II. LITERATURE REVIEW

Antoun, Coskun, & Georgievski, 2018 The Bank Specific, industry specific and macroeconomic determinants of the financial performance of the Banks in the Central and Eastern European countries were investigated in this study. To analyze these determinants the author constructed a financial performance Index (FPI) based o the CAMEL ratios. The data for 2009-14 was collected from Bank scope database, World developments indicators and financial structure and development database. The empirical analysis using the fixed-effect panel regression concluded that the asset quality, earnings, capital adequacy and liquidity are negatively affected by size and positively affected by business mix and economic growth.

Roy, Paul, Quazi&Nguyen, 2018 conducted this study to develop and validate a scale for measuring the consumers perceived service value in the Indian retail banking services. The author compiled a list of possible measurement items based on literature review and expert opinion through focus groups. Data for the study was collected from a sample of 442 respondents representing the Indian retail banking sector using survey instrument and were analyzed using the structural equation modeling. The study discovered a seven-dimensional scale for measuring service which includes service equity, customer service quality, intimacy, product leadership, operational effectiveness, customer communication, and perceived sacrifice.

Srinivasan, P. and Britto, J. (2017) evaluated the financial performance of 16 commercial banks from the period of 201-2017. The Liquidity, solvency and profitability ratios were calculated and one —way ANOVA was applied to determine whether there is a significant difference in the means of the financial ratios of the private and the public sector banks. The impact of liquidity, solvency and efficiency on the profitability of the public and private sector banks was studied by employing the panel data estimation fixed and random effects models. The empirical results revealed a positive and a significant impact on the profitability.

Pinto, Hawaldar, Rahiman, T.M, &Sarea, 2017 financial performance of 8 commercial banks of Bahrain was evaluated in this study from the year 2005-2015. To determine the relationship between the financial parameters of these banks Regression, correlation and t-test was applied. The study concludes that profitability of the banks has an impact on the capital adequacy and the financial leverage but did not confirm the relation between profitability and the efficiency of the banks.

Alemu &Aweke, 2017 analyses the overall performance of the private commercial banks in Ethiopia for a period of 10 years from 2007-2016 by using the CAMEL rating approach. The collected data from the audited annual reports was analyzed by descriptive statistics and the panel regression model was applied to find the impact of the CAMEL ELEMENTS on the bank performance i.e. ROA and ROE. The results of the study concluded that NIB bank stood on the top and the panel model estimations indicated that the explanatory variables were significant in determining the profitability indicators.

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GudataAbara, 2015 analyzed the financial performance in the Ethiopian Commercial Banking Sector for a period of five years from 2007-2011. The Banks selected for the study was Commercial Banks of Ethiopia, Construction and Business Bank, Bank of Abyssinia, Awash International Bank and United Bank . Ratio analysis was applied to study the financial performance and t-test was used to see whether there is a significant difference in the profitability, operational efficiency, liquidity management, solvency & risk of the selected commercial banks.

Kaur,Kaur,& Singh, 2015 measured and compared the financial performance of the leading five public sector banks SBI, Bank of Baroda, Punjab National Bank, Bank of India and Canara Bank for the year 2009-14. The study applied the CAMEL Model i.e. Capital Adequacy, Asset quality, Management efficiency, earning quality and liquidity to analyze the performance and concluded that Bank of Baroda leads in all the aspects of the CAMEL Model.

Repkova, 2015 applied data envelopment analysis to determine the efficiency in the Czech banking sector from 2001-12. The author applied panel data analysis to estimate the determinants of the banking efficiency and concluded that the level of capitalization, liquidity risk and riskiness portfolio have a positive impact on the banking efficiency. The CCR model shows a negative impact of ROA, Interest rate and GDP on efficiency but BCC model CCR model shows a positive impact of liquidity risk and portfolio on efficiency.

Tzeremes, 2015 analyzed the banking efficiency in Indian Banking Industry from 2004-12. In order to analyze the dynamic effects on the industry's performance level the author applied the conditional directional distance estimator. The results of the study indicate that foreign banks perform better compared to national and domestic private banks. The findings support the view that ownership structure affects bank technical efficiency levels.

Fahad, N. (2014) empirically analyzed and compared the financial performance of the conventional and Islamic banking in Bangladesh. The analysis was done from the year 2008-12 and the panel data of 10 conventional banks and 6 Islamic banks was collected from the audited annual reports. The author calculated the relevant financial ratios and regression model in which Return on Assets (ROA) and Return on Equity (ROE) were used as dependent variables along with various internal and external independent variables. The results of the study indicated that credit risk, concentration, size and economic conditions are most significant in the conventional banks and the financial development is the most significant in the Islamic bank performance.

Bansal & Mohanty, 2013 the financial performance of the Banks was evaluated by applying the CAMEL Model i.e. Capital Adequacy, Assets quality, Management, Earnings and liquidity. On the basis of Market Capitalization five major Banks SBI, HDFC Bank, ICICI Bank, Axis Bank and Kotak Mahindra Bank were selected for the study from the period of 2007-11. The Banks were ranked on the basis of the overall weighted results of ratios in which HDFC stood first.

Karim &Alam, 2013 measures the financial performance of five private sector banks of Bangladesh from the period of 2008-12. The author used the secondary data collected from the various audited annual reports and financial ratios like NIM, ROA, ROE, NPA were applied. The Internal based performance was measured by Return on Assets, Market based performance was measured by Tobin's (price/book ratio) and the economic based performance was measured by the Economic Value. By applying multiple regression analysis the study showed a positive impact of the three indicators on the financial performance of the Bangladeshi banks.

Goel &Rekhi, 2013 investigated the profit earning capacity and the factors affecting the profit earning of the selected private and public sectors banks from the year 2009-12. On the basis of the data collected from the audited annual reports of the banks the ROA, ROE, demand deposit, saving deposit ratio, debt equity ratio, credit deposit ratio and NIM were calculated. On the basis of the corealation matrix the author concluded that efficiency and profitability are interrelated and the private sector banks are more efficient that the public sector.

Miencha& Selvam, 2013 examined and compared the performance of the Kenyan commercial banks after the global financial crisis era. The data was collected from the Central Bank of Kenya Annual report, Banks in Kenya, published reports and journals from the period of 2007-11. By the data Envelopment Analysis (DEA) it wasfound that

private banks performed well relatively compared to public banks sector and foreign sector banks in Kenya.

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Paradi, Rouat& Zhu, 2011 analysed a major Canadian bank with 816 branches on the basis of a two stage data Envelopment analysis approach, developed for simultaneously benchmarking the performance of operating units along different dimensions (for line managers) and a modified Slacks-Based Measure model. This was applied for the first time to aggregate the obtained efficiency scores from stage one and generate a composite performance index for each unit. The performance dimensions were evaluated on the basis of production, profitability and intermediation. This three- dimensional efficiency analysis shows a significantly more comprehensive evaluation of bank branch performance that is also likely to be better accepted by branch level management. The study concluded that poor performance in one aspect does not predict similar poor results in the other two aspects.

III. OBJECTIVES OF THE STUDY

- (a) To evaluate the financial performance of the selected public and private sector Banks using the CAMEL Model Approach.
- (b) To evaluate that whether there is a significant difference in the Capital Adequacy, Asset Quality, Management Efficiency, Earnings & Profitability and the liquidity of the sample banks.

IV. RESEARCH METHODOLOGY

For conducting the research Sample of six Commercial Banks (three Public and three Private sectors) are taken and the data for the study is from 2008-09 to 2017-18. The banks include Axis Bank, Bank of Baroda, Corporation bank, HDFC Bank, ICICI Bank and State Bank of India. The data is collected from published annual reports, websites of the respective banks, and from Reserve Bank of India. Calculations are done for measuring the aspects of financial performance of banks by applying CAMEL Model which includes capital adequacy, asset quality, management efficiency, earning quality and liquidity. The significance of the parameters of the CAMEL model was tested by using ANOVA. The following ratios were calculated to evaluate the financial performance of the sample Banks:

V. CAPITAL ADEQUACY

(a) Capital Adequacy Ratio (CAR): CAR is critical to ensure that banks have enough

- cushions to absorb reasonable amount of losses before they become insolvent. Banks with a higher capital Adequacy Ratio is considered safe and meets its financial obligations. The minimum ratio to be maintained by Banks is 8% under Basel II and 10.5% under Basel III.
- (b) **Debt Equity Ratio:** This ratio is considered as the key financial metric as it indicates positional financial risk. A high Debt equity ratio indicates aggressive growth strategy by the company as it is dependent on debt. A D/E ratio of 1.5 or lower is considered desirable and the ratios higher than 2 are less favorable.
- (c) Credit Deposits Ratio: This ratio will indicate how much a Bank lends out of the deposits it has mobilized. The credit deposits ratios of the bank is 75%.
- (d) Cash Deposits Ratio: The Cash Deposits ratio of the Banks is the ratio of cash in hand and the balances with RBI as a percentage of the aggregate deposits. This ratio is maintained above CRR given by the Bank.
- (e) Investment Deposits Ratio: This ratio indicates how much of the Bank's deposits are invested in the government securities. This ratio is normally the higher value of SLR.
 - (i) Asset Quality: The loan portfolio and the credit administration program will determine the Asset quality of the Bank. It indicates the efficiency of the Bank in controlling and the managing of the credit risk and the credit rating to be achieved. The percentage of Gross and Net NPA have been analyzed for determining the asset quality of the sample banks.
 - ratio of the Banks will measure the Banks overhead as a percentage of its revenue. This ratio will indicate the ability of the Banks to convert assets into revenue. This ratio will be calculated as the ratio of expenses to revenues. A lower efficiency ratio means that the banks are operating better, and a ratio under 50% is considered to be optimal. An increase in the efficiency ratio it means that a bank expenses are increasing or its

revenues are decreasing. The ratios like Total income /total assets, Total Income /Compensation to employees, Interest Income of Bank as a % of working funds , Operating profit of bank as % to working funds, Net Interest Income /Interest earned were calculated for the study.

ISSN: 2349-4190

(iii) Earning and Profitability:

- Operating Profit Margin: This ratio indicates the proportion of the revenue which is available to cover the Nonoperating Costs like Interest. A High Operating profit Margin indicates a lower risk.
- **Net Profit Margin:** It indicated how much Net Profit is generated as a percentage of revenue. A High Net profit Margin indicates profitability.
- **Return on Net Worth:** This indicates the efficiency of the shareholders capital to generate profits. A high ratio will indicate the prudent use of the shareholders money.
- Return on the Total Assets: This ratio
 indicates how effectively the company
 is using its assets to generate earnings.
 A high Return on total assets will help
 investors in recognizing the good stock
 opportunities.
- Return on Capital Employed: It indicates the company profitability and the efficiency with which the capital is employed. A high Return on the capital employees is the indicator of success of the company as it indicates a large amount of profits can be reinvested for the benefits of the shareholders.
- (f) Liquidity: Current Ratio and quick Ratio measures the short term liquidity of the Banks. It measures the ability of the company to meet its short term obligations. The Dividend payout ratio indicates how much money the banks returns to its shareholders and the Retention Ratio indicates the net income which can be retained by the company after payment of dividends.

VI. KEY PARAMETERS OF THE SAMPLE BANKS

Table 1

	K	ey Par	amete	rs of]	Pubilc	and P	rivate E	Banks (a	all valu	es in cr	rores)	
	Years	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	CAGR
	Banks	00 00	00 10	10 11	11.12	12 10	10 14	14 10	10 10	10 11		O/ (O/ (
	SBI	57,947.70	65,949.20	64,986.04	83,951.20	98,883.68	118,282.25	128,438.22	144,274.44	156,700.41	194,280.58	14.39%
ţ	вов	12,835.54	15,106.39	21,043.54	27,476.85	31,969.44	35,985.68	39,835.35	40,198.98	40,303.25	43,394.77	14.49%
Net Worth	Corp.	4,896.51	5,774.87	7,137.81	8,275.93	9,565.69	10,085.10	10,484.48	10,686.14	12,048.67	10,182.57	8.48%
× <	HDFC	15,052.73	21,522.49	25,379.27	29,924.68	36,214.14	43,478.63	62,009.42	72,677.77	89,462.35	106,295.00	24.26%
ž	ICICI	49,883.02	51,618.37	55,090.93	60,405.25	66,705.96	73,213.32	80,429.36	86,918.11	96,908.94	102,155.75	8.29%
	Axis	10,214.80	16,044.61	18,998.83	22,808.54	33,107.86	38,220.48	44,676.51	53,164.91	55,762.54	63,445.26	22.50%
	SBI	742,073.13	804,116.23	933,932.81	1,043,647.4	1,202,739.6	1,394,408.5	1,576,793.3	1,730,722.4	2,044,751.4	2,706,343.3	15.46%
S	вов	192,396.95	241,044.26	305,439.48	384,871.11	473,883.34	568,894.39	617,559.52	574,037.87	601,675.17	591,314.82	13.29%
Sit	Corp.	73,983.91	92,733.67	116,747.50	136,142.20	166,005.45	193,393.01	199,345.82	205,170.84	220,559.62	183,315.95	10.61%
Deposits	HDFC	142,811.58	167,404.44	208,586.41	246,706.45	296,246.98	367,337.48	450,795.64	546,424.19	643,639.66	788,770.64	20.91%
Δ	ICICI	218,347.82	202,016.60	225,602.11	255,499.96	292,613.63	331,913.66	361,562.73	421,425.71	490,039.06	560,975.21	11.05%
	Axis	117,374.11	141,300.22	189,237.80	220,104.30	252,613.59	280,944.56	322,441.94	357,967.56	414,378.79	453,622.72	16.21%
	SBI	53,713.68	103,011.60	119,568.96	127,005.57	169,182.71	183,130.88	205,150.29	323,344.59	317,693.66	362,142.07	23.62%
gs	вов	5,636.09	13,350.09	305,439.48	23,573.05	26,579.28	36,812.97	35,264.28	33,471.70	30,611.44	62,571.97	30.66%
Borrowings	Corp.	2,072.40	9,077.53	15,965.38	14,248.10	12,898.85	13,021.45	10,414.90	13,112.19	6,468.17	22,171.08	30.13%
5	HDFC	2,685.84	12,915.69	14,394.06	23,846.51	33,006.60	39,438.99	45,213.56	53,018.47	74,028.87	123,104.97	52.96%
Во	ICICI	67,323.69	94,263.57	109,554.28	140,164.91	145,341.49	154,759.05	172,417.35	174,807.38	147,556.15	182,858.62	11.74%
	Axis	10,185.48	17,169.55	26,267.88	34,071.67	43,951.10	50,290.94	79,758.27	99,226.38	105,030.87	148,016.14	34.63%
	SBI	542,503.20	631,914.15	756,719.45	867,578.89	1,045,616.55	1,209,828.72	1,300,026.39	1,463,700.42	1,571,078.38	1,934,880.19	15.18%
S	вов	143,985.90	175,035.29	228,676.36	287,377.29	328,185.76	397,005.81	428,065.14	383,770.18	383,259.22	427,431.83	12.85%
dvances	Corp.	48,512.16	63,202.56	86,850.40	100,469.02	118,716.65	137,086.30	145,066.04	140,322.24	140,356.79	119,868.84	10.57%
dva	HDFC	98,883.05	125,830.59	159,982.67	195,420.03	239,720.64	303,000.27	365,495.03	464,593.96	554,568.20	658,333.09	23.45%
ď	ICICI	218,310.85	181,205.60	216,365.90	253,727.66	290,249.44	338,702.65	387,522.07	435,263.94	464,232.08	512,395.29	9.94%
	Axis	81,556.77	104,343.12	142,407.83	169,759.54	196,965.96	230,066.76	281,083.03	338,773.72	373,069.35	439,650.30	20.59%
	SBI	275,953.96	285,790.07	295,600.57	312,197.61	350,927.27	398,799.57	481,758.75	575,651.78	765,989.63	1,060,986.72	16.14%
Investments	вов	52,445.88	61,182.38	71,396.59	83,209.40	121,393.72	116,112.66	122,319.72	120,450.52	129,630.54	163,184.53	13.44%
me	Corp.	24,937.77	34,522.63	43,452.74	47,474.63	58,164.49	66,191.21	63,412.28	63,280.63	64,072.98	70,349.76	12.21%
est	HDFC	58,817.55	58,607.62	159,982.67	97,482.91	111,613.60	120,951.07	166,459.95	163,885.77	214,463.34	242,200.24	17.03%
<u>2</u>	ICICI	103,058.31	120,892.80	134,685.96	159,560.04	171,393.60	177,021.82	186,580.03	160,411.80	161,506.55	202,994.18	7.82%
	Axis	46,330.35	55,974.82	71,991.62	93,192.09	113,737.54	113,548.43	132,342.83	122,006.20	128,793.37	153,876.08	14.27%

Table 2

				Status	of NPA o	f the samp	le banks (i	n crores)			
	Years	00.00	00.40	10.11	44.40	40.40	13-14	44.45	45.40	46.47	47.40
	Banks	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
	SBI	15,588.60	19,534.89	25,326.29	39,676.46	51,189.39	61,605.35	56,725.34	98,172.80	112,342.99	223,427.46
NPA	ВОВ	NA	NA	3,152.50	4,464.75	7,982.58	11,875.90	16,261.45	40,521.04	42,718.70	56,480.39
	Corp.	NA	NA	790.23	1,274.21	2,048.23	4,736.79	7,106.68	14,544.25	17,045.22	NA
ross	HDFC	NA	NA	1,694.34	1,999.39	2,334.64	2,989.28	3,438.38	4,392.83	5,885.66	8,606.97
5	ICICI	NA	NA	10,034.26	9,475.33	9,607.75	10,505.84	15,094.69	26,720.93	42,551.54	54,062.51
	Axis	NA	NA	159.94	1,806.30	2,393.42	3,146.41	4,110.19	6,087.51	21,280.48	34,248.64
	SBI	9,552.00	10,870.17	12,346.89	15,818.85	21,956.48	31,096.07	27,590.58	55,807.02	58,277.38	110,854.70
4	BOB	NA	NA	790.88	1,543.64	4,192.02	6,034.76	8,069.49	19,406.46	18,080.18	23,482.65
NP.	Corp.	NA	NA	397.74	869.39	1,410.88	3,180.56	4,464.98	9,160.14	11,692.18	NA
Net	HDFC	NA	NA	296.41	352.33	468.95	820.03	896.28	1,320.37	1,843.99	2,601.02
_	ICICI	NA	NA	2,407.36	1,860.84	2,230.56	3,297.96	6,255.53	13,296.75	25,451.03	27,886.27
	Axis	NA	NA	41.04	472.64	704.13	1,024.62	1,316.71	2,522.14	8,626.55	16,591.71

For the evaluation of the Banks a different set of fundamentals factors are considered as they have a different operating structure than the regular industrial companies. Table -1 show that the CAGR of Net worth for the sample period of 10 years is 14.39% & 14.49% for SBI and Bank of Baroda and in private sector HDFC maintains 24.26%. Deposits growth give an indication on how much a Bank can lend. SBI and HDFC maintains a high CAGR of 15.46% and 20.91%. Advances of the Banks assess

the aggressiveness of Banks management , SBI and HDFC maintains a high CAGR of 15.18% and 23.45%. The growth in investments will indicate the amount is being invested by the Banks SBI and HDFC shows an high CAGR of 16.14% & 17.03%. Table-2 showcases the NPA positions of the Banks Lower NPA indicates better Credit Policy and able to recover the loan from the debtors than the other banks.

VII. RESULTS AND DISCUSSION

Table 3

			Capi	tal A	deaua	acv R		of Pu	bile a	and P	rivate	Ban	ks		
		Years			1	<i>J</i>									
Rat		Banks	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	Average	Λ	SD
ς		SBI	14.25%	13.39%	11.98%	13.86%	12.92%	12.44%	12.00%	13.12%	13.11%	12.60%	0.13	2%	0.00
ana	크	вов	14.05%	14.36%	14.52%	14.67%	13.30%	12.28%	12.60%	13.17%	12.24%	12.13%	0.13	2%	0.00
Capital Adequacy	Ratio basel-II	Corp.	13.66%	15.00%	14.11%	13.00%	12.33%	11.64%	11.09%	10.56%	11.32%	9.23%	0.12	5%	0.01
a A	io	HDFC	15.69%	17.44%	16.22%	16.52%	16.80%	16.07%	16.79%	15.53%	14.55%	14.82%	0.16	2%	0.00
pit	Rat	ICICI	15.50%	19.40%	19.50%	18.50%	18.70%	17.70%	17.00%	16.60%	17.40%	18.40%	0.18	2%	0.00
ပ		Axis	13.69%	15.80%	12.65%	13.66%	17.00%	16.07%	15.09%	15.29%	14.95%	16.57%	0.15	3%	0.00
ns		SBI	78.34	74.22	77.19	78.01	82.25	82.04	77.39	76.31	71.15	71.25	76.82	2%	1.21
Loa	9	вов	81.35	77.38	78.56	78.07	72.22	71.78	68.03	60.9	61.83	66.47	71.66	3%	2.28
Advances / Loans	% spunj	Corp.	72.61	71.07	74.07	70.98	72.1	71.15	69.71	65.56	63.04	55.43	68.57	3%	1.80
nce	fu	HDFC	78.87	77.24	79.34	79.19	79.93	83.86	82.77	86.45	86.15	83.02	81.68	1%	1.02
dva		ICICI	69.86	58.57	68.53	69.44	69.64	73.26	75.94	77.02	75.25	74.18	71.17	2%	1.70
Ă		Axis	73.87	72.96	76.16	72.29	71.53	73.29	76.65	78.84	76.4	78.44	75.04	1%	0.82
ير		SBI	74.97	75.96	79.9	82.14	85.17	86.84	84.47	83.56	80.38	73.79	80.72	2%	1.44
Credit Deposit		BOB	72.78	73.6	73.87	74.76	71.68	69.54	69.54	68.13	65.24	67.95	70.71	1%	0.98
Dek	Ratio	Corp.	67.77	67.01	71.63	74.07	72.54	71.18	71.84	70.55	65.93	64.43	69.70	1%	1.01
dit	۳	HDFC	66.64	72.44	76.02	78.06	80.14	84.84	85.5	87.41	90.22	89.8	81.11	3%	2.48
Cre		ICICI	91.44	90.04	90.45	97.71	99.25	100.71	104.72	105.08	98.69	92.92	97.10	2%	1.78
		Axis	68.89	71.87	74.65	76.26	77.58	80.03	84.71	91.1	92.17	93.63	81.09	3%	2.80
	0	SBI	36.38	36.33	33.45	30.73	29.52	28.87	29.64	31.97	35.54	38.45	33.09	10%	3.42
Investment	Deposits Ratio	ВОВ	27.96	26.22	24.26	22.4	23.83	22.78	20.1	20.37	21.27	24.54	23.37	11%	2.52
) tu	its	Corp.	32.03	35.67	37.22	35.96	34.96	34.6	33	31.32	29.91	33.28	33.80	7%	2.29
Ne	pos	HDFC	44.43	37.85	34.45	36.99	38.51	35.05	35.13	33.13	31.79	31.88	35.92	11%	3.78
=	De	ICICI	46.35	53.28	59.77	61.16	60.38	77.6	76.51	70.34	61.27	61.6	62.83	15%	9.70
		Axis	39.04	39.55	38.71	40.35	77.58	42.51	40.88	37.5	32.45	32.4	42.10	31%	12.91
sits	ŀ	SBI	NA 	NA 	NA	NA	NA	5.81	6.76	7.42	6.82	5.86	6.53	11%	0.69
osi		BOB	NA NA	NA NA	NA NA	NA NA	NA NA	3.08	3.47	3.71	3.78	3.81 7.09	3.57	9%	0.30
Cash Depo	Ratio	Corp.	NA NA	NA NA	NA NA	NA NA	NA NA	6.29	6.08	5	6.48		6.19	12%	0.76
ysh.	_	ICICI	NA NA	NA NA	NA NA	NA NA	NA NA	6.02	6.46 6.43	5.77 6.35	5.71	9.95 5.93	6.78	26% 3%	1.80 0.20
ပြ	ŀ	Axis	NA NA	NA NA	NA NA	NA NA	NA NA	6.14 5.98	6.12	6.2	6.14 6.88	7.62	6.56	10%	0.20
		SBI	13.73	13.75	16.21	13.94	13.87	13.34	13.87	14.24	15.08	15.79	14.38	7%	0.03
to	٦	ВОВ	15.43	16.84	15.57	14.87	15.07	16.83	16.39	15.11	15.69	15.07	15.69	5%	0.74
sbt	Fu	Corp.	15.53	17.63	18.59	18.17	18.7	20.47	20.01	20.43	18.84	20.18	18.86	8%	1.54
۵	ers	HDFC	9.93	8.38	8.79	9.04	9.09	9.36	8	8.25	8.02	8.58	8.74	7%	0.62
Total Debt to	owners Fund	ICICI	5.77	5.74	6.08	6.55	6.57	7.11	7.05	7.36	6.9	7.58	6.67	10%	0.64
	٦	Axis	12.49	9.88	11.34	11.14	8.96	8.68	9.05	8.64	9.35	9.52	9.91	13%	1.31
<u> </u>															

Table-3 shows all the six Banks Namely Axis Bank, Bank of Baroda, Corporation bank, HDFC Bank, ICICI Bank and State Bank of India have an Average Capital Adequacy ratio ranging from 12% to 18%. In Public Sector SBI and BOB have an equal average of 13% and in private sectors ICICI maintains an

average of 18%. This shows that these two banks have more capacity to adjust to its losses. The Assets / Loans Fund % Average is highest for SBI 76.82% and HDFC in the private sector at 81.68%. The credit deposit ratio indicates how the bank lens out the deposits it has mobilized, SBI at 80.72 in public sector and ICICI at 97.10 in private sector indicates full utilization of resources. But credit deposit ratio above 75% also indicates pressure on the resources. The cash deposit ratio is the ratio of cash in hand and balances with RBI as percentage of aggregate deposits; it's always maintained more than CRR given by RBI which is currently 4%. In Public Sector

SBI 6.53 and in private sector HDFC 6.78 maintained highest average cash deposit ratio. Investment Deposit Ratio indicates the amount of deposits of banks invested in the government securities and is maintained above SLR which is currently 19%. In public sector SBI and corporation bank stood at 33% and in private sector ICICI stood at 62.83. The dept equity ratio of Axis Bank is 9.91 in private sector and Corporation Bank in public sector at 18.86 is the highest, which means that the creditors and depositors of these banks are at highest risks as they are focusing more on debt than shareholders fund.

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Table 4

		Asse	ets Q	uality	Rat	ios o	f Pul	oilc a	nd Pr	ivate	Ban	ks		
Ratio	Years	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	Average	cv	SD
	Banks											Ave)	
₫	SBI	2.84	3.05	3.28	4.44	4.75	4.95	4.25	6.5	6.9	10.91	5.19	15%	0.77
NPA	вов	NA	NA	1.36	1.53	2.4	2.94	3.72	9.99	10.46	12.26	4.47	33%	1.46
Gross	Corp.	NA	NA	0.91	1.26	1.72	3.42	4.81	9.98	11.7	NA	3.76	38%	1.44
Ğ	HDFC	NA	NA	1.05	1.02	0.97	1	0.9	0.94	1.05	1.3	0.82	17%	0.14
, of	ICICI	NA	NA	4.47	3.62	3.22	3.03	3.78	5.21	7.89	8.84	4.01	23%	0.91
%	Axis	NA	NA	1.01	0.94	1.06	1.22	1.34	1.67	5.04	6.77	1.91	37%	0.70
	SBI	2.1	1.82	1.63	1.82	2.1	2.57	2.12	3.81	3.71	5.73	2.74	15%	0.41
IPA	вов	NA	NA	0.35	0.54	1.28	1.52	1.89	5.06	4.72	5.49	2.09	33%	0.69
et	Corp.	NA	NA	0.46	0.87	1.19	2.32	3.08	6.53	8.33	NA	2.28	41%	0.93
% of Net NPA	HDFC	NA	NA	0.2	0.2	0.2	0.3	0.2	0.28	0.33	0.4	0.21	19%	0.04
0 %	ICICI	NA	NA	1.11	0.73	0.77	0.97	1.61	2.67	4.89	4.77	1.75	32%	0.57
	Axis	NA	NA	0.26	0.25	0.32	0.4	0.44	0.7	2.11	3.4	0.79	44%	0.35

Table-4 shows Bank of Baroda secures first position with the lowest NPA of 2.09 followed by corporation Bank 2.28, and State Bank of India with highest NPA 2.74. It states that Bank of Baroda has better Credit Policy and able to recover the loan from the debtors than the other banks. They are at lower risk of increasing Non-performing assets.

Whereas, the NPA of other four banks is comparatively high, it means that these banks are not making efforts to decrease their NPA's as Bank of Baroda is doing. In private sector HDFC secures first position with the lowest NPA of 0.21 followed by AXIS Bank 0.79, and ICICI with highest NPA 1.75.

Table 5

				1.00: :	•	•	able 5		• •	1.5	• .			-
	Mana	agem	ent E	ettici	ency	Rati	os ot	Pub	ilc ai	nd Pr	1vate	Ba	nks	
Ratio	Years	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	Average	CV	SD
	Banks													
	SBI	0.09	0.09	0.09	0.10	0.09	0.09	0.09	0.09	0.08	0.09	0.09	4%	0.00
Total income to Total Assets	ВОВ	0.09	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	80.0	7%	0.01
otal income t Total Assets	Corp.	0.10	0.09	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09	6%	0.01
al in	HDFC	0.13	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.11	8%	0.01
10g	ICICI	0.10	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.09	0.09	6%	0.01
	Axis	0.11	0.10	0.09	0.10	0.11	0.11	0.10	0.10	0.10	0.09	0.1	6%	0.01
	SBI	7.80	6.81	6.01	7.20	7.48	6.79	7.33	7.53	7.84	7.69	7.25	8%	0.57
e to	ВОВ	7.56	8.42	9.64	12.53	12.49	11.43	11.56	9.81	10.50	10.84	10.5	16%	1.65
tal Income npensation Employees	Corp.	14.04	13.28	13.25	18.03	19.26	18.16	19.84	15.40	15.62	12.52	15.9	17%	2.70
l Inc	HDFC	8.85	8.80	8.63	9.85	10.45	11.59	11.94	12.31	12.45	13.89	10.9	17%	1.82
Total Income to Compensation to Employees	ICICI	20.08	17.08	11.67	11.77	12.40	12.86	12.84	13.63	12.80	12.21	13.7	20%	2.71
- 0	Axis	13.69	12.29	12.06	13.03	14.13	13.99	14.05	14.87	14.40	13.17	13.6	7%	0.91
± .	SBI	7.30	6.80	7.00	8.00	7.80	7.60	7.60	7.30	6.90	6.40	7.27	7%	0.50
lo to to	DOD													
= % =	ВОВ	7.80	6.90	7.00	7.60	7.30	6.80	6.60	6.30	6.30	6.30	6.89	8%	0.54
ncome s a %	Corp.	7.80 8.40	6.90 7.60	7.00 7.80	7.60 9.20	7.30 9.40	9.20	6.60 9.30	6.30 8.80	6.30 8.10	6.30 7.20	6.89 8.5	8% 9%	0.54
et Income ks as a % rking Func	Corp.													
terset Income or Banks as a % of Working Funds	Corp. HDFC	8.40	7.60	7.80	9.20	9.40	9.20	9.30	8.80	8.10	7.20	8.5	9%	0.79
Interset Income of Banks as a % of Working Funds	Corp. HDFC ICICI Axis	8.40 9.30	7.60 8.40	7.80 8.00	9.20 9.60	9.40 9.90	9.20 9.70	9.30 9.60	8.80 9.20	8.10 8.90	7.20 8.90	8.5 9.15	9% 7%	0.79 0.61
		8.40 9.30 8.10	7.60 8.40 7.20	7.80 8.00 6.80	9.20 9.60 7.80	9.40 9.90 8.20	9.20 9.70 8.00	9.30 9.60 8.20	8.80 9.20 8.10	8.10 8.90 7.40	7.20 8.90 7.10	8.5 9.15 7.69	9% 7% 7%	0.79 0.61 0.52
	Axis SBI	8.40 9.30 8.10 8.60	7.60 8.40 7.20 7.70	7.80 8.00 6.80 7.50	9.20 9.60 7.80 8.70	9.40 9.90 8.20 8.90	9.20 9.70 8.00 8.80	9.30 9.60 8.20 8.80	8.80 9.20 8.10 8.60	8.10 8.90 7.40 7.90	7.20 8.90 7.10 7.20	8.5 9.15 7.69 8.27	9% 7% 7% 8%	0.79 0.61 0.52 0.63
	Axis SBI	8.40 9.30 8.10 8.60 2.00	7.60 8.40 7.20 7.70 1.80	7.80 8.00 6.80 7.50 2.20	9.20 9.60 7.80 8.70 2.40	9.40 9.90 8.20 8.90 2.00	9.20 9.70 8.00 8.80 1.80	9.30 9.60 8.20 8.80 1.90	8.80 9.20 8.10 8.60 1.90	8.10 8.90 7.40 7.90 2.00	7.20 8.90 7.10 7.20 1.70	8.5 9.15 7.69 8.27 1.97	9% 7% 7% 8% 10%	0.79 0.61 0.52 0.63 0.21
	Axis SBI	8.40 9.30 8.10 8.60 2.00 2.20	7.60 8.40 7.20 7.70 1.80 2.00	7.80 8.00 6.80 7.50 2.20	9.20 9.60 7.80 8.70 2.40 2.20	9.40 9.90 8.20 8.90 2.00	9.20 9.70 8.00 8.80 1.80 1.60	9.30 9.60 8.20 8.80 1.90	8.80 9.20 8.10 8.60 1.90	8.10 8.90 7.40 7.90 2.00 1.60	7.20 8.90 7.10 7.20 1.70	8.5 9.15 7.69 8.27 1.97 1.83	9% 7% 7% 8% 10% 18%	0.79 0.61 0.52 0.63 0.21 0.32
	Axis SBI	8.40 9.30 8.10 8.60 2.00 2.20 2.50	7.60 8.40 7.20 7.70 1.80 2.00 2.30	7.80 8.00 6.80 7.50 2.20 2.20	9.20 9.60 7.80 8.70 2.40 2.20 2.00	9.40 9.90 8.20 8.90 2.00 1.90	9.20 9.70 8.00 8.80 1.80 1.60	9.30 9.60 8.20 8.80 1.90 1.50	8.80 9.20 8.10 8.60 1.90 1.30 1.40	8.10 8.90 7.40 7.90 2.00 1.60 1.90	7.20 8.90 7.10 7.20 1.70 1.80 1.60	8.5 9.15 7.69 8.27 1.97 1.83	9% 7% 7% 8% 10% 18% 20%	0.79 0.61 0.52 0.63 0.21 0.32 0.38
ъ Б	Axis SBI BOB Corp. HDFC	8.40 9.30 8.10 8.60 2.00 2.20 2.50 2.90	7.60 8.40 7.20 7.70 1.80 2.00 2.30 3.30	7.80 8.00 6.80 7.50 2.20 2.20 2.20 3.10	9.20 9.60 7.80 8.70 2.40 2.20 2.00 3.20	9.40 9.90 8.20 8.90 2.00 1.90 1.90 3.20	9.20 9.70 8.00 8.80 1.80 1.60 1.60 3.40	9.30 9.60 8.20 8.80 1.90 1.50 1.40 3.40	8.80 9.20 8.10 8.60 1.90 1.30 1.40 3.30	8.10 8.90 7.40 7.90 2.00 1.60 1.90 3.30	7.20 8.90 7.10 7.20 1.70 1.80 1.60 3.60	8.5 9.15 7.69 8.27 1.97 1.83 1.88 3.27	9% 7% 7% 8% 10% 18% 20% 6%	0.79 0.61 0.52 0.63 0.21 0.32 0.38 0.19
Operating profit of bank as % to working funds	Axis SBI BOB Corp. HDFC ICICI	8.40 9.30 8.10 8.60 2.00 2.50 2.90 2.30	7.60 8.40 7.20 7.70 1.80 2.00 2.30 3.30 2.70	7.80 8.00 6.80 7.50 2.20 2.20 3.10 2.40	9.20 9.60 7.80 8.70 2.40 2.20 2.00 3.20 2.40	9.40 9.90 8.20 8.90 2.00 1.90 3.20 2.70	9.20 9.70 8.00 8.80 1.60 1.60 3.40 3.00	9.30 9.60 8.20 8.80 1.50 1.40 3.40	8.80 9.20 8.10 8.60 1.90 1.40 3.30 3.60	8.10 8.90 7.40 7.90 2.00 1.60 1.90 3.30 3.60	7.20 8.90 7.10 7.20 1.80 1.60 3.60 3.20	8.5 9.15 7.69 8.27 1.97 1.83 1.88 3.27 2.92	9% 7% 8% 10% 18% 20% 6%	0.79 0.61 0.52 0.63 0.21 0.32 0.38 0.19 0.49
Operating profit of bank as % to working funds	Axis SBI BOB Corp. HDFC ICICI Axis	8.40 9.30 8.10 8.60 2.20 2.50 2.90 2.30 3.00	7.60 8.40 7.20 7.70 1.80 2.00 2.30 3.30 2.70 3.50	7.80 8.00 6.80 7.50 2.20 2.20 3.10 2.40 3.20	9.20 9.60 7.80 8.70 2.40 2.20 2.00 3.20 2.40 2.90	9.40 9.90 8.20 8.90 1.90 1.90 3.20 2.70 3.00	9.20 9.70 8.00 8.80 1.60 1.60 3.40 3.00 3.30	9.30 9.60 8.20 8.80 1.90 1.40 3.40 3.30 3.30	8.80 9.20 8.10 8.60 1.30 1.40 3.30 3.60 3.40	8.10 8.90 7.40 7.90 2.00 1.60 1.90 3.30 3.60 3.10	7.20 8.90 7.10 7.20 1.70 1.60 3.60 3.20 2.40	8.5 9.15 7.69 8.27 1.97 1.83 1.88 3.27 2.92 3.11	9% 7% 7% 8% 10% 18% 20% 6% 17%	0.79 0.61 0.52 0.63 0.21 0.32 0.38 0.19 0.49
Operating profit of bank as % to working funds	Axis SBI BOB Corp. HDFC ICICI Axis SBI	8.40 9.30 8.10 8.60 2.20 2.50 2.90 2.30 3.00 32.72	7.60 8.40 7.20 7.70 1.80 2.00 2.30 3.30 2.70 3.50 33.34	7.80 8.00 6.80 7.50 2.20 2.20 3.10 2.40 3.20 39.96	9.20 9.60 7.80 8.70 2.40 2.20 2.00 3.20 2.40 2.90 40.64	9.40 9.90 8.20 8.90 1.90 1.90 3.20 2.70 3.00 37.05	9.20 9.70 8.00 8.80 1.60 1.60 3.40 3.00 3.30 36.14	9.30 9.60 8.20 8.80 1.90 1.40 3.40 3.30 3.30 36.10	8.80 9.20 8.10 8.60 1.90 1.40 3.30 3.60 3.40 34.88	8.10 8.90 7.40 7.90 2.00 1.60 1.90 3.30 3.60 3.10	7.20 8.90 7.10 7.20 1.70 1.60 3.60 3.20 2.40	8.5 9.15 7.69 8.27 1.97 1.83 1.88 3.27 2.92 3.11 36	9% 7% 7% 8% 10% 18% 20% 6% 17% 10%	0.79 0.61 0.52 0.63 0.21 0.32 0.38 0.19 0.49 0.31 2.63
Operating profit of bank as % to working funds	Axis SBI BOB Corp. HDFC ICICI Axis SBI BOB	8.40 9.30 8.10 8.60 2.20 2.50 2.90 2.30 3.00 32.72 33.95	7.60 8.40 7.20 7.70 1.80 2.00 2.30 3.30 2.70 3.50 33.34	7.80 8.00 6.80 7.50 2.20 2.20 3.10 2.40 3.20 39.96 40.22	9.20 9.60 7.80 8.70 2.40 2.20 2.00 3.20 2.40 2.90 40.64 34.77	9.40 9.90 8.20 8.90 1.90 1.90 3.20 2.70 3.00 37.05 32.15	9.20 9.70 8.00 8.80 1.60 1.60 3.40 3.00 3.30 36.14 30.73	9.30 9.60 8.20 8.80 1.90 1.50 1.40 3.40 3.30 3.30 36.10 30.69	8.80 9.20 8.10 8.60 1.30 1.40 3.30 3.60 3.40 34.88 28.91	8.10 8.90 7.40 7.90 2.00 1.60 1.90 3.30 3.60 3.10 35.24 32.02	7.20 8.90 7.10 7.20 1.80 1.60 3.60 3.20 2.40 33.95 35.56	8.5 9.15 7.69 8.27 1.97 1.83 1.88 3.27 2.92 3.11 36 33.5	9% 7% 8% 10% 18% 20% 6% 17% 10% 7%	0.79 0.61 0.52 0.63 0.21 0.32 0.38 0.19 0.49 0.31 2.63 3.27
	Axis SBI BOB Corp. HDFC ICICI Axis SBI BOB Corp.	8.40 9.30 8.10 8.60 2.00 2.50 2.90 2.30 3.00 32.72 33.95 28.74	7.60 8.40 7.20 7.70 1.80 2.00 2.30 3.30 2.70 3.50 33.34 35.57 27.24	7.80 8.00 6.80 7.50 2.20 2.20 3.10 2.40 3.20 39.96 40.22 32.18	9.20 9.60 7.80 8.70 2.40 2.20 2.00 3.20 2.40 2.90 40.64 34.77 24.17	9.40 9.90 8.20 8.90 1.90 1.90 3.20 2.70 3.00 37.05 32.15 22.34	9.20 9.70 8.00 8.80 1.60 1.60 3.40 3.00 3.30 36.14 30.73 21.07	9.30 9.60 8.20 8.80 1.90 1.40 3.40 3.30 3.30 36.10 30.69 20.81	8.80 9.20 8.10 8.60 1.90 1.40 3.30 3.40 34.88 28.91 21.84	8.10 8.90 7.40 7.90 2.00 1.60 1.90 3.30 3.60 3.10 35.24 32.02 22.86	7.20 8.90 7.10 7.20 1.80 1.60 3.60 3.20 2.40 33.95 35.56 27.45	8.5 9.15 7.69 8.27 1.97 1.83 1.88 3.27 2.92 3.11 36 33.5 24.9	9% 7% 8% 10% 18% 20% 6% 17% 10% 7% 10%	0.79 0.61 0.52 0.63 0.21 0.32 0.38 0.19 0.49 0.31 2.63 3.27 3.82

Table-5 shows the Management efficiency ratio of the Banks. The Total Income to Total assets shows that how effectively a bank uses its assets to generate earnings. In public sector SBI and corporation Bank have an equal ratio of 0.09 with BOB at 0.08. In private sector HDFC & Axis have an equal ratio of 0.1, and ICICI Bank with lowest of 0.09.Both public and private sector perform fairly close for Total Income to Total assets. In Total Income to compensation to employees SBI and ICICI Performs well at 7.25 and 13.73 respectively. The Interest

Income of Banks as a percentage of working funds is 8.50 for corporation Bank followed by 7.27 for SBI and Bank of Baroda stands last at 6.89.In private sector HDFC Bank shows a highest average of 9.15, followed by 8.27 in axis and 7.69 in ICICI. The Average Operating profit of bank as % to working funds is 1.97 in SBI and 3.27 for HDFC Bank. The Net Interest income / Interest earned are 36 for SBI with a very less coefficient of variation of 7% and in private sector HDFC maintains a high average of 47.20 with a CV of 6%.

Table 6

Ear	Earnings & Profitability Ratios of Pubilc and Private Banks													
Ratio	Years Banks	08- 09	09- 10	10- 11	11- 12	12- 13	13- 14	14- 15	15- 16	16- 17	17- 18	Average	C	SD
	SBI	21.5	21.3	23.6	24.7	22.8	19.3	21.4	19.9	22	15.5	21.2	12%	2.56
ofit	ВОВ	17.7	23.7	25.7	23.1	20.7	18.6	19.1	15.5	19.7	19.1	20.9	15%	3.07
g Pro	Corp.	18.4	20	19.3	15.7	14.3	9.4	12	9.3	15.3	11	14.47	27%	3.97
Operating Profit Margin	HDFC	26.1	31.9	31.5	26.5	26.4	28.3	29.3	29.2	30.8	33.3	28.89	8%	2.23
pera	ICICI	20.8	28.1	26.3	23.6	26.2	29.7	31.3	34	34.6	31	28.56	16%	4.43
0	Axis	25.9	33	30.8	26	27.2	29.6	30.1	31.5	30.6	27.5	29.22	8%	2.43
	SBI	11.9	10.5	7.5	9.5	10.3	6.1	5.9	2	3	-8.5	5.82	103%	5.99
Net Profit Margin	вов	12.4	14.7	16.1	13.7	11.5	10.5	6.5	-15	1.4	-6.8	6.53	156%	10.22
Ž	Corp.	11.1	12.8	13.5	9.8	8	1.2	2.2	-12	1	-39	0.84	1912%	16.06
rofit	HDFC	11.1	14.6	16	13.4	14.7	15.6	16.7	16.3	16.9	17.3	15.26	12%	1.89
et P	ICICI	8.5	11.4	15	15.4	16.6	17.5	17.9	13.8	12.2	8.9	13.72	25%	3.38
ž	Axis	12.2	15.2	15.8	14.4	14.6	15.6	16.2	14.9	6.2	-1.4	12.37	46%	5.66
	SBI	16.9	14.8	11.1	15.6	15.5	8.7	8.2	2.7	4.2	-12	8.53	104%	8.85
Net	вов	18.6	20.9	23.9	20.9	16.2	14	8.5	-19	1.9	-8.9	9.67	148%	14.31
ırn On I Worth	Corp.	17.6	20.1	22.5	19.5	15.6	2.5	4.6	-24	2	-71	1.02	2812%	28.69
Wo	HDFC	16.6	16.1	16.7	16.3	18.4	19	18	17	16.9	16.7	17.17	6%	0.96
Return On Net Worth	ICICI	7	7.4	9.3	11.1	12.6	13.6	14.2	11.2	9.7	6.5	10.26	27%	2.75
	Axis	17.6	17.8	17.5	18.7	17.5	16.6	17.2	15.3	6.4	-1.4	14.32	46%	6.55
	SBI	1.1	0.9	0.6	0.9	1	0.6	0.5	0.2	0.2	-0.7	0.53	101%	0.53
Return on Total assets	вов	1.1	1.2	1.3	1.1	0.9	8.0	0.5	-1	0.1	-0.5	0.55	142%	0.78
rn on T assets	Corp.	1	1.1	1.1	0.9	0.8	0.1	0.2	-1.1	0.1	-3.3	0.09	1525%	1.37
ass	HDFC	1.4	1.5	1.6	1.5	1.6	1.7	1.8	1.7	1.7	1.7	1.62	8%	0.12
Reti	ICICI	0.9	1	1.3	1.4	1.6	1.7	1.7	1.4	1.2	8.0	1.3	25%	0.32
	Axis	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.5	0.6	-0.1	1.26	45%	0.57
-	SBI	6.9	5.9	4.1	5.9	5.9	3.3	3.2	0.9	1.3	-4.2	3.32	100%	3.33
Return on Capita Employed	ВОВ	9.7	10.8	11.6	10.2	8.5	7.1	4.3	-10	1	-4	4.92	146%	7.19
n C loye	Corp.	9.5	8.8	7.5	6.4	6.1	1.1	2.2	-11	1.1	-31	0.06	20710%	12.43
ırn on Cap Employed	HDFC	10.1	10	10.6	9.6	9.9	9.9	10	8.7	8.5	8.3	9.56	8%	0.78
letu etu E	ICICI	2.4	2.6	3.2	3.5	3.9	4.3	4.5	3.6	3.5	2.4	3.39	22%	0.75
<u> </u>	Axis	7.7	7.9	7.8	7.7	7.3	7.2	6.7	5.2	2.2	-0.4	5.93	48%	2.83

The table-6 shows the earning and profitability ratios. A high the operating profit margin shows less financial risks as compared to a low ratio. SBI secures first position with highest operating profit margin of 21.2 followed by Bank of Baroda 20.9, and corporation Bank with lowest margin of 14.47. In private sector at Axis Bank has a high margin of 29.22. A high Net profit margin makes the company to control its costs. SBI secures first position with highest Net profit margin of Bank of Baroda 6.53 followed by SBI at 5.82, and corporation Bank with

lowest margin of 0.84. In private sector HDFC Bank has a high margin of 15.26 which is very high as compared to private sector. The wise use of shareholders fund is indicated with a high return on Net worth which is 9.67 in Bank of Baroda and in private sector HDFC shows a high return of 17.17. Low percentage indicates less efficient deployment of equity Resources Corporation Bank and ICICI shows a low return of 1.02 & 10.26 respectively. The return to total assets is considered as a sign of how well a company is using its assets to generate

earning. In public sector SBI and Bank of Baroda have a high ratio of 0.55 were as corporation Bank is at 0.09. Private sector performs well than public sector with a highest average ratio of 1.62 for HDFC, 1.30 for ICICI and 1.26 for Axis Bank. Return on Capital Employed indicates that a large portion of invested back in the company for the benefits of the shareholders and is sign of a successful growth of the

company. In public sector BOB secures first position with highest Return on Capital Employed ratio of 4.92 followed by SBI 3.32, and corporation Bank with lowest margin of 0.06. In private sector HDFC secures first position with highest Return on Capital Employed ratio of 9.56 followed by Axis 5.93, and ICICI Bank with lowest return 3.39.

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Table 7

	Liquidity Ratios/Leverage Ratios of Pubilc and Private Banks													
Ratio	Years	08-09	09-10	10-11		12-13		14-15			17-18	Average (3	SD
	Banks													
	SBI	0.04	0.04	0.04	0.05	0.04	0.03	0.06	0.07	0.07	0.08	0.05	10%	0.01
ati	вов	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.05	0.04	0.05	0.03	14%	0.00
Current Ratio	Corp.	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.07	0.07	0.1	0.04	22%	0.01
rei	HDFC	0.04	0.03	0.06	0.08	0.06	0.06	0.04	0.07	0.06	0.04	0.05	9%	0.00
J	ICICI	0.13	0.14	0.07	0.07	0.09	0.09	0.06	0.13	0.12	0.12	0.1	9%	0.01
	Axis	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.07	0.1	0.1	0.05	21%	0.01
	SBI	5.74	9.07	8.5	12.05	12.15	13.81	11.02	10.89	11.94	13.83	10.9	7%	0.79
Ę.	вов	9.62	21.88	26.51	28	23.9	24.05	20.78	18.27	19.38	21.18	21.4	8%	1.62
æ	Corp.	9.53	18.35	26.65	23.15	26.35	27.91	27.74	31.68	21.47	27.01	24	8%	2.00
Quick Ratio	HDFC	5.23	7.14	6.89	6.2	7.84	8.55	12.69	14.51	11.19	17.48	9.77	13%	1.27
ਰ	ICICI	5.94	14.7	15.86	16.71	10.53	11.31	13.81	14.97	16.31	20.44	14.1	9%	1.26
	Axis	9.52	19.19	19.6	21.63	20.1	18.57	20.64	25.74	17.1	20.02	19.2	7%	1.29
ıt t	SBI	20.18	20.77	25.84	20.06	20.12	20.56	20.21	20.28	20.11	NA	18.8	11%	2.16
Dividend Payout Ratio Net profit	вов	17.22	17.92	15.23	13.86	20.21	20.33	21.42	NA	24.06	NA	15	18%	2.67
IPa et p	Corp.	20.08	20.22	20.96	20.16	20.25	20.13	20.07	NA	NA	NA	14.2	22%	3.10
enc Ne	HDFC	18.94	18.62	19.55	19.52	19.46	19.38	19.62	19.53	NA	NA	15.5	17%	2.58
vid	ICICI	35.58	33.23	31.3	29.41	27.71	27.07	25.93	29.89	NA	21.5	26.2	12%	3.16
i R	Axis	23.16	22.56	16.91	15.51	16.29	15.11	14.78	14.48	38.25	509.74	68.7	71%	49.06
E	SBI	84.13	86.02	76.95	79.94	79.88	79.44	79.79	79.72	79.89	100	82.6	3%	2.10
ığı	вов	84.64	86.16	84.77	86.14	79.79	79.67	78.58	100	75.94	100	85.6	3%	2.64
g Rete Ratio	Corp.	81.56	83.34	79.04	79.84	79.75	79.87	79.93	100	100	100	86.3	3%	3.01
g R Rai	HDFC	88.95	88.76	80.45	80.48	80.54	80.62	80.38	80.47	100	100	86.1	3%	2.56
Earning Retention Ratio	ICICI	83.66	83.79	68.7	70.59	72.29	72.93	74.07	70.11	100	78.5	77.5	4%	3.03
Ear	Axis	83.55	85.36	83.09	84.49	83.71	84.89	85.22	85.52	61.75	-409.7	32.8	150%	49.22

Short term Liquidity of Banks is measured by Current Ratio and Quick Ratio. Table-7 shows in public sector SBI have a high ratio of 0.05 followed by corporation Bank is at 0.04 and lowest is Bank of Baroda at 0.03. Private sector performs well than public sector with a highest average ratio of 0.1 for Axis Bank and HDFC& ICICI at 0.05. In Quick Ratio public sector Corporation Bank has a high ratio of 23.28 followed by Bank of Baroda is at 21.36 and lowest is SBI at 10.90. In Private sector Axis Bank 19.21, followed by ICICI at 14.05 and the least is 9.77 of HDFC. A high dividend payout ratio means

that the company is sharing more of its earnings with the shareholders and therefore the retention ratio will be low. In Public Sector SBI maintains a high Average Dividend Payout ratio of 18.8 and in private sector ICICI has a ratio of 26.2 were axis bank in 2018 has a dividend payout of 509.74 and a negative retention ratio of -409.74 which is an unsustainable move. The retention Ratio indicates the profits retained by the Banks for future investments in which Corporation Bank is at 86.333 and in private sector HDFC is at 86.07.

Table 8

	T	rends	of A	Annua	al Sto	ock F	Retur	ns in	% (1	oasec	l at B	SE	<u>E)</u>	
Ratio	Years	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	Average	cv	SD
	Banks											A		
	SBI	99.19	34.31	-23.33	0.7	-4.8	39.99	-26.31	52.58	-13.75	19.03	18	222%	39.49
Returns	вов	178.3	53.94	-15.99	-12.51	12.03	14.55	-7.89	17.57	-17.18	-17.05	21	291%	59.80
etn	Corp.	174	36.73	-30.85	-5.12	-23.11	-5.13	-23.17	34.44	-41.52	-6.68	11	573%	62.76
	HDFC	101	22	11.76	20.95	21	37.75	5.52	35.74	32.01	19.76	31	87%	26.65
Total	ICICI	190.6	18.49	-19.2	20.3	21.16	28.57	-23.69	19.59	11.37	42.78	31	192%	59.65
•	Axis	186.5	21.26	-17.43	15.35	13.81	93.87	-20.03	11.42	4.81	44.42	35	176%	62.15

Table-8 shows the trends of Annual stock Returns Based on BSE. In Public Sector the average of 10 years shows that Bank of Baroda gives the maximum Returns at 21% followed by SBI at 18% and corporation Bank at 11%. Corporation Banks shows a

high Coefficient of Variation of 573% and shows negative returns in some sample years, In private sector Axis Bank shows highest average returns of 35%.HDFC and ICICI shows a return of 31% but ICICI Bank has a high CV as compared to HDFC.

ISSN: 2349-4190

VIII. APPLICATION OF ANOVA ON CAMEL MODEL

	Table-9 A	NALYSIS OF	VARIANCI	E (ANOVA	.)	
Source of	SS (Sum Of	df(Degree of	MS(Mean	F	P-value	F crit
Variation	Squares)	Freedom)	Square)			
		Capital Ade	quacy Ratio	•		
Between Groups	0.023063746	5	0.004612749	30.543052	0.000	2.3860699
Within Groups	0.008155323	54	0.000151025			
Total	0.031219069	59				
		% of Gross NPA	(Asset Quality)			
Between Groups	135.065335	5	27.013067	2.7648745	0.0270	2.3860699
Within Groups	527.58475	54	9.770087963			
Total	662.650085	59				
	Total Inco	me to Total Assets	s (Management E	fficiency)		
Between Groups	135.065335	5	27.013067	2.7648745	0.0270	2.3860699
Within Groups	527.58475	54	9.770087963			
Total	662.650085	59				
		Operating Pr	ofit Margin			
Between Groups	1887.3175	5	377.4635	35.568069	0.0000	2.3860699
Within Groups	573.071	54	10.61242593			
Total	2460.3885	59				
		Current Ratio (L	iquidity Ratio)			
Between Groups	135.065335	5	27.013067	2.7648745	0.0270	2.3860699
Within Groups	527.58475	54	9.770087963			
Total	662.650085	59				
	Trends	of Annual Stock Re	turns in % (Base	d at BSE)		
Between Groups	4441.317828	5	888.2635657	0.3097471	0.9050	2.3860699
Within Groups	154856.1042	54	2867.705633			
Total	159297.422	59				

Table-9 shows the application of ANOVA for testing the significant difference in the Capital Adequacy,

Asset Quality, Management Efficiency, Profitability and Liquidity of the Sample Banks for 10 Years.

- (i) Ho: There is No significant difference in the Capital Adequacy, Asset Quality, Management Efficiency, Profitability and Liquidity of the Sample Banks.
- (ii) Ha: There is significant difference in the Capital Adequacy, Asset Quality, Management Efficiency, Profitability and Liquidity of the Sample Banks.
- (iii) The p-value for all the selected ratios on the application of ANOVA is less than 0.05 which rejects the Null Hypotheses. Therefore there is significant difference in the Capital Adequacy, Asset Quality, Management Efficiency, Profitability and Liquidity of the Sample Banks.

IX. CONCLUSION

The study sought to examine the financial performance of commercial banks in India. Sample of six Commercial Banks (three Public and three Private sectors) are taken and the data for the study is from 2008-09 to 2017-18. The banks include Axis Bank, Bank of Baroda, Corporation bank, HDFC Bank, ICICI Bank and State Bank of India. The data is collected from published annual reports, websites of the respective banks, and from Reserve Bank of India. Calculations are done for measuring the aspects of financial performance of banks by applying CAMEL Model which includes capital adequacy, asset quality, management efficiency, earning quality and liquidity. The significance of the parameters of the CAMEL model was tested by using ANOVA. The results confirm the following:

- (a) In the first parameter of CAMEL Model i.e. Capital Adequacy in the public sector SBI and in the private sector HDFC Bank perform well as compared to the sample Banks. This ensures the efficiency and the stability of the banks, that they are capable of meeting its financial obligations. The application of ANOVA sows a significant difference in the capital adequacy ratio of the sample Banks.
- (b) In the second parameter of CAMEL Model i.e. .Asset Quality which assesses the credit risk associated with particular assets. These assets require the interest payments such as loans and investments portfolios. In Public sector Bank of Baroda and in private sector HDFC Bank shows the lowest average in the percentage of Net NPA in the sample period of 10 years. The Banks should adopt rigorous laws of the NPA management. There should be a separate act to treat the willful defaulter's .Policies and

procedures to grant loans to individual borrowers or companies should be revised.

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- (c) In the third parameter of CAMEL Model i.e. Management efficiency in the public sector SBI and in the private sector HDFC Bank perform well as compared to the sample Banks. The management efficiency may improve by more focus on the customer's service.
- (d) In the fourth parameter of CAMEL Model i.e. Earnings and profitability in the public sector SBI and in the private sector HDFC Bank perform well as compared to the sample Banks in Operating Profit Margin, Return on Total assets and in Net Profit Margin, Return On Net Worth, Return on Capital Employed in the public sector Bank of Baroda and in the private sector HDFC Bank perform well as compared to the sample Banks in the sample period of 10 years. In a highly competitive market and digital revolution banks need to move beyond the model of "one-size-fits-all". Sophisticated customer segmentation, Product Bundling Relationship, Pricing Automating customer care and Multi-Channel Seamless Experience will help bank to attract and retain its customers and increase its profitability.
- (e) In the fifth parameter of CAMEL Model i.e. Liquidity in the public sector SBI and in the private sector ICICI Bank perform well as compared to the sample Banks. In Public Sector SBI and in private sector ICICI maintains a high Average Dividend Payout ratio in the sample period .A high liquid ratio will add good value to meet unforeseen contingencies and short –term obligations. Controlling Overhead Expenses, Negotiating for Longer Payment Cycles, Get Rid of Useless Assets allows having better Quick and Current ratios, and allows you to save some of your liquidity in the near term and put it to better use.SBI in public sector and ICICI in private sector maintains a stable dividend payout Ratio.

The Banking sector of India has witnessed a paradigm shift – evolving from physical banking to becoming digital anchors. The role of technology has become an integral component in the strategic framework of banks to driving, shaping and redefining the business models and the revenue streams. Enhancing customers banking experience, Credit re-engineering, digitization for customer efficiency and customer inclusion and Banking with quality are the parameters to focus on growth and face the challenges of the Banking sector. In current scenario the customers is spoilt for choices, but they want to bank with the "fittest "bank. Is inevitable for the banks to spend on digitization and customer services but maintain their profitability through cost optimization. The banks overall strategy should be

towards its growth. The Banking sector should be forward looking in integrating the upcoming technology and leveraging data & Analytics to become "smarter "in identifying and servicing customers' needs.

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A Critical Analysis of Merger and Acquisition under Indian Accounting Standard-103 and the Companies Act, 2013

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ABSTRACT

Since last decades, India is extensively demanding to converge Accounting Standards (AS) with International Financial Reporting Standards (IFRS). For that it is essential also as to maintain uniformity in disclosing the accounting treatments especially for the multi-national and global company. In this course, the Institute of Chartered Accountant of India engages in formulating Indian Accounting Standards (Ind AS) with this regards. The implementation of Ind AS has already begun in the country with Phase I and Phase II companies and many of the Ind AS has been already implemented. In this regards, The Ministry of Corporate Affairs (MCA) also provided The Companies Rules, 2015(Indian Accounting Standards) on vide Notification dated February 16, 2015 and till date many of the amendments are been finalising too. The Ministry also notified the provisions on Compromises, Arrangements and Amalgamations under Sections 230- 240 in Chapter XV of the Companies Act, 2013. By this paper, the efforts have been made to explore the modified concepts of Ind AS 103 - Business Combinations and all those provisions of the Companies Act, 2013 that relate to mergers and acquisitions. This paper emphasis mainly on two aspects i.e. A comparison between the provisions of old companies act, 1956 & new companies act, 2013 and comparison between the provisions of AS-14 & Ind AS-103.

Keywords: Merger and Acquisition, Business Combination, Arrangements, Amalgamations, Ind AS-103.

I INTRODUCTION

In today's modest world, most of the companies want fast and easy mode for the growth and development of their business. For that sometimes business expansion strategy is used by the company and they opt an option to purchase or unite with ready business rather than opt for IPOs to save the time, efforts and cost. The concept of merger and acquisition is very much popular in today's world, especially after economic reforms of Liberalisation, Privatisation, and Globalisation (LPG) of the year 1991. The breezes of economic reforms increased competition in the Indian economy. Indian firms also switch towards mergers and acquisition to void unhealthy competition and to face international and multinational companies globally.

As far as India is concerned, the legal and regulatory framework has been framed by the Government to control over the activity of merger and acquisition. Institute of Chartered Accountants of India and Ministry of Corporate Affairs has also framed Accounting Standard to maintain uniformity in preparing accounting for M&A. Moreover in new Companies Act, 2013, Ministry of Corporate affairs provides more logical and practical approach regarding merger and acquisition compared to old Companies Act, 1956 with the object of conversation with the global standards. Before going into the detail, we must understand the basic concept of merger and acquisition.

II. MERGER

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According to the Oxford Dictionary "Merger" means "combining of two companies into one".

The term 'Merger' is not stated anywhere in sections 390 to 394 of old companies Act, 1956. The Income Tax Act, 196 has also overlooked it. The term of 'Merger' is mentioned only in accounting standard 14 given by ICAI and that is 'Amalgamation in nature of Merger'

But the new Companies Act, 2013 explains the concept of merger without specific definition. The act mentions following points about merger:

- (a) A combination of two or more entities into one.
- (b) The desired effect being not just the accumulation of assets and liabilities of the distinct entities but organisation of such entity into one business
- (c) Generally, in merger, the merging entities would cease to be in existence and would merge into a single surviving entity.
- (d) Merger or amalgamation
- (e) Merger by absorption
- (f) Merger by formation of a new company.

III. ACQUISITION

A Fundamental characteristic of merger (either through absorption or consolidation is that the acquiring or amalgamated company (existing or new) takes over the ownership of other company and combines its operations with its own operations.

An acquisition may be either Friendly or Hostile Acquisition,

- (a) Friendly Acquisition
- (b) Hostile Acquisition

IV. REVIEW OF LITERATURES

- (a) 2018 September, A Research Article has been published by Jain D, Mergers and Acquisitions under the Companies Act, 2013. In this paper, the author wrote about new provisions in the companies act, 2013 with regards to merger and acquisition and she also compared all those provisions with companies act, 1956.
- (b) 2014, December 6th, NRS Advisors pvt ltd published an article on changes in provisions related to Mergers and Amalgamations in Companies Act, 2013 where explanations have been given about changes in the process of mergers and acquisitions, new types of mergers with respect to small companies or between a holding company and its wholly owned subsidiary and of an Indian Company with a foreign company.
- (c) 2016, December, Anup Koushik Karavadi, published an article on titled, Changing contours of mergers and acquisitions under companies act, 2013. In this article author tried to explain the about what are the topics that remains unexplained and what are the topics that remains unchanged.
- (d) 2016, September 7, Nimisha Srivastva, student of Gujarat National Law University, Gandhinagar, discusses mergers under the Companies Act, 2013. The author explained about merging of listed co. with unlisted co., fast track mergers, cross border merger, minority shareholders etc.
- (e) 2017, January, Purohit, Jaydutt and Trivedi Sunil published research paper on titled, Road Map to Ind AS in International Journal of scientific research in engineering in Vol. 1 where business combination is explained under extant Indian GAAP and Ind AS 103.

V. OBJECTIVES OF THE STUDY

- (a) To explore the concepts and provisions of the Indian Accounting Standard 103 as well as of section 230-240 of the Companies Act, 2013.
- (b) To comprehend the provisions of section 230-240 of the Companies Act, 2013.
- (c) To understand the needs of convergence of AS 14 into Ind As of 103.
- (d) To study the modification made by the ministry of corporate affairs and Institute of Chartered

Accountants of India with regards to merger and acquisition.

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(e) To compare the old provisions and new provisions of Accounting Standards and Companies Acts.

VI. SIGNIFICANCE OF THE STUDY

- (a) Acquirer companies may aware about the new provisions of companies act 2013 as well as in Ind AS -103 with respect to merger and acquisition
- (b) They can differentiate the old provision and new provision with this research study.
- (c) Shareholders may also be able to understand that the company has taken the right decision or not.
- (d) The study will help the regulatory authority to regulate the mergers and acquisitions deals for stakeholders' benefit like RBI and SEBI.
- (e) Research will help the consultancy or advisory firms that in which aspect they should pay more attention to earn more consultancy fee.

VII. NEW PROVISIONS IN IND AS 103 - BUSINESS COMBINATIONS

A business consists of inputs and processes applied to those inputs that have the ability to create outputs.

Business is an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs or other economic benefits directly to investors or other owners, members or participants.

A business combination is a transaction or other event in which an acquirer obtains control of one or more businesses. Transactions sometimes referred to as 'true mergers' or 'mergers of equals' are also business combinations as that term is used in this Ind AS.

- (a) Intangible assets: while doing business combination, all the intangible assets are recognised at their fair value, if they are separately identifiable. Only goodwill is recognised as a separate asset.
- (b) Acquisition-related costs: while having a business combination, acquisition-related costs (including stamp duty) are considered as an expense in the period in which such costs are incurred and are not included as part of the consideration transferred.
- (c) Deferred taxes are recorded on provisional basis of differences of assets acquired (other than goodwill) and liabilities taken over presumed in a business combination.

If the fair value of an assets acquired and liabilities taken over surpasses the fair value of the consideration transferred (plus the amount of non-controlling interest and the fair value of the acquirer's previously held equity interests in the acquire), It's a gain for the acquirer in other comprehensive income and accumulated in capital reserve.

- (d) Contingent liabilities: It is assumed that if contingent liabilities represent by current obligation that arises from past events and its fair value can be measured reliably with subsequent changes to profit and loss.
- (e) New Provisions under the Companies Act, 2013:Under the Companies act, 2013, the notice of scheme and documents to be circulated to regulators (Income Tax, Reserve Bank of India, SEBI, Competition Commission of India (if necessary)) and the regulators shall respond within 30 days from the date of receipt of notice [Section 230(5)]
- (f) Fast Track Mergers: There is no such provision provided before the new companies act. Under the 1956 Act, all mergers and amalgamations required approval of court. The 2013 Act provides that mergers and amalgamations between two or more small companies or between holding companies and its whollyowned subsidiary (or between such companies as may be prescribed) do not require court approval. (Section 233)
- (g) Squeeze-out Provisions: As per the new law, the provision for voluntary squeeze-out is retained but it also provides for mandatory minority squeeze out, subject to appropriate shareholders resolutions. (Section 236)
 - The merger of a listed company into an unlisted company will not ipso facto make

the unlisted company listed. It will continue to be unlisted until the applicable listing regulations and SEBI guidelines in relation to allotment of shares to public shareholders are complied with.

- In case the shareholders of the listed company decide to exit, the unlisted company would facilitate the exit with a predetermined price formula which shall be within the price specified by SEBI regulations.
- Set off of authorized capital It has been specifically provided in CA 2013 that where the transferor company is dissolved, the fee paid by the transferor company on its authorized capital shall be set off against any fees payable by the transferee company on its authorized capital subsequent to the merger.
- Filing of report till completion of scheme

 Every company in relation to which an order has been made by the Tribunal, shall until the completion of the scheme, file a statement, every year, with the Registrar, certified by a CA or a CS, indicating whether the scheme is being complied with in accordance with the orders of the Tribunal.
- **Penalty** The penalties for non-compliance with the provisions of CA 2013 has been increased substantially. The fine for the company shall be a between the range of Rs 1,00,000 to Rs 25,00,000. Every officer in default shall be punishable with a fine between the range of Rs 1,00,000 to 3,00,000 or with imprisonment upto 1 year or both.

VIII AS-14 VIS-À-VIS AS-103: A COMPARISON

	Ind AS 103 on Business Combinations ⁱ
Amalgamations	
The Standard deals only with amalgamation	Ind AS 103 defines business combination which
	has a wider scope
There are two methods of accounting for	Ind AS 103 prescribes only the acquisition
amalgamation. The pooling of interest method	method for each business combination.
and the purchase method.	
An acquired assets and liabilities are recognised at	Ind AS 103 requires the acquired identifiable
their existing book values or at fair values under	assets liabilities and non-controlling interest to be
the purchase method.	recognised at fair value under acquisition method.
AS 14 states that the minority interest is the	Ind AS 103 requires that for each business
amount of equity attributable to minorities at the	combination, the acquirer shall measure any non-
date on which investment in a subsidiary is made	controlling interest in the acquirer either at fair
and it is shown outside shareholders' equity.	value or at the non-controlling interest's
and it is shown outside shareholders equity.	proportionate share of the acquireree's
	identifiable net assets.
AS 14 requires that the goodwill arising on	Under Ind AS 103, the goodwill is not amortised
amalgamation in the nature of purchase is	but tested for impairment on annual basis in
	accordance with Ind AS 36.
amortised over a period not exceeding five years.	The state of the s
AS 14 does not provide specific guidance on the	Ind AS 103, the consideration the acquirer
consideration.	transfers in exchange for the acquirer includes any
	asset or liability resulting from a contingent
	consideration arrangement.
An existing AS 14 does not deal with the reverse	Ind AS 103 deals with reverse acquisitions
acquisitions.	

(a) Companies Act, 1956 vis-à-vis Companies Act, 2013: A Comparison

Let us analyse the impact of new provisions of the Companies Act, 2013 relating to the mergers and acquisitions. We will first analyse the concepts that have been modified under the new Act and compare those with similar provisions under the old Act. Then, we will also analyse certain new concepts related to mergers and acquisitions introduced under the new Act.

Reverse Mergers have been largely used by private companies as a method to become public instead of opting for the traditional Initial Public Offering (IPO) method. The term 'Reverse Merger' has not been statutorily defined either under the old Act or the 2013 Act.

Under the Companies Act, 1956 there were no specific threshold limits to object to a scheme of compromise or arrangement. Companies Act, 2013 specifies certain threshold requirements to object to a scheme.3 Proviso to Section 230(4) of the 2013 Act stipulates the minimum criteria to raise any objections.

(b) Cross-Border Mergers: MCA notified Section234 of the Companies Act, 2013 which permits cross border mergers. Also, Rule 25A of the Companies (Compromises, Arrangements and Amalgamations) Amendment Rules, 2017 deals with the Merger or amalgamation of a foreign company with a Company and vice versa. Under the Companies Act, 1956, the merging a foreign company with an Indian company was allowed while the merging of an Indian Company with a foreign company was not possible since the definition of the transferee company under Section394(4)(b) of the 1956 Act was defined to mean only 'company incorporated under the Act.

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Another key change introduced under the 2013 Act is the abolition of treasury stock. Section 77 of the Companies Act, 1956 specifically restricted a company from issuing shares to itself or through its own holding company

(c) Comparison of Ind AS – 103 with IFRS 3: Ind AS 103 requires the bargain purchase gain arising on business combination to be recognised in other comprehensive income and accumulated in equity as capital reserve, unless there is no clear evidence for the underlying reason for classification of the business combination as a bargain purchase, in which case, it shall be recognised directly in equity as capital reserve while IFRS-3 requires the same to be recognised in profit or loss.

Ind AS -103 gives the guidance under the common control for business combinations of entities while IFRS 3 does not.

IX. CONCLUSION

This research paper is specially made to analyse the aspects of merger and acquisition with regards to old companies act with new companies act and old accounting standard with new accounting standard, However there are some other laws also affects to merger and acquisition moreover of theses. Like the Income Tax Act, 1961 [Section 2(1A)] also defines an amalgamation, All the mergers are statutory mergers, since all mergers occur as specific formal transactions in accordance with the laws, or statutes of the states where the companies are incorporated.

The new Companies Act, 2013 has sought to streamline and make M&A more smooth and transparent. It appears that the New Act can help to deal with the challenges and complexities that the current procedures faces in relation to procedures that were contemplated under the old Act. The New Act has incorporated various provisions to tackles the problems actually faced during the process of mergers, by taking into consideration the practical aspects of the process the new notified sections are going to bring a paradigm shift in the way corporate restructuring is done in India. The new provisions seek to streamline the process and make it more transparent. Further, the jurisdiction of NCLT over these matters will speed up the entire process and also provide uniformity. The 2013 Act has provided statutory force to many of the corporate restructuring practices that were in practice earlier through judicial approval

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Case Study - Acquisition of Henkel India Ltd. by Jyothy Laboratories –Will it be Successful?

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ABSTRACT

Mergers and Acquisitions is a strategic move made by a company to achieve inorganic growth. However selecting a right partner for merge requires lot of deliberations. An acquirer should select the target after a thoughtful process. Size of a company, mode of payment, benefits from the acquiring company and post-merger integration are few of the key parameter that should well planned before making a final choice. The present case is about building operational efficiencies by Jyothy Laboratories through acquisition of Henkel Indian operations. Jyothy was depended on it single product "Ujala Supreme" for revenue and had plans for market expansion by increasing its product portfolio. On the other hand Henkel India struggled for survival since the time of its entry into Indian markets. Though Henkel had a strong product portfolio but had failed to take the leverage in Indian markets. Jyothy had a strong presence in semi urban and rural areas parallel to this Henkel had a good hold in urban area. By acquiring Henkel Jyothy will get access to the bunch of products but also get entry in new segment. Since long Jyothy was trying hard to acquire Henkel Indian arm and finally succeeded in March 2011.

The case is developed by referring various secondary sources like newspaper articles, annual reports of the companies and its website.

Keywords: Mergers and Acquisitions, Target Company, Strategic Move.

I. THE CASE

"The Henkel deal came at just the right time. This is also the best tax planning they (Jyothy) could have done as they'll be able to get credit for Henkel's losses." -SubbuSubramaniam, Managing partner, M Cap Fund Advisors

"We felt comfortable making a loan to them at such short notice as we knew they (Jyothy) were a debtaverse company and had a healthy balance sheet." -ParitoshKashyap, Executive Vice President, Kotak Mahindra Bank

"Jyothy needs to see its task for Henkel as that of brand re-creation."-Santosh Desai,MD&CEO, Future Brands

"With growth of its flagship products slowing down, and margins under pressure, this acquisition is the best tax planning Jyothy could have done."-SubbuSubramaniam, Managing partner, M Cap Fund Advisors

After all hardships, finally UllasKamath, (Kamath) Deputy Managing Director of Jyothy Laboratories was able to strike the deal with Henkel AG to sell its Indian Subsidiary which was making losses since the time of its entry into Indian market.

With the beginning of millennium, Kamath met twice Henkel management to form an alliance or to sell the Indian arm to his company but was not able to crack the deal. In January 2011, things turned into his favor and got the news he was waiting for more than a decade. Henkel parent group was in talk with investment bankers to exit from Indian markets.

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Without any delay, he flew to Dusseldorf, headquarters of Henkel, with all set to get the Henkel Indian arm under the umbrella of Jyothy.

II. ABOUT JYOTHY LABORATORIES - THE ACQUIRER

Mr.M.P. Ramachandran(Ramachandran), in 1983 started the company with an initial capital of Rs. 5000 and the only product — Ujala. With a small factory in a small district with his own formulation, he laid the foundation stone for his little venture.

Since starting, Jyothy has taken the utmost advantages of tax holidays by setting up plants in the backward areas. This was the incident that witnessed the meeting of duo -Kamath and Ramachandaran. He met Ramachandaran in Bangalore when one of his friends was looking for Ujala distributorship. Kamath gave advice to set up plants in areas which was providing tax benefits. This was proven a boon and within a span of three months he was member of Ramchandaran team and became a second in command.

Ramchandaran operated with two principles- reinvest profits into business and never dependent on debt. He was a firm believer of power of advertisement. In early 90s, the era of pre detergent war, he incurred huge advertisement expenses to promote Ujala.

In 1993, Jyothy Laboratories Ltd. (JLL) was incorporated and a factory was established at Tamil Nadu to manufacture Ujala. Later on in 1997 Ujala was roll out nationally and within two years in 1999 it became a Rs. 100 crore brand.

With the beginning of 2000, JLL ventured into households insecticides and utensils care segment. Over a period of time, the company has also forayed into personal care, fabric care services and fragrances.

In 2007, JLL came with IPO and became a listed company. Today (JLL) is having its presence across India with all its brands catering to the needs of the different consumers.

III. ABOUT HENKEL INDIA -THE TARGET

Henkel India Ltd. (HIL) was a subsidiary of Henkel AG & Company in Dusseldorf, Germany. To have strong footprints in Indian market, Henkel formed a joint venture with A.C Muttiah's Tamilnadu Petro Products Ltd (TNPL), a Southern Petrochemicals Industries Corporation (SPIC) group company.

Since its inception, Henkel was struggling hard for its survival. It was failed to reap the fruits from its joint venture.

Only plant at Karaikal, Pondicherry to serve the entire country lead to higher transportation cost and ate up the margins. The decision was taken in order to have quality confirmation. While starting up in India, parent group was not in favor of outsourcing because of quality issues so they decided to manufacture the product on their own. This decision was on different lines as compare to Europe where company outsourced the production.

Waiting for approvals from parent group for minor issues affected the operations. Also many of employees in new entity were from SPIC had experience in fertilizers and had no idea about FMCG sectors. As a result, decisions regarding marketing and advertising were taken by the Germany counterpart of Henkel without having a proper understanding of Indian markets.

IV. THE NEED FOR SEARCH

The company was highly dependent on single brand "Ujala Supreme" – fabric whitener (Refer Exhibit I – Ujala Losing its Shine). However Jyothy has tried to diversify into detergent, dish wash and mosquito repellents but stiff competition has made a tough ride. Moreover company has its major presence in rural market and with only three brands. The company was

facing many challenges to grow more in absence of wide range of product portfolio.

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Setting up plants in areas providing tax advantages was no more helpful for the company to improve profits.

JLL was searching for a company that can fill in the gaps in different segments where it was having no presence and at the same time help it to enter into the urban areas.(Refer Exhibit II – Product Wise Market Share)

V. SELECTION OF HENKEL

Henkel India had a strong product portfolio but had failed to take the leverage in Indian markets. Its brand like Margo, Fa, Prill and Mr.White had a good recall. The company always focused on technology and was failed in building an emotional connects with the customers.

Although company had never tasted profits, it was having presence across the nation. Majorly in urban sector contrary to Jyothy which has strong hold in semi urban and rural areas. The rural urban mix of Jyothy was 75:25 whereas of Henkel the ratio was 30:70.

The company had sales revenue of Rs. 400 crore and was making loss of Rs. 40 crore a year and has lost money to the tune of 500 crore over the years. This was a huge savings in tax for any profitable company who take over the Henkel India by offsetting the profits against accumulated losses.

Henkel was a perfect fit for Jyothy being a complementary in nature. With the product portfolio of Henkel, Jyothy was able to widen its presence across socio economic categories from premium to niche categories.

With the Henkel acquisition Jyothy was able to expand its reach, leverage the economies of scale and improve the positioning. (Refer Exhibit III – Post Integration Synergies)

VI. CRACKING THE DEAL – THE TUG OF WAR

In 2000, the first attempt made by Kamath but was not succeeded.Kamath proposed to join the hands for distribution of Henkel products into different areas other than big cities. Henkel dissented on giving distribution channel to a company which was half of its size.

Within span of 5 years they restarted talk, this time Henkel was also worried about its future in the Indian market. The parent group played a smart game by putting a proposal of taking majority stake in Jyothy Laboratories. Ramchandran rejected the offer being successful he was not in opinion to part with stake.

On one fine morning of January 2011, Kamath came to know from the sources about the Henkel AG looking for a buyer to sell its Indian unit. He flew to the Dusseldorf, the Headquarters of Henkel AG with better preparation this time.

Kamath was aware of the fact that the Jyothy's balance sheet size was not fit to get into bidding war. He put another option in front of top management in Germany to send them proposal after consulting his team in India. He made very clear about not participating in bidding process and if they (Henkel) don't like to sell the Indian arm they were free to use his turnaround plan.

By the timeKamath reached India and sent the proposal, the deal took a new turn which was proved to be a game changer in the entire episode.

A C Muttiah of SPIC group, joint venture partnerin Henkel India was unhappy with the Henkel parent group not considering him before selling its share. Through MAPE Advisory, he offered his share in the company to Jyothy. In March 2011, JLL acquired 14.9% in HIL for Rs. 60.73 crore and took the captainship of the company.

Again Kamath visited Dusseldorf and hit the bull's eye. He sealed the deal by giving an option to Henkel parent group of revisiting India after 5 years and can acquire 26% stake in combined entity. In May 2011, he bought 50.97% stake at the cost of Rs. 142.9 crore. He got an unexpected support from Kotak Bank of Rs. 600 crore, which helped to sail the ship with smooth and ease.

On June 30, 2011 JLL acquired 3.97% shares from the open market at the cost of Rs. 18.9 crore.It also acquired 12.05% shares as compare to proposed 20% through open offer at the amount of Rs. 57.8 crore as on Oct. 17, 2011. (Refer Exhibit IV – Acquisition Details)

VII. INTEGRATION PROCESS – POST ACQUISITION TASK

Though Kamath was successful to bag the company but the real test was waiting for him. Integration of both the entities in order to derive maximum benefits but this was not a child's play. Ramchandaran and Kamath were aware of the facts that coming days would not be the easy for them.

Soon after the deal, entire Henkel team around 250 people quit as they found difficult to work with Indian company. Jyothy retained selected key functional area's middle manager like operations, distribution, marketing and finance. They also shut

down the Henkel's office in Chennai and guest house across countries and shifted the corporate office to Mumbai. Also purchase and supply chain activities were centralized. Jyothy also brought marketing strategies under its purview for Henkel products.

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On manufacturing end, they decentralized the production of Henkel products to the 28 units of Jyotyhy Laboratories and outsourced where ever it was economic beneficially unlike centralized production with only a plant that Henkel did in past. Procurement of raw material was another area. Henkel had compulsion of buying linear alkyl benzene (LAB) a key ingredient in making detergent from its Indian venture partner; Jyothy was able to fetch most competitive prices from its vendors as they have a policy of paying upfront cash. By following Jyothy model, they built the synergy and brought the cost down.

Kamath in one of his interview explained the mantra through which they were saving the distribution cost. He said "We always ask ours supplier to send the raw material when the finished are ready to be delivered". This in turns help them to fetch a better rate unlike most of units where trucks deliver the raw material and goes empty charging for full trip.

To bring in more efficiency, states where Jyothy has its godowns were also put in use for Henkel and the godowns and mother depot of Henkel was used by Jyothy to supply goods. The effect of this integration was saving into cost amounted Rs. 26 crore, which Jyothy was paying to its super stockiest. Jyothy was used to pay 5% margin to its stockiest.

With the addition of seven more products salesmen has more to sell and the pay-off would be dip in operating costs. Also benefits of economies of scale would be harvested. Manufacturing more products (combined entity- Jyothy and Henkel) fixed costs would be mop up by larger turnover.(Refer Exhibit V – Bouquet of Products& Exhibit – VI Segment Wise Products Presence)

Jyothy also instructed its sales team that their costs – salary, travelling expenses, and allowances should not be more than 3% of sales. In distribution Jyothy took over the weak areas and kept regions untouched where Henkel was extremely strong.

Financially also Henkel proved a good proposition for Jyothy. With accumulated losses of Rs. 500 crore, Jyothy was able to reduce its tax liability for three-four years.

Operating model has also witnessed change in post-acquisition scenario. The pipeline inventory came down to Rs. 18 crore from Rs. 70 crore which in turns lead to lesser investment in working capital.

VIII. ENTRY OF RAGHUNANDAN

With the acquisition of Henkel the duo-Ramchandaran and Kamath felt the need of change from gurukul to business school. The company never had brand managers, manufacturing or sales head. Advertising agencies was the whole and sole for brand building. With new portfolio of 10 brands in four segments professional team was required to run the business effectively and efficiently.

In May 2012, JLL appointed Raghunandan (Raghu) as CEO of JLL. Raghu also known as "Turnaround Man" had changed the futures of family owned business like Dabur and Paras. According to Raghu, there were many things that required to be changed in Jyothy. The new job was full of challenges. Henkel was not successful because of its investment in brands was low and overheads were high. Jyothy after having a good head start has not invested much. So his task was double folded – minister the Henkel brands and also smooth integration of JLL and Henkel.

Soon after taking the charge, Raghu started charting out the plans for the company growth. He was assigned with a task to build the talent pool at the various categories, supply and other heads that a multinational company should have. With his team of 15 senior managers, he focused on key areas to fuel growth engine. He introduced a second line of management to bring in fresh thinking, leadership and strategy.(Refer Exhibit-VII – The New Structure) The first move he took was shift from company owned sales force and commercial sales agents (CSA) to carry and forward agents. Only top 20% distributors were covered by the company's direct sales force and rest was by distributor's salesman. Also to save costs he replaced turnover based incentives by fixed fee system for the sales team. This results into saving of Rs. 10 crore.

Raghu also reworked on distributor and retailer margins. Jyothy was offering 12-16% margins to its retailer and distributors which were higher than Industry averages. The strategy was good till company had three products as this was a driving

factor for a retailer to sell more. But with larger bouquet of products margins need to refine. Jyothy offered margins of 8% and was able to save Rs. 30 crore.(Refer Exhibit-VIII- The New Margins)

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The money saved was spent partially on advertising and rest was added to company's bottom line. Apart from it, Raghu also took responsibility to change distributors list. Till now Jyothy worked with smaller ones but with Henkel's products it started on eyeing larger distributors especially who had experience of working with MNCs. This helped them to reach more stores.

Raghu also introduced products in middle in premium segments when company started shifting from regional to national player. Moving forward, he is planning to take seven brands i.e. Henko, Ujala, Fa, Margo, Pril, Maxo and Exo to the next level.

IX. LOOKING AHEAD

On July 2012, the name of Henkel India Ltd. was changed to Jyothy Consumer Products Ltd. (JCPL). Within couple of years the Jyothy was able to integrate Henkel in a phase wise manner properly and has introduced structural changes along with new strategies in different segment.

In April 2013, JCPL was merged with JLL. It has been 24 months now; JLL took over the erstwhile Henkel. At this stage analyst view that how this marriage will bring fortune to Jyothy. In span of 730 days, with series of actions the company had brought in operational efficiency, hence making the takeover of Henkel profitable.

Moving further, Jyothy needs to look how to remain competitive in the market place with the diversification adopted 104 weeks back. Till date it seems an ambitious move by JLL -an Indian company acquires multinational – Henkel which is not seen frequently in the Indian markets. However, the time will tell to what extent the merger has been fruitful for Jyothy and was it a wise move to acquire Henkel.

Exhibit-I Uiala Losing its Shine

Year	Market Share by Volume (%)	Market Share by Value(%)
2009-2010	58	72
2010-2011	58.3	72
2011-2012	60	74
2012-2013	59.06	72.6

Source: Compiled by Authors from JLL Annual Reports

Exhibit-II Product Wise Market Share

THE BIG PICTURE						
CATEGORY	COMPANY	BRANDS	MARKET SHARE	COMPETITORS		
Fabric care	Jyothy Labs	Ujala Supreme	72% of fabric	Robin Blue (Reckitt Benckiser): 5-8%		
(Total size:₹13,000 cr)		(fabric whitener)	whitener market (₹250 cr)	and balance with regional players		
		Ujala Stiff and Shine (fabric conditioner)	3.4%	Comfort (HUL): 5%		
		Ujala Technobright (detergent)	Negligible	Surf (HUL): 11%		
	Henkel India	Henko (detergent)	1%	Surf (HUL): 11%; Ariel (HUL): 4%		
		Mr White (detergent)	Less than 1%	Tide (P&G); Rin and Sunlight (HUL)		
		Chek (detergent)	Less than 1%	Wheel (HUL); Ghari; Nirma		
Mosquito repellent	Jyothy Labs	Maxo	22-24%	Goodknight (Godrej): 30%; Mortein (Reckitt		
(coil only) (₹800 cr)				Benckiser): 26%; All Out (SC Johnson): 10%		
Dishwashing	Jyothy Labs	Exo (bar)	6-7%	Vim (HUL): 60%; rest fragmented among		
(₹700-800 cr)				players like Nip (FENA), Expert (Rohit Surfactants)		
	Henkel India	Pril (liquid)	4-5%			
Personal care						
Deodorants	Henkel India	Fa	4%	Axe, Rexona, Dove (HUL): 25%; Set Wet Zatak		
(₹1,000 cr)				(Paras): 9%; balance with other players		
Soap	Henkel India	Margo	1%	Medimix (Cholayil): 2%; Chandrika (Wipro): 1%;		
(₹10,000 cr)				Hamam (HUL): 3%		
	Jyothy	Jeeva	Negligible	Source: Industry estimates		

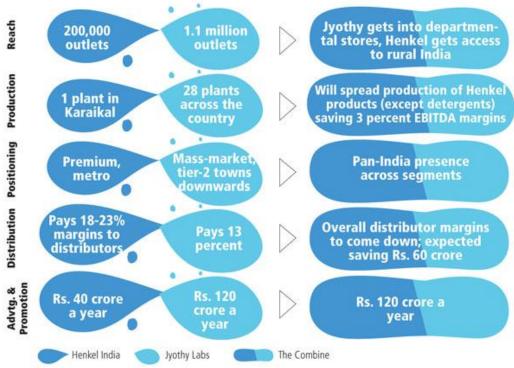
Source: The Strategist-July 11 2011, Supplement of Business Standard

Exhibit- III

Post Integration Synergies

TWICE AS CLEAN

How the integration will shape up



Source: Article in The Forbes –June 8,2011

Exhibit-IV Acquisition Details

Henkel Acquisition

INR Rs. Cr

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Seller	% of shares	Value
TPL	16.66	67.9
Henkel AG	50.97	143.0
Open Market	3.97	18.9
Open offer	12.05	57.8
Other Transaction Cost		27.88
Preference Capital		42.6
Loan Repayment		425.0
Total	83.65	783.0

Source: JLL Analyst Presentation – November 09,2011



Source: Jyothy Laboratories Ltd. Annual Report 2010-11

Exhibit-VI Segment Wise Products Prsence

	Value	Mid-Premium	Premium	Niche
Detergents	Check Morelight	Ujala Mr. White	Technobright Henko Champion	Technobright Matic Henko Matic
Other Fabric Care		Ujala Whitener Mr. White Bleach		Ujala Stiff & Shine
Dish wash		Exo Bar, Round Pril Bar	Pril Liquid Exo Liquid	Exo Scrubber
Household Insecticides	Maxo Coil	Maxo Liquid		Maxo Cream Wet Wipe
Personal Care		Jeeva Nikki	Fa Deo Fa Soap	Margo Neem

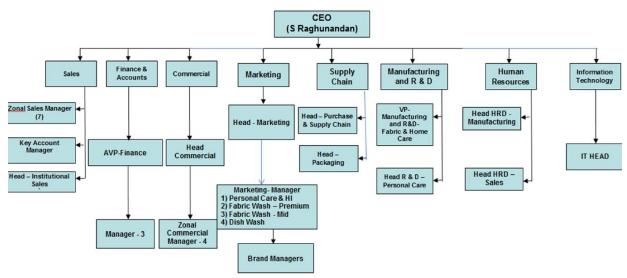
Source: Jyothy Laboratories Ltd. Annual Report 2010-11

Exhibit – VII The New Structure

New Management Team



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Source: JLL Analyst Presentation – February 07, 2013

Exhibit- VIII
The New Margins

Channel Margin Rationalisation

	Stockis	st Margin	Retailer Margin			
Brand	Old Revised		Old	Revised		
EXO	6-8	6	8-15	8-10		
MAXO	6-8	6	10	10		
MAYA	6-8	6	10-20	10-15		
MORE LIGHT	6-11	6	10-15	10		
UJALA	8	6	10-14	10		
INDUSTRY		4-5		8-10		

Source: JLL Analyst Presentation- November 01, 2012

Exhibit- IX The JCPL Performance

JCPL - Status Update

Rs. In lakhs

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Period	Net Sales	EBITDA %
Jan-Mar'11 (3 mths)	11,921	-6.4 %
Apr-Jun'11 (3 mths)	12,311	8.8 %
Jul - Sept'11 (3 mths)	10,746	10.6 %
*Oct - Dec'11 (3 mths)	7,691	1.61 %
Jan-March'12 (3 mths)	11,063	14.2%
Apr-Jun'12 (3 mths)	11,489	10.2%
#July-Sept'12 (3 mths)	8,452	-0.26%

^{*}Oct-Dec'11 - Due to temporary shut down of Karaikal plant on account of Labour unrest from September 26, 2011 to December 26, 2011, 61 days. Sales of Henko Detergent lost 27 Crores and thereby loss of Rs. 7 crores in EBIDTA (10%)

Source: JLL Analyst Presentation- November 01, 2012

[#] July-Sept'12 - Rationalisation of Henkel distributors done in the month of August/September resulting in temporary loss in primary sales. Integration of JLL and Henkel distribution underway and expected to be completed by December 2012 and sales expected to be normal from coming quarters.

Exhibit-X The Income Statement of JLL

Profit & Loss Account



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Particulars	Qu	Quarter Ended			Nine Months Ended	
	31-12-	30-09-	31-12-	31-12-	31-12-	31-03-
	2012	2012	2011	2012	2011	2012
Net Sales	20,378	17,783	16,631	59,147	44,395	66,278
Other Income - Operating	74	23	27	121	73	19
Total Income	20,452	17,805	16,658	59,268	44,468	66,297
Cost of Goods Sold	11,117	9,065	8,681	32,489	24,015	37,259
Employee cost	2,269	2,355	2,214	6,867	6,256	7,802
Advertisement and Sales Promotion expense	1,069	1,592	659	4,293	3,270	4,283
Other expenditure	2,346	2,554	2,279	7,238	6,244	8,686
EBITDA	3,651	2,239	2,825	8,380	4,683	8,266
EBITDA % to Net Sales	17.9%	12.6%	17.0%	14.2%	10.5%	12.5%
Depreciation and Impairment	325	330	622	991	1,361	1,703
Finance Cost	1,719	1,648	229	4,853	605	1,943
Other Income - Non Operating	1,725	1,637	1,429	4,987	4,122	5,701
Profit Before Tax	3,332	1,899	3,403	7,523	6,839	10,322
Tax	726	372	495	1,628	1,280	1,970
Profit After Tax	2,606	1,527	2,908	5,895	5,559	8,352
EPS	1.62	0.95	1.80	3.66	3.45	5.18

Source: JLL Analyst Presentation – February 07, 2013

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PR Communications in Health Sector – A Pilot Study

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ABSTRACT

This pilot study focuses on the role of PR communications in health sector and how these communications will persuade as important among the patients. As Public Relation activities has become life-blood for all the organizations so as to create positive image and brand in the market. 10 multi-specialty hospitals of Bhopal city has been selected as study area and a sample of 10 respondents was selected from each hospitals. Personal interviews with the selected patients have been conducted through the designed questionnaire. It was found that Reputation, Behaviour of staff and Sponsorship were the most important PR communications which brings the patients to that particular hospitals and plays a major role while selecting the hospitals for treatment. It is suggested that more focus should be given for portraying the Behaviour of staff and sponsorship activities of the hospital to build the positive image of the hospital. Also, patients with different educational background differs in their opinion with respect to the PR communication factors hence it is suggested to design an effective communication messages so that people belonging to different educational background can easily understand the messages and persuade in the way hospital desires them to do.

Keywords: Public relations, Communication, Reputation, Sponsorship, Behaviour, Attitude.

I. INTRODUCTION

In today business world, communication plays a vital role for maintaining relationship with clients, competitors as well as customers. Effective communication skill empowers one to explain the thoughts and convey the message so as to persuade the message in the way, exactly what we meant them to understand. Communication needs to be effective in business as it is the essence of management and this is the reason why every organization, whether public or private, gives utmost importance to the Public Relations. The concept of maintaining relations with public is termed as Public relations or PR. Public relations has become vital in all areas of life and one such foremost area is health which has become one of the most important area of social activity today. The practice of public relations in health care has changed together with the dramatic changes in health care. In some sense, public relations in health care are not particularly different by public relations in any other industry given that the overall objective of the public relations is still to "match long-term relationships" and "manage reputation" (Traynowicz -Hetherington, 2001). The image of doctors and health institutions in the public is not even close to what health professionals wanted. Various health institutions are shaken by the affairs associated with corruption and bribes. Doctors are linked to the stereotype that they are people who have extremely low ability for good and effective communication with its public. To this should be added also the low awareness of management to recruit communication professionals in their institutions.

Improved public relations activities are steadily becoming one of the most important activities hospitals can engage. This increased emphasis is fueled by increased competition within the health care market where consumers are becoming more selective and using health-related information to make informed choices (Tengilimoglu, 2001). Today more and more new private hospitals are entering the health care market place. In addition, patients have become better informed and more accountable consumers of health care services and want to become more active participants in decisions regarding the treatment process (Akinci et al., 2004). This increased desire for consumer choice has forced hospital managers to look at service availability in a different way; thereby opening the door for more customer-oriented recruitment strategy. Increased emphasis in the area of public relations can help to bring consumer-friendly services to the forefront increasing agency marketability and consumer choice.

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PR in health care industry was started somewhere in between 1950-60 but that time PRs need very little need to create awareness and preference because of less number of available hospitals and these facilities always gained support and sympathy of people. PR did not have to be particularly active in order to "maintain and build public confidence." Rather, the role of public relations were attributed and limited to the communication of the information and positive image. Later on by 1970, there was a shift in the expression in health. Marketing department in the health organizations got greater responsibilities due

to increasing competition in the sector and changing preferences of people to become more health conscious. The focus of marketing department is now to attract more pool of patients by identifying the desires and need of the people (Cutlip, 2003). Constant pressure forced hospital managers to seek professional public relations and communication professionals to maintain two-way communication between hospitals or health organizations and their public. The PRs has given the responsibility to promote a positive image and transfer of news, dealing with criticism and training of internal public for teamwork.

II. AIM & HYPOTHESIS

Large number of studies has been conducted so far on Public Relations and some has been directed towards health sector as well. The aim of this pilot study is know the importance of PR communication in health sector and how these PR communications portray the image of the hospitals so that they will get more number of patients. Another aim of this study is to test the developed questionnaire so that it can be reframed by eliminating the biased elements for further study. Also it has been seen that communication or messages can be analyzed and persuade in different aspects with respect to gender as Men's has some different priorities and selection criteria than that of women. Also effectiveness of any communication is depended upon the understanding of the receiver which will rely upon his educational background. In the light of above statements, following hypothesis has been formulated:

- (a) **H01:** Male and Female patients do not differ in their opinion towards the Public relation factors of Hospitals.
- **(b) H02:** Patients do not differ in their opinion towards the Public relation factors of Hospitals with respect to their educational status.

III. METHODOLOGY ADOPTED

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The aim of this research is to know the role of PR communication in health sector. Researcher has identified ten multi-specialty hospitals in Bhopal city as the study area to conduct the pilot study. A sample of 10 patients is selected from each hospital who were visiting the hospitals on the basis of convenience sampling technique. As this study is targeted to know the role of PR communications, care has been taken while selecting the sample respondents that they have come across through some PR activities so far by demonstrating them each such activities conducted by hospitals. Data has been collected through the designed questionnaire by taking personal interviews with the patients waiting in the waiting halls for their turn. It is assumed that all the respondents are not related to each other in any manner and the opinions of one respondent cannot affect the opinions of any other respondent. Data collected through designed questionnaire is filled in SPSS 21.0 for checking reliability of the designed instrument which is found 0.851 at Cronbach Alpha.

IV. DATA ANALYSIS & DISCUSSION

Table 1 reflects the demographic profile of the respondents. The results of descriptive analysis for demographic information indicated that among the analyzed samples (n = 100), 41% of the respondents were female and 51% were males. In terms of age group, the ages of the respondents ranged from upto 20 years to above 70 years old, with the majority of respondents falling between the age group of "21-30" (31%), followed by the age group "31-40" (25%), "41-50" (24%), upto 20 years (19%), "> 50" (13%). Majority of respondents were married (57%) and having education of Graduate level (45%) followed by Postgraduate or above level (36%), up to 12th by 12% and up to 10th by 7%.. About 52% of the respondents were working people (salaried or selfemployed), followed by 20% are Housewife followed by Students at 19% and 7% from others category.

Table 1
Demographic profile of the respondents (n=100)

	Demographic profile of the respondents (n=100)					
	Demographic	Frequency	%			
Gender						
	Male	59	59%			
	Female	41	41%			
Age						
	Upto 20 Yr	7	7%			
	21-30 Yr	31	31%			

	31-40 Yr	25	25%
	41-50 yr	24	24%
	51-60 Yr	8	8%
	61-70 Yr	3	3%
	Above 70 Yr	2	2%
Marital Status			
	Married	57	57%
	Unmarried	43	43%
Education			
	Upto 10th	7	7%
	Upto 12th	12	12%
	Graduate	45	45%
	Post Graduate & Above	36	36%
Occupation			
	Salaried	39	39%
	Self-employment	13	13%
	Student	19	19%
	Housewife	20	20%
	Others	7	7%

Table 2 gives a description about the factors considered by the patients while selecting a particular hospital for treatment. It was found that majority of patients gives priority to the advices given by their known persons whether friends or relatives for selecting any hospital for treatment (23%) followed by the hospitals which has reputed and well known

doctors (21%). The other important factors considered by the patients in selecting the hospitals are the time of examination and process (11%), modern equipment's and treatment facility (13%), good public relation activities (9%) and distance of hospital from their places (9%).

ISSN: 2349-4190

Table 2 Factors for selection of Hospitals

Factors	Frequency	%
Advice of the friends and relatives	23	23
I have a known person working in this hospital	2	2
This hospital is near to my place	5	5
Having a good public relations activities	9	9
Having modern medical equipment's	13	13
This hospital has reputed and successful doctors	21	21
Having good physical utility (Waiting lounge, rooms etc.)	7	7
Examination and other process time is very short	11	11
Having all the medical departments	9	9

Based on the observation, researcher has identified five factors which related to PR activities either directly or indirectly and patients were asked to rate their importance in context to their criteria of selecting a hospital for treatment. These five factors are: Reputation and Image of the hospital, Logo and slogan of the hospital, Behaviour and attitude of the hospital staff, Design of the hospital (includes facility like waiting lounge, rooms etc.) and Sponsorship (includes camping of the hospitals in rural areas). Table 3 gives a clear idea about the importance of

each factors based on the mean scores. The mean score revealed that Behaviour and attitude of the hospital staff is the most important factor (4.3) considered by the patients while selecting any hospital for treatment followed by the Reputation and Image of the hospital in the market (3.8). Logo and Slogan is the least important factor considered by the patients as logos and slogans is given emphasis for promotional purpose only so that people at least remember the hospital and generally given emphasis

by rural people who have poor literacy background and unable to remember the name of hospitals.

Table 3
Degree of importance of Public Relation factors while selecting hospitals

	Certainly not Important	Not Importa nt	No Idea	Importan t	Very Importan t	Total	Mean	Std. Deviation
Reputation and Image	3	5	17	51	24	100	3.8	0.94029
Logo and Slogans	27	26	27	17	3	100	2.4	1.15379
Behaviour& Attitude of Staff	1	3	5	37	54	100	4.3	0.80773
Design of Hospital	7	12	17	49	15	100	3.0	1.20503
Sponsorship	8	14	24	46	8	100	3.3	1.08342

(a) H01: Male and Female patients do not differ in their opinion towards the Public relation factors of Hospitals.

An independent t-test was performed for identifying the differences in the opinion of male and female patients towards Public relation factors of hospitals. Table 4 presents the results of Independent t-test. It was found that null hypothesis is rejected for 3 out of 5 dimensions i.e. Reputation and Image of hospitals (t = 2.347, p < 0.05), Behaviour& Attitude of staff (t = 2.327, p < 0.05) and Sponsorship (t = 2.318, p < 0.05)

0.05). For rest of two factors, there is no statistically significant mean difference among opinion of men and women patients towards Logo & Slogan and Design of Hospitals and null hypothesis is failed to reject for two factors. From the analysis it is concluded that men and women patients possess different opinion towards Reputation and image of hospitals in the market, Behaviour and attitude of staff of the hospitals and Sponsorship activities of the hospitals.

ISSN: 2349-4190

Table 4
Gender-wise degree of importance of Public Relation factors while selecting hospitals

	Gender	N	Mean	Std. Deviation	t-value	p-value
Reputation and Image	Male	51	4.55	0.931	2.347	0.009
Reputation and image	Female	49	3.13	0.955	2.347	0.009
Logo and Slogans	Male	51	2.55	1.146	1.751	0.080
	Female	49	2.33	1.163	1./31	
Behaviour& Attitude of Staff	Male	51	4.17	1.203	2.327	0.015
Benaviour& Attitude of Staff	Female	49	2.93	1.205	2.321	
Design of Henrital	Male	51	4.59	0.813	1.02	0.308
Design of Hospital	Female	49	4.21	0.8	1.02	
Construction 1.	Male	51	3.91	1.066	2 210	0.021
Sponsorship	Female	19	3.11	1.103	2.318	0.021

(b) H02: Patients do not differ in their opinion towards the Public relation factors of

One way Anova was carried out among educational background of the patients as Independent variable and PR factors of hospitals as dependent variable to determine the differences in opinion of patients towards PR factors of hospitals. The result presented in table 5 shows that F-statistic values and p-values indicate the statistically significant differences across educational levels of patients in Reputation and

Hospitals with respect to their educational status.

Image of Hospital (F = 3.721, p < 0.05), Behaviour& Attitude of Staff (F = 5.472, p < 0.05) and Sponsorship (F = 10.912, p < 0.05). Remaining two factors do not show statistically significant differences. It was clearly seen that patients belonging to higher educational background gives more value to Reputation and Image, Behaviour&

Attitude of Staff and sponsorship factors than lower

educated patients.

ISSN: 2349-4190

Table 5
Education-wise degree of importance of Public Relation factors while selecting hospitals

	Education	N	Mean	Std.	F	p-value
	<u> </u>	- 1	1110411	Deviation	value	p varae
	10th	7	3.73	0.971		
Reputation and Image	12th	12	3.84	0.9.4	2 721	0.000
	Graduate	45	3.79	0.958	3.721	0.000
	Post Graduate & Above	36	4.16	0.664		
	10th	7	2.42	1.202		
Logo and Slogans	12th	12	2.46	1.078	1.139	0.343
	Graduate	45	2.43	1.163	1.139	
	Post Graduate & Above	36	2.74	1.211		
Behaviour& Attitude of	10th	7	3.12	0.747	5.472	0.000
	12th	12	4.07	0.812		
Staff	Graduate	45	4.45	0.761		
	Post Graduate & Above	36	4.59	0.859		
	10th	7	2.33	1.162		
Design of Heavital	12th	12	2.74	1.151	2.126	0.074
Design of Hospital	Graduate	45	3.02	0.973		
	Post Graduate & Above	36	3.13	0.921		
	10th	7	2.58	1.174		
Changarshin	12th	12	2.68	1.143	10.012	0.000
Sponsorship	Graduate	45	3.34	1.021	10.912	0.000
	Post Graduate & Above		3.49	0.851		

From table 3, it was revealed that Behaviour& Attitude of Staff and Reputation and Image of the hospitals are the most important factors considered by the patients while selecting hospitals. Hence, management of hospitals has to necessarily portray the good and helpful behviour of the staff for enhancing and maintaining the reputation and image of the hospitals in the market. For this, good PR activities and communication is required. Table 6 presents the rankings given by patients to PR

communications for creating the positive image of the hospitals. It was found that Word of Mouth Publicity, Publicity on TV and Radio and Sponsorship activities of the hospitals were given high ranks showing their importance in PR communication strategy. Other important factors receiving high ranks are Publicity in Press, Face to face communications and Publicity through Printed materials.

Table 6
Ranking of PR Communications for creating positive image

Activities	Importance Score	Ranking
Printed Materials	41	VI
Face to Face Communication	43	V
Congress & Seminars	19	IX
Publicity on TV and Radio	67	II
Publicity on Press	53	IV
Publicity in Internet	28	VIII
Publicity on Billboards	37	VII
Sponsorship Activities	54	III
Word of Mouth Publicity	83	I

V. CONCLUSION

The aim of this pilot study is to know the role and importance of PR communications for health sector and to assess the important activities which will persuade by patients and brings them to the hospitals. It was found that the factors considered by the patients while selecting a particular hospital for treatment are recommendations by friends and relatives, reputation of hospitals and doctors, time for examining the patients, equipment's and treatment facilities and good PR activities. Reputation of hospitals and behaviour of staff is the major PR factors considered by the patients. For portraying a positive image of the hospitals, PRs has to focus on communicating the behaviour and helpful nature of the staff and of modern treatment availability facilities. Communication is effective if one can clearly understand what the message actually is and education plays an important role in it. This study has shown that people with different educational background differ in their opinion with respect to some of the PR factors. Hence, it is highly recommended to draft the communication strategy in such a manner so that it can be easily understood by the people belonging to different educational background. Communication is the heart and soul of PR activities and without effective communication all the PR activities are waste and blundered.

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Impact of Rehabilitation and Compensation on Socio-Economic Status of Gas Victims

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ABSTRACT

The industrial disaster took place in Bhopal in the year 1984 was one of the biggest and worst industrial disaster mankind has ever seen which has killed around 5000 people, leaving thousands of morbidities and permanent disabilities among the people. The company, UCIL involved has given a compensation amount of \$470 million as relief after intervention of Supreme Court of India which was very less for the damage done. Government has instantly started relief and rehabilitation measures like medical facilities, supply of pure drinking water, training and skill development for the family members so that they can start some work or get some employment. Over a period of time it was assumed that the amount received as compensation and various relief and rehabilitation measures has helped victim families to overcome from disaster. This study has been conducted to know the impact of compensation and rehabilitation over socio-economic status of victim families by performing a field survey. This study shows that a lot of families now become economically sound but still lot of work has to be done for the people and people still suffering.

Key words - Methyl Isocyanate, Socio-economic, Rehabilitation, Disaster, Lifestyle

I. INTRODUCTION

Bhopal, the capital of Madhya Pradesh, situated at an altitude of 505 Meter above the sea level covers a total area of 284 sq.kms with a density of population of around 2355.2/sq km. According to the 1981 census the population of Bhopal was 6.72 lakh and was divided into 56 Municipal wards. Presently there are 85 wards. On the midnight of 2nd and 3rd December 1984, more than 40 tons of methyl isocyanate gas leaked from tank no. 610 of Bhopal based pesticide plant of Union Carbide of India Limited, immediately killing at least 3,800 people and causing significant morbidity and premature death for many thousands more. A disaster of such great magnitude caused by sudden release of Methyl Isocyanate or rather a mixture of Methyl Isocyanate and other toxic reaction products called Toxic gas(s) into a thickly populated area is unparallel in the history of mankind. The gas(s), on the cold winter night, entered the residential areas stunning the residents with unbearable respiratory symptoms, severe irritation of eyes, photophobia blepharospasm. Immediately relief measures were provided. Situation was handled in the best possible way. The company involved in what became the worst industrial and environmental accident in history immediately tried to dissociate itself from legal responsibility. Eventually it reached a settlement with the Indian Government through mediation of country's Supreme Court and accepted the moral responsibility. It paid \$470 million in compensation, a relatively small amount of based on significant underestimations of the long-term health consequences of exposure and the number of people

exposed. The state govt. also came up with immediate relief of pro-rata compensation to all those affected and introduced many rehabilitation packages to affected population so as to come over the disaster. Death compensations, compensations for chronic illnesses have been distributed. Later on, several rehabilitation measures have been undertaken by the state government for the gas victim families so that they should overcome from the disaster and will become economically independent and come in the mainstream. The one question that needs to be whether answered is (i)these compensation/rehabilitation packages has gone into the right hands; (ii) whether these have really helped the people in the improvement of their living conditions, their occupational betterment, educational status, the improvement in the economy of Bhopal, an attempt through this study would be made to answer these questions.

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II. OBJECTIVE OF THE STUDY

The objective of this study is to assess the impact of rehabilitation, compensation and relief measures on the socio-economic status of the gas victim families over a period of 30 years.

(a) Hypothesis

Based on the objective of the study and literature reviewed, following hypothesis has been developed:

(i) **H01:** There exist no significant differences in earnings of the affected families over 30 years of time.

- (ii) There exist no significant differences in the housing and infrastructure facilities of the affected families over 30 years of time.
- (iii) **H03:** There exist no significant differences in educational status of the children of affected families over 30 years of time.
- (iv) There exist no significant differences in health and treatment status of the affected families over 30 years of time.
- (v) There exist no significant differences in the possession of assets by the affected families over 30 years of time.
- (vi) There exist no significant differences in the economic status and savings of the affected families over 30 years of time.

III. METHODOLOGY

The aim of this study is to know the impact of rehabilitation, compensation and relief measures adopted by the government over the socio-economic condition of the gas victim families over a period of 30 years. A sample of 200 severely affected and 200 moderately affected families has been drawn using quota and convenience sampling techniques and primary data has been collected through extensive field work and one to one contact with the families with the help of a self-structured questionnaire. The questionnaire is designed on the basis of previous studies done for assessing the socio-economic status of the population, under the guidance of supervisor. Reliability and validity of designed instrument has been checked through pilot survey on 10% of the sampled population. The data collected is analysed with the help of statistical software SPSS 21.

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IV. ANALYSIS OF DATA & DISCUSSION

From the given table 1, it can be clearly observed that the sample population is skewed towards male population at about 64% indicating the greater participation by male diaspora whereas female respondents are only 35%.

Table 1
Demographic profile of the respondent (n=400)

	Particulars	Frequency	%	Pa	rticulars	Frequency	%
Gender	Male	257	64.3		Govt. Employee	89	22.2
Gender	Female	143	35.8	Type of	Private Employee	171	42.8
	Upto 25	31	7.8	Occupation	Self-employed	87	21.7
	26-30	61	15.3		Others	53	13.3
Age	31-35	87	21.8		Hindu	339	84.8
	36-40	168	42	D -1:-:	Muslim	21	5.3
	Above 40	53	13.3	Religion	Christen	24	6
	Married	248	62		Others	16	4
Marital	Unmarried	93	23.3		ST	31	7.8
Status	Separated	25	6.3	Social Status	SC	98	24.5
Status	Divorced	12	3	Social Status	OBC	127	31.8
	Widowed	22	5.5		General	144	36
	Primary	31	7.7	Nature of	Nuclear	284	71
	High School	57	14.3	Family	Joint	116	29
Literacy	Higher Secondary	89	22.3		Up to 3 Members	52	13
	Graduate	174	43.5	Size of the	4 - 5 Members	112	28
	PG & Above	49	12.2	family	5 - 6 Members	120	30
					Above 6 Members	116	29

It was also found that majority of the respondents are in the age group of 31 - 40 years (about 64%) and are married (62%) whereas as some are unmarried (23.3%) and very few are separated (6.3%), divorced (3%) or widowed (5.5%). The sample has also the largest chunk of respondents as graduate (43.5%) and higher secondary (22.3%) whereas some have education up to high school (14.3%) or primary level (7.7%) and very few of them have education level of PG & above (12.2%). The sample consist of majority of service class people in which around 42.8% people were in private jobs whereas about 22.2% were in

government jobs and some were doing business (21.7%). Religion wise the study area is dominated by Hindus (85%) followed by Christen community (6%). Majority of group members belongs to General category with 36% followed by OBC at 32%, SC at 24.5% and ST at 7.8%. Majority of respondents have nuclear families (71%) with family size of more than 4 members (89%). Overall the sample for study is a fair representation of the population since the study was conducted mainly among the households who were majorly affected in the disaster of 1984.

(i) H01: There exist no significant differences in earnings of the affected families over 30 years of time.

Table 2 presents the monthly income aspects of affected people at the time of accident and today's scenario and a gradual shift in terms of raised income was seen clearly.

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Table 2
Monthly income status of the people
STATUS OF MONTHLY INCOME

Before 1985			By 2015			
Particulars	Frequency	%	Particulars	Frequency	%	
Below 15,000	338	84.5	Below 15,000	177	44.3	
15,001 - 30,000	42	10.5	15,000 - 30,000	138	34.5	
30,001 - 45,000	20	5	30,001 - 45,000	50	12.5	
Above 45,000	-	-	Above 45,000	35	8.7	

Wilcoxon rank test on income status at 1985 and 2015 was performed and it was found that none of the respondents moved to negative ranks whereas about 218 respondents were moved to higher ranks and about 182 respondents were on the same ranks.

This shows that income of 218 people has been raised significantly over a period of 30 years whereas income of around 182 people is still on the same level.

Table 3 Wilcoxon rank test (Earnings in 1985 and 2015)

		N	Mean Rank	Sum of Ranks
Status of monthly income 2015 - Status of monthly	Negative Ranks Positive Ranks	0ª 218 ^b	.00 109.50	.00 23871.00
income 1985	Ties	182°		
	Total	400		

- a. Status of monthly income 2015 < Status of monthly income 1985
- b. Status of monthly income 2015 > Status of monthly income 1985
- c. Status of monthly income 2015 = Status of monthly income 1985

Table 4
Test statistics of Wilcoxon rank test (Earnings in 1985 and 2015)
Test Statistics^a

	Status of monthly income 2015 - Status of monthly income 1985
Z Asymp. Sig. (2-tailed)	-13.743 ^b

- Wilcoxon Signed Ranks Test
- Based on negative ranks.

By examining the final **Test Statistics** table, it was found that there is a significant change in earnings of the people over a period of 30 years (p = 0.000). Based on the change in median value (Pre = 1.000, Post = 2.000) and Z score statistics (Z = -13.743, p = 0.000) it was concluded that there is a statistically positive significant change in the earnings of people

over 30 years of time from 1985 to 2015 which shows that people were earning much more money as compared to previous time.

(ii) H02: There exist no significant differences in the housing and infrastructure facilities of the affected families over 30 years of time.

On assessing the status of the ownership of the house in past and current scenario by the affected people, it was found that previously majority of people use to live on rent (51.5%) whereas some possess their own house (46.3%) and very few of them use to live in house of others. Over a period of 30 years, the scenario is found changed where majority of people now possessed their own house (59.8%) whereas some still lives in rental houses (37%) and in others house as well (3.3%). A change in percentage has been seen which may be the result of rise in the family monthly income.

ISSN: 2349-4190

Table 5 Ownership status of the house

OWNERSHIP STATUS OF HOUSE

Before	1985		By 20	015	
Particulars	Frequency	%	Particu la rs	Frequency	%
Rental	206	51.5	Rental	148	37
Owner	185	46.3	Owner	239	59.8
Living in others house	9	2.3	Living in others house	13	3.3

Wilcoxon Signed Ranks Test and Chi-square is used to assess the changes in the ownership status of the house of the affected families over a period of 30 years. We can see from the table's legend that none of the respondents have been moved to negative rankings from higher rankings from the period of

1985 to 2015 whereas 58 people have found a positive significant in ownership of the house and 342 respondents were found with no significant change in their ownership status of the house from the period of 1985 to 2015.

Table 6
Wilcoxon rank test (Ownership of house in 1985 and 2015)

		N	Mean Rank	Sum of Ranks
Ownership of house 2015 - Ownership of house 1985	Negative Ranks Positive Ranks Ties Total	0° 58° 342° 400	.00 29.50	.00 1711.00

- a. Ownership of house 2015 < Ownership of house 1985
- b. Ownership of house 2015 > Ownership of house 1985
- c. Ownership of house 2015 = Ownership of house 1985

Table 7
Test statistics of Wilcoxon rank test (Ownership of house in 1985 and 2015)
Test Statistics^a

	Ownership of house 2015 - Ownership of house 1985
Z Asymp. Sig. (2-tailed)	-7.390 ^b .000

- Wilcoxon Signed Ranks Test
- Based on negative ranks.

By examining the final **Test Statistics** table, it was found that there is a significant change in ownership status of the affected families over a period of 30 years (p = 0.000). Based on the change in median value (Pre = 1.000, Post = 2.000) and Z score

statistics (Z = -7.390, p = 0.000) it was concluded that there is a statistically positive significant change in the ownership of house by the affected families over 30 years of time from 1985 to 2015 which shows that more number of families were living in

their own house rather than living on rent or in others house.

(iii) **H03**: There exist no significant differences in educational status of the children of affected families over 30 years of time.

On analyzing the educational aspect of the affected family, it was found that majority of affected families have two or more children when this accident has took place (60.1%) whereas some families has only one child (15.5%). Among these 302 families who have children at their home, two or more children were studying in school and colleges (40.3%) whereas children of 43% families were not studying anywhere.

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Table 8 Number of children in family and attending school/colleges

rumber of emuten in family and attending behoof coneges						
Particulars		Frequency	Percent			
	Nil	98	24.5			
Children in family at the time of	One	62	15.5			
accident	Two	99	24.8			
	More than two	141	35.3			
	Nil	172	43			
How many of them were attending	One	67	16.8			
school/colleges at the time of disaster	Two	117	29.3			
uisastei	More than two	44	11			

While assessing the impact of disaster on the educational status of the suffered families, it was found that children of majorities of families were enrolled in government school and institutes (89%) whereas only few families will able to send their children in private school and institutes (11%). After some time of accident, majority of families has sent

their children to private schools and institutes for study (60.6%) whereas some families still continue to send their children to government school and institutes (39.4%). The reason behind this change can be the amount received by the suffered families in form of compensation which makes families able to give better education to their children.

Table 9 **Education status of the children** EDUCATION STATUS

Before Accident			After Accident			
Particulars	Frequency	%	Particulars	Frequency	%	
Govt. School/Inst.	203	89	Govt. School/Inst.	90	39.4	
Private School/Inst.	25	11	Private School/Inst.	138	60.6	

Wilcoxon Signed Ranks Test and Chi-square is used to assess the differences in the educational status of the children of the affected families over a period of 30 years. We can see from the table's legend that only 1respondent have been moved to negative rankings from higher rankings from the period of 1985 to 2015

whereas 114 people have moved to positive rankings showing the significant changes in educational status of the children and 113 respondents were found with no significant change in the educational status of the children from the period of 1985 to 2015.

Table 10 Wilcoxon rank test (Educational status in 1985 and 2015)

	rain	.>		
		N	Mean Rank	Sum of Ranks
	Negative Ranks	1 ^a	58.00	58.00
Where are they studying	Positive Ranks	114 ^b	58.00	6612.00
2015 - Where are they studying 1985	Ties	113°		
January ing 1900	Total	228		

a. Where are they studying 2015 < Where are they studying 1985

b. Where are they studying 2015 > Where are they studying 1985 c. Where are they studying 2015 = Where are they studying 1985

Table 11
Test statistics of Wilcoxon rank test (Educational status in 1985 and 2015)
Test Statistics^a

	Where are they studying 2015 - Where are they studying 1985
Z	-10.537 ^b
Asymp. Sig. (2-tailed)	.000

- Wilcoxon Signed Ranks Test
- Based on negative ranks.

By examining the final **Test Statistics** table, it was found that there is a significant change in the educational status of the children of the affected families over a period of 30 years (p = 0.000). Based on the change in median value (Pre = 1.000, Post = 2.000) and Z score statistics (Z = -10.537, p = 0.000) it was concluded that there is a statistically positive significant change in the educational status of the children of the affected families over 30 years of time from 1985 to 2015 which shows that more number of families were now sending their children to private school and institutes for better education.

(iv) H04: There exist no significant differences in health and treatment status of the affected families over 30 years of time.

Analysis of medical treatment aspects reports that majority of people immediately after the accident by during the period of 1985 used to visit government hospitals for their treatments (67.75%) whereas some visit private hospitals (22.75%) and few used to get treatment either in private nursing homes (6.25%) or by private physicians at their clinics (3.325%). By 2015, a drastic change in the preferences of people have been recorded which may be the result of increase in family income and degrading quality of government facilities where only some people use to get treatment from government hospitals (21.75%) whereas as majority of people prefers private doctors either in private hospitals (24.5%), nursing homes (20.5%) or at the private clinics (33.25%).

ISSN: 2349-4190

Table 12 Medical treatment status MEDICAL TREATMENT

Before 1985			By 2015		
Particulars	Frequency	%	Particulars	Frequency	%
Government Hospitals	271	67.75	Government Hospitals	87	21.75
Private Hospitals	91	22.75	Private Hospitals	98	24.5
Private Nursing Homes	25	6.25	Private Nursing Homes	82	20.5
Private Physicians Clinics	13	3.25	Private Physicians Clinics	133	33.25

Wilcoxon Signed Ranks Test and Chi-square is used to assess the differences in the health and treatment status of the peoples of the affected families over a period of 30 years. We can see from the table's legend that none of the respondents have been moved to negative rankings from higher rankings from the

period of 1985 to 2015 whereas 268 people have moved to positive rankings showing the significant changes in health and treatment status of the affected families and 132 respondents were found with no significant change in the health and treatment status from the period of 1985 to 2015.

Table 13 Wilcoxon rank test (Health and treatment status in 1985 and 2015)

Raiks						
		N	Mean Rank	Sum of Ranks		
M/hara da usu narmali u isit	Negative Ranks	0ª	.00	.00		
Where do you normally visit for medical treatment 2015 -	Positive Ranks	268⁰	134.50	36046.00		
Where do you normally visit	Ties	132°				
for medical treatment 1985	Total	400				

 a. Where do you normally visit for medical treatment 2015 < Where do you normally visit for medical treatment 1985

b. Where do you normally visit for medical treatment 2015 > Where do you normally visit for medical treatment 1985

c. Where do you normally visit for medical treatment 2015 = Where do you normally visit for medical treatment 1985

Table 14

Test statistics of Wilcoxon rank test (Health and treatment status in 1985 and 2015)

Test Statistics^a

	Where do you normally visit for medical treatment 2015 - Where do you normally visit for medical treatment 1985
Z Asymp. Sig. (2-tailed)	-14.429 ^b

- Wilcoxon Signed Ranks Test
- Based on negative ranks.

By examining the final **Test Statistics** table, it was found that there is a significant change in the health and treatment status of the affected families over a period of 30 years (p = 0.000). Based on the change in median value (Pre = 1.000, Post = 3.000) and Z score statistics (Z = -14.429, p = 0.000) it was concluded that there is a statistically positive significant change in the health and treatment status of the affected families over 30 years of time from 1985 to 2015 which shows that more number of families were now visiting to private physicians and nursing homes rather than visiting to government hospitals for their treatment.

(v) H05: There exist no significant differences in the possession of assets by the affected families over 30 years of time.

ISSN: 2349-4190

When assessing the economic status of the affected families in terms of possession of assets at the time of 1985 and 2015, it was found that number of people possessing various assets has been significantly increased by 2015 as compared to the time of 1985. McNemar Test and Chi-square is used to assess the differences in the possession of assets by the affected families over 30 years of time.

Table 15
Possession of assets by the people
POSSESSION OF ASSETS

Before 1985					By 2015				
Particular s	Yes	%	No	%	Particulars	Yes	%	No	%
Own House	187	46.8	213	53.3	Own House	307	76.8	93	23.3
Land	87	21.8	313	78.3	Land	138	34.5	262	65.5
Other Property	38	9.5	362	90.5	Other Property	67	16.8	333	83.3
Jewelry	176	44	224	56	Jewelry	353	88.3	47	11.8
Vehicle (2 Wheeler/ 4 Wheeler)	95	23.8	305	76.3	Vehicle (2 Wheeler/ 4 Wheeler)	387	96.8	13	3.3
Electronic Appliances	128	32	272	68	Electronic Appliances	391	97.8	9	2.3
Home Appliances	82	20.5	318	79.5	Home Appliances	395	98.8	5	1.3
Furniture	311	77.8	89	22.3	Furniture	397	99.3	3	0.8

Table 16 Cross tabulation of Possession of assets by the people between 1985 and 2015

	- 1985	2015			1005	2015	
	- 1985	Yes	No		1985	Yes	No
Own	Yes	172	15	Vehicle (2 Wheeler/4 Wheeler)	Yes	95	0
House	No	135	78		No	292	13
T 1	Yes	80	7	Floring's April's and	Yes	128	0
Land	No	58	255	Electronic Appliances	No	263	9
Other	Yes	38	0	II AP	Yes	82	0
Property	No	29	333	Home Appliances	No	313	5
	Yes	176	0	T '4	Yes	311	0
Jewelry	No	177	47	Furniture	No	86	3

From the cross tabulation analysis of possession status of various assets by the people in 1985 and 2015, it was found that majority of people has been moved to the positive ranks and none of them has moved to negative ranks means people who have not possessed assets in 1985 has possessed the assets by

2015 but none of the people who has already possessed an asset in 1985 has loosed its possession by 2015. This shows a significant positive and upward movement of the lifestyle and economic status of the affected families over a period of 30 years.

ISSN: 2349-4190

Table 17 Chi square of Possession of assets by the people between 1985 and 2015
Test Statistics³

	Own House 1985 & Own House 2015	Land 1985 & Land 2015	Other Property 1985 & Other Property 2015	Jewelry 1985 & Jewelry 1985	Vehicle (2 Wheeler/4 Wheeler) 1985 & Vehicle (2 Wheeler/4 Wheeler) 2015	Electronic Appliances 1985 & Electronic Appliances 2015	Home Appliances 1985 & Home Appliances 2015	Fumiture 1985 & Fumiture 2015
N	400	400	400	400	400	400	400	400
Chi-Square ^b	94.407	38.462	27.034	175.006	290.003	261.004	311.003	84.012
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000

a. McNemar Test

By examining the final **Test Statistics** table, it was found that there is a significant positive change in the possession of all the assets by the peoples 2015 (p = 0.000). Based on the Chi-square statistics it was concluded that there is a statistically positive significant change in the possession of all the assets by the affected families over 30 years of time and

more number of families now possessed all the assets by 2015 as compared to 1985.

(ix) H09: There exist no significant differences in the economic status and savings of the affected families over 30 years of time.

Table 18 Family income assessment of the people

Family Income

		A N/I	41-1 E21 I
Income Status group	No. of Families	Average Mo	onthly Family Income
income Status group	140. Of Failines	1985	2015
Very Poor	122	2500	9300
Poor	55	3250	12750
Lower Middle Income	114	5150	21700
Middle Income	89	10700	33700
Upper Middle Income	20	15600	67500

b. Continuity Corrected

As per the calculations of family monthly income done and presented in table 18, it was noted that there is a significant change in the monthly income of families belonging to all the income classes from 1985 to 2015 where families of all class were able to earn much more amount as compared to earlier times.

ISSN: 2349-4190

Table 19
Test statistics of Chi-square of Income in 1985 and 2015
Test Statistics

	Average income in 1985	Average income in 2015
Chi-Square	27.871 ^a	57.006 ^b
df	4	4
Asymp. Sig.	.000	.000

- 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 27.8
- 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 63.20

The pre (1985) and post (2015) pattern of income of the affected families were checked using Chi square 'goodness of fit' test and found statistically significant. The Chi square value of the income in 1985 was found $x^2 = 277.871$, p = 0.000 and income

by 2015 was found $x^2 = 57.006$, p = 0.000. Hence, it is concluded that there is significant differences in the income pattern of the affected families over a period of 30 years.

Table 20 Savings status of the people

SAVINGS

Transport Status analysis	N C. E	Savings		
Income Status group	No. of Families	1985	2015	
Very Poor	122	300	550	
Poor	55	550	900	
Lower Middle Income	114	300	1200	
Middle Income	89	3200	4700	
Upper Middle Income	20	3950	14000	

As per the calculations of savings pattern of the affected families done after deducting all the household expenses and presented in table 4.21, it was noted that all the affected families, belonging to different income class, will able to save some money

in both the calculated times. A significant changes has also been observed from the table in the amount of savings done by all the income class families from 1985 to 2015.

Table 21
Test statistics of Chi-square of Savings in 1985 and 2015

Test Statistics Savings in 1985 Savings in 2015 Chi-Square df 85.309^a 163.753^b 4 4 Asymp. Sig. .000 .000

- 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 46.3
- 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 105.3

The pre (1985) and post (2015) patter of savings done by the affected families were checked using Chi square 'goodness of fit' test and found statistically significant. The Chi square value of the savings in 1985 was found $x^2 = 85.309$, p = 0.000 and savings by 2015 was found $x^2 = 163.753$, p = 0.000. Hence, it is concluded that there is significant differences in the amount of savings done by all the income class of the affect families over a period of 30 years.

V. CONCLUSION

An attempt has been made to know the impact of compensation, relief and rehabilitation measures provided by the government to the gas affected families over the period of 30 years. After reviewing all the social and economic aspects and role of rehabilitation schemes on the current status of the affected families, it was found that the compensation amount received by the affected families and rehabilitation schemes will help a lot to the suffered people from overcoming the disaster and in improving their social as well as economic conditions. Today majority of the suffered families were found in much better condition as compared to the condition at the time of disaster. Definitely, rehabilitation measures adopted by the State Government for the welfare of the gas victim families had played a crucial role in bringing these families to the current position. Still, a lot of people were found suffering and no major improvement in their past status has been seen. Hence, it is concluded that the job and responsibility of State government has not over yet and a lot of work has need to be done specially for the poorer section of people to bring them back to the mainstream. New policies need to be crafted for the victim families who till now were not become economically stable and sound.

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A Study on the Entrepreneurial Mindset of the Generation Z

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ABSTRACT

This paper aims to investigate the mindset essential to entrepreneurial success of the young students towards entrepreneurship, who are yet to enter the field of work (Generation Z). Generation Z are those born between 1996 to 2000 (Mark & Sniderman, 2018). The factors associated with the entrepreneurial mindset are inclination to take risks, venturing into new fields, innovation & creativity. In this paper an empirical study has been done wherein a survey was conducted on 148 students who are pursuing their graduation/post-graduation degrees in various fields (Management, Hospitality, Law, Design, Information Technology, Family Managed Business, Liberal Arts and Journalism) to test how the demographic profiles play a vital role in affecting the factors like willingness towards taking risk, innovation, working out of their comfort zone, facing challenging situations and uncertainty, few of the key factors associated with entrepreneurship. This study contributes to the body of the literature of entrepreneurial mindset with insights that there is relationship between the demographics of the students, their cultural background and their mindset towards entrepreneurship. The tests used to identify the relationship are One-way ANOVA test, Chi-Square and Cross-Tabulations.

Key-Words: Entrepreneurial Mindset, Generation Z, Risk-Taking, Innovative, Uncertainty, Demographic, Comfort-Zone & Student

I. INTRODUCTION

The need to become an entrepreneur over the ages have always been spurred by micro and macro factors, in recent times events like the great recession has accelerated the number of people choosing to be entrepreneurs. Industry 4.0, globalisation and immense support system for start-ups has led to the next wave of generating entrepreneurs. Interestingly a huge impetous is given to youngsters, fresh out of college to take their creative innovations and make businessess that can add value to the society. In the current age of technology India is on the path to become the youngest country in the world, with a median age of 29 by 2020, has 46% of its workforce below the age of 36. With a keen understanding of technology, ability to reach for their dreams and a can do attitude of the youth, theyare bound to transform the economy of the country. The focus however has now shifted from the millenials to a generation post millenials who are still pursuing their degrees, who have still not enetred the workspace as a full-time wage earners contributing to the daily household income. This generation is more popularly termed as generation Z, those born in the time period 1996-2010. Generation Z is an interent friendly generation, brought up in the midst of technology, when there was never a time-period where any major calamity(natural/artificial) existed. They are well versed with the technological advancements, are better networked, have a higher degree of awareness and are keen to develop their own creations.(Reeves & Oh, 2007) The intiatives by the government of India like Start-up India, Make-In India, a start-up ecosystem in the cities, Incubation Cells in colleges to even tinkering labs in schools, etc have served as a bedrock in paving a way of creating budding entrepreneurs even before their graduating ceremonies.

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This study deals with the generation Z in the age group of (18-23) who are still pursuing their graduation/post-graduation degrees. The study aims to investigate their demographic backgrounds in relationship with entrepreneurial mindset in terms of willingness to innovate and risk taking ability. The second part of the paper deals with Lieterature Review on Generation Z and Entrepreneurial Mindset contributing to the objectives of the study. The third and fourth section of the paper deals with the methodology applied in data analysis and interpretation of the data analysed. The paper is summarised with the findings and conclusions towards the end.

II. LITERATURE REVIEW& OBJECTIVES OF THE STUDY

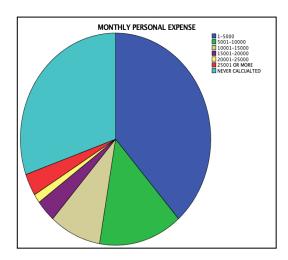
(a) Generation Z- Earlier identified as the post-millennial generation has now been termed commonly as Generation Z.By 2018, it became substantial to create a cutoff between Millennials and Generation Z. While there are multiple studies categorizing Generation Z and Millennials in different time periods a recent survey by PEW research center states that those born between the time period of 1996-2010 are classified as the Generation Zⁱ. They are the

first globally most technologically literate and socially empowered generation. They are techno-savvy almost by birth. Technology is not an added advantage but serves as a routine tool for them. They are highly dependent on technology serving even as their first language. (Reeves & Oh, 2007). Compared to previous generations, they are virtually more aware, have efficient network skills, driven by higher exposure to digital media and they tend to spend significantly more time on online social networks as compared to the earlier generations (A.P.Singh & Dangmei, 2016)

Entrepreneurial Mindset-The term entrepreneurial mindset is not synonymous to entrepreneurship however plays a vitol role in entrepreneurial success. There are various studies that introduce EM indicators to identify personality variables that might have a significant impact on entrepreneurial variables. The indicators are categorized into Personality traits (such as Self- Confidence, Action Orientation, Risk Acceptance, Need to Achieve, Readiness for venture) and skills (such as Persistence, thinking/looking from a Higher Order, Idea Generation, Originality, Execution, oriented thinking) (Ashourizadeh, Chavoushi, Z, & Schott, T., 2014), (Ngek, 2015). The accumulation of the entrepreneurial mindset indicators is defined to be taught to promote entrepreneurial discipline. Hall, J.A, & Mayer, P.S, 2016)The term entrepreneurial mindset has been coined as "the inclination to discover, evaluate and exploit opportunities" (Bosman & Fernhabe, S, 2018).

(c) Objectives of the study

- (i) To study the relationship of demographic background of respondents to their willingness to become an entrepreneur.
- (ii) To study the willingness of innovation of respondent.



(iii) To identify the risk-taking abilities of respondents

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III. METHODOLOGY

Descriptive and Causal Research design were used in the research. The descriptive research was done in order to describe the respondents i.e. Generation Z and the casual research was conducted to analyze the association of various demographic variables with entrepreneurial mindset variable such as willingness towards taking risk, innovation, working out of their comfort zone, facing challenging situations and uncertainty. The data has been collected from both primary and secondary sources. The primary data collected through a self-administered questionnaire. Non-probability sampling method was used as the questionnaire was distributed online as per the convenience of the researcher. A total of 148 respondents were surveyed in the city of Surat who are pursuing their graduation/post-graduation degrees in various fields (Management, Hospitality, Law, Design, Information Technology, Family Managed Business, Liberal Arts and Journalism). This study contributes to the body of the literature of entrepreneurial mindset with insights that there is relationship between the demographics of the students, their cultural background and their mindset towards entrepreneurship. The various statistical tools used were tests One-way Anova test, Chi-Square and Cross-Tabulations through SPSS.

IV DATA ANALYSIS

A set of frequency tables were generated to study the descriptive statistics of the sample.

Willingness amongst the respondents towards entrepreneurship

Figure: - 1 Pie chart for Monthly Personal Expenses

Table: -1 Frequency table for Monthly personal Expenses

Monthly Personal		
Expenses		
	Frequency	Percent
1-5000	57	38.5
5001-10000	21	14.2
10001-15000	13	8.8
15001-20000	5	3.4
20001-25000	2	1.4

From the Fig: -1 and Table: - 1 we can observe that the Respondents in the sample comprising of Generation Z largely the age bracket of 18 years to 23 years had their monthly personal expenses in large two groups, 39% belonged to the category wherein they personal expenditure was below 5000 and the second largest category was of 30.4% who never calculated and spent as and when required.

Also, from the Figure: - 2 we can clearly observe that the respondents belonging from the business

25001 OR MORE	5	3.4
NEVER CALCUALTED	45	30.4
Total	148	100.0

background 34% of them never calculated their monthly expenditure and 30.40% in the entire sample of Gen z irrespective of belonging to any family occupation also never calculated their monthly expenditure

Figure: - 2 Bar chart of Monthly personal expense of respondents and their family occupation.

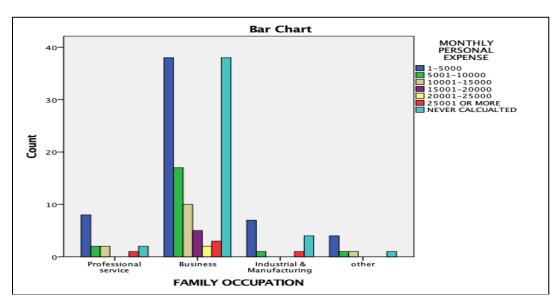
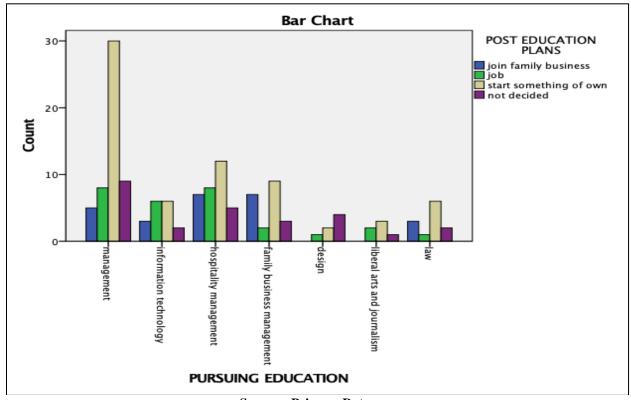


Table:- 2 Cross tabulation with frequency between the respondents Family occupation and their Monthly personal expenditure

				•					
		MONTH	LY PERSO	NAL EXPENS	SE				Total
							25001	NEVER	
			5001-	10001-	15001-	20001-	OR	CALCUA	
		1-5000	10000	15000	20000	25000	MORE	LTED	
		8	2	2	0	0	1	2	15
	Professional								100.00
	services	53.30%	13.30%	13.30%	0.00%	0.00%	6.70%	13.30%	%
Z		38	17	10	5	2	3	38	113
									100.00
- A	Business	33.60%	15.00%	8.80%	4.40%	1.80%	2.70%	33.60%	%
OCCUPATION		7	1	0	0	0	1	4	13
C_{C}	Industrial &								100.00
	Manufacturing	53.80%	7.70%	0.00%	0.00%	0.00%	7.70%	30.80%	%
ГΥ	Other	4	1	1	0	0	0	1	7
MI									100.00
FAMILY		57.10%	14.30%	14.30%	0.00%	0.00%	0.00%	14.30%	%
Tot									
al		57	21	13	5	2	5	45	148

1									100.00
		38.50%	14.20%	8.80%	3.40%	1.40%	3.40%	30.40%	%

Fig. 3 Respondents from various educational fields and their plans post their education



Source:- Primary Data

(a) Interpretation:- Gen Z persuing management have obvious choice to start something of their own and they are highest in numbers. The next

following them were respondents from the field of hospitality field.

Table:- 3
Cross tabulation:- Percentage frequency distribution of respondents post education plans with respect to their major reasons for their respective choices

		THE	REAS	SON T	го сн	OOSE	E POS	T EDU	CATIO	N PL	ANS					
				T			T			T	SCOPE I	FOR	T			T
				ot	AUT	ON	ot	FLEX	IBLE	ot	INNNOV	/ATIO	ot	CON	TR	ot
		MON	VEY	al	OMY	7	al	TIMI	NGS	al	N		al	OL		al
		yes	no		yes	no		yes	no		yes	no		yes	no	
EDUCATION S	JOIN FAMI LY BUSI NESS	16	9	25	7	18	25	11	14	25	17	8	25	4	21	25
/OC/	JOB	14	14	28	6	22	28	7	21	28	12	16	28	6	22	28
ST ED	STAR TUP	47	22	69	14	55	69	24	45	69	46	23	69	20	49	69
POS PL.≜	UNDE	11	15	26	2	24	26	4	22	26	7	19	26	9	17	26

	CIDE D															
Total				14			14			14			14			14
Count		88	60	8	29	119	8	46	102	8	82	66	8	39	109	8
%		59.	40.		19.	80.								26.	73.	
reason		50	50		60	40		31.1	68.9		55.40	44.60		40	60	
wise		%	%		%	%		0%	0%		%	%		%	%	

Source:- Primary data

(b) Interpretation: - The major reason to select their choice of career post their education is Money with 59.50% Yes and the second most top reason is innovation with 55.40%. The

respondents who have chosen Startup or Entrepreneurship as their future plan basically were the ones whose scores were highest for the reasons Money & Innovations.

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Table 4
Chi Square test to test the association of Post education plans of the respondents with the major reasons to choose their careers.

Sr no	Null Hypothesis	Chi- Square	Test		Result
		Value	df	p-Value	
H ₀₁	There is no association (relation) between respondents Post education plan and the reason of Money for their respective choice	6.571 ^a	3	.087	Cannot Reject Null Hypothesis
H_{02}	There is no association (relation) between respondents Post education plan and the reason of Autonomy for their respective choice	3.540 ^a	3	.316	Cannot Reject Null Hypothesis
H ₀₃	There is no association (relation) between respondents Post education plan and the reason of Flexibility for their respective choice	5.863 ^a	3	.118	Cannot Reject Null Hypothesis
H ₀₄	There is no association (relation) between respondents Post education plan and the reason of Innovation for their respective choice	15.468 ^a	3	.001	Reject Null Hypothesis
H ₀₆	There is no association (relation) between respondents Post education plan and the reason of Control for their respective choice	2.892 ^a	3	.409	Cannot Reject Null Hypothesis

Source:- Primary Data

The Null Hypothesis H_{04} was rejected as the association between Respondents post educational plan and Innovation was established. with the p (.001) which is P value <0.05. This indicated that there was a relationship established between respondents plans after

education and the reason for the same being innovation

 H_{07} :- There is no association (relation) between respondent's gender and their opinion that female entrepreneurs have different struggle from their male counterparts

Table:- 5
Cross Tabulation and Frequency table between Gender and Opinion about Female Entrepreneurs facing struggle different then Male counterparts.

Opinion about female entr	•	-	Total
struggles different then ma	aie entreprei	ieurs	Total
	yes	no	

GENDER	Female	32	40	72
	% within GENDER	44.40%	55.60%	100.00%
	Male	46	30	76
	% within GENDER	60.50%	39.50%	100.00%
Total		78	70	148

Chi Square: -3.836^{a} , df -1, p-value -0.050

V. RESULT

We reject Null Hypothesis H_{07} . There is an association between gender and the opinion on believing that the female entrepreneurs' struggles are different then male entrepreneurs. From the

cross tabulations it is clearly indicative that the Men are of a stronger opinion then women about the female entrepreneur's struggles being different by 60.5%. Also, in total score also both genders believe that female entrepreneurs have different struggle then men.

ISSN: 2349-4190

Table:- 6
One way ANOVA test for Age and Willingness to take risk for greater rewards and Decision making in situation of uncertainty

	N	Mean	Standard	F	p-
			Deviation		value
H_{08} There is no significant difference between Age and	148	3.95	.894	3.047	.012
Willingness to take risk for greater rewards					
H_{09} There is no significant difference between Age and Decision	148	3.30	1.069	2.668	.025
making in situations of uncertainty					

(c) Interpretations: - Null hypothesis H₀₈ & H₀₉ were rejected, A one-way ANOVA between subjects was conducted to compare the effect of age of respondents on the willingness to take risk for rewards and decision-making in situations of uncertainty. The result was significant effect at F(3.047), p=.012 & F(3.20), p=.025 at p-value < 0.05 level . The age of the respondents was the independent variable and the willingness to take risk for rewards and Decision-making in uncertainty was the dependent variables. It was established that the impact of age was significant on both the dependent variables.

VI. FINDINGS AND CONCLUSION

After conducting the various statistical tests certain major findings were established in this study on Generation Z and their entrepreneurial mindset. The demographic variables such as age , gender , family occupation , their monthly expenditure played as very important role in their entrepreneurial mindset . It was observed in the study that the generation Z is a carefree generation as they largely did not keep account of their expenses made, especially those who belonged from the business background. Mostly the respondents wanted to start something of their own and those who belonged from the field of management were the highest in their entrepreneur

drive and closely followed were the one from the hospitality field. The major influencing factor for the students to start their own start-up was Money and drive for innovation. The generation Z in this study realizes the importance of money and also is driven largely by innovations and these are the reasons that this generation wants to start on their own. A relationship between innovation and post education plans was identified. This brings us to the conclusion that the generation Z is of high entrepreneurial mindset as innovation is highly important for them.

The Generation Z still suffers from the mindset of gender bias as the study revealed an association between the Gender and the opinion that female entrepreneur journey is more difficult as compared to the men. The men were strong believers of this fact. It would be a scope of future study to investigate the major reasons of this belief.

Willingness to Risk taking for greater rewards was established within this age segment (generation Z). Taking Risk has been considered one of the critical factors for entrepreneur's mindset. Our study reveals that the generation Z is very open in taking up risks for greater returns. In the end this study has established strong connections in respect of demographic influences, willingness for innovation and risk taking amongst its respondents (gen Z).

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Impact of Exchange Rate on Sectoral indices in India

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ABSTRACT

This study tries to examine the relationship between the macro-economic variable and the share market. To establish this relationship we have undertaken exchange rate (US Dollar) and stock market indices – BSE AUTO, BSE IT, BSE FMCG, BSE Capital Goods and BSE BANKEX. The data has been taken from the time period of February, 2009 and February, 2019 on monthly basis. Johansen cointegration has been applied to check the long run relationship and cointegration between the macro-economic variable and share market. Fundamentally exchange rate might impact various sectors of the economy, though technically there might be other macro-economic factors that might impact much more significantly than the exchange rate. Granger Causality test has also been applied to check the impact of US Dollar long term as well as short term on the stock market indices. The results shows that US Dollar does not significantly impact the indices, hence there are many other variables that might be impacting the indices.

Keywords: macro-economic variable, stock market indices, exchange rate, Johansen cointegration test and Granger Causality test.

I. INTRODUCTION

Over many years, number of researches have been conducted, both empirically and theoretically, the relationship between the macro-economic variables and the returns from share market. (Chen et. al., 1986 and Fama 1981, 1990) It is now a clearly explained finding that share prices react to the volatility in the various macro-economic variables. However very few research has been done on the impact of the macro-economic variables on different sectors of the economy in the emerging stock market.

Share market of any country plays a very critical role in the development of various industries and is also a barometer for the growth of the overall economy. Whilst there were many steps undertaken by researchers to stabilize the markets of the developing countries, but the share markets of these countries are characterized by the volatility that happens due to various uncontrollable economic factors (Rangel and Engel, 2005). The share markets of emerging economies are much likely sensitive than that of the under-developed or developed economies to the changes and volatilities that happens not only at the local micro level but also at the global macro-level.

This paper investigates the relationship between the exchange rate and the different sectors of Indian economy – BSE AUTO, BSE FMCG, BSE IT, BSE Capital Goods and BSE BANKEX from the period of 2009 – 2019. The main objective of the paper is to examine the impact of the exchange rates on the various sectors of the economy, which in turn will show that which of the following sectors does not get affected by the volatility in the exchange rate.

There are many compelling reasons why the research has been conducted – there are many researches that

have been done in the past regarding the relationship between the macro-economic variables and the share market, but there is a paucity on impact on various different sector individually. In addition, particularly the impact of exchange rate volatility on the various sector of Indian share market is missing. This research will actually fill the missing blocks in the bank of knowledge by addressing the impact of individual macro-economic variable on each sector individually.

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The relationship between the macro-economic variables and the share market has always been an extensive contested topic. (Fama, 1970) According to Efficient Market Hypothesis, when the case is of efficient market, all the pertinent information about the volatility in the macro-economic variables are completely factored in the current market price of any share and henceforth the investors will only be able to earn normal profits. Now just going through the findings pf Efficient Market Hypothesis than the volatility in any of the macro-economic variables will not affect the share prices at all. However, this conclusion was later thoroughly investigated by Schwert and Fama (1977) and many other researchers avowed that there lies relationship between the macro-economic variables and share prices and the volatility in share prices do influence the share prices. In Arbitrage Pricing Theory (APT) too, there lies theoretical relationship between the macroeconomic variables and the share prices.

Chen et. al (1986) is one of the ideal research that states there lies relationship between the volatility in macro-economic variables and the share prices movements on the basis of APT, and also establishes there exists long term relationship between them. On the international level, many of the researchers have been able to prove this relationship (Maysami et. al,

(2004); Asaolu and Ognumuyiwan, (2011)). But there is a dearth when it comes to strongly affirm the relationship between the volatility in macroeconomic variables and share prices in India, though many researchers have tried to establish the relationship with the overall Index (see. Petheet. al, 2000; Bhattacharya et. al, 2006). Thus is a vital need for in depth study to understand which sector is the most influenced by the volatility that happens in the exchange rate. Furthermore, Indian capital market is having a commendable run of growth and is now the leading capital market amongst the developing nation and has also started to be a benchmark for many developing nations.

II. LITERATURE REVIEW

Fifield et. al. (2002), examined the local as well as the global economic factors that influences the share prices in emerging economies. GDP, interest rates, inflations rate represented the local macro-economic variables and world Industrial Production and world inflation acted as the global macro-economic variables. The global macro-economic variables had significant relationship the share market returns than that of the local macro-economic variables in the emerging share markets.

Returns from stock market highly correlated growth in money and fluctuation in interest rates Flannery et. al. (2002). 17 macro-economic variables were taken into account and then using GARCH model 6 of them were found to be price factored – Employment report, Balance of Trade, Housing starts, PPI, CPI and monetary aggregate.

Howe et. al. (2002), researched cointegration between various different macro-economic variables and different sector indices unlike traditionally researched composite indexes of Singapore. Various sectoral indexes like hotel index, property index, finance index, and different macroeconomic variables were undertaken to check the long-term equilibrium. The results showed that Singapore stock market and property index have cointegrating relationship with volatility in industrial production, interest rates, exchange rates and money supply.

Prices of stocks do reflect the profits that company might attain in future and these anticipated profits highly depends on the business cycles. Sadorsky (2002), tried to examine the macroeconomic factors prevailing in US, which might impact the technological stock prices. Three major factors were identified that affected the conditional volatility of the stock prices – the consumer price index, the term premium and the oil prices.

Bhanumurthy (2006), investigated the relationship between the various micro and macro-economic

variables in examining their influence on the exchange rate volatility in the short run. In short run, many of the dealers feel that micro-economic variables influences strongly on exchange rates such as central bank intervention, market movement, information flow, speculation, etc.

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Credit lending do not amplify the changes that happens in macro-economic variables Hofmann et. al (2006). The study tried to examine the nature of banks' lending to other NBFC during the times of changes in aggregate demand, supply and monetary policies, especially in Germany and Euro region. Responses in both of the areas are much likely the same, though there were some differences in the movements of interest rates, inflation, output, etc.

Bloch et. al (2008), examined how the volatility in oil prices impacts various different indicators of macro economy like employment and investment, in Thailand. VAR was employed to study the impact of the volatility in the oil prices and Granger Causality Test further showed the response function of the oil prices significantly impacted the unemployment rate and investments.

Mahendruet. al. (2010), analyzed the long-term relationship between the various different macroeconomic variables and the index of BSE SENSEX. The various different macro-economic variables includes foreign exchange rate, exchange rate, inflation rate and the prices of gold. Multiple regression model was employed to understand the relationship between the macro-economic variables and the stock market returns. The results showed gold prices and exchange rates highly influences the share prices whereas other variables like – inflation rate and foreign exchange reserves influences the share prices at a very limited extent only.

Investing in equities and capital market provides a unique option to the investors apart from traditional investment options, as investing in share market is directly related to the activities happening in the overall economy. Kalra (2012), using correlation and regression analysis found out that — gold prices, inflation and forex rates are the most critical factors that impacts the performance of SENSEX (stock market), in India.

Puja (2012), researched the relationship between the Indian share market and various different macroeconomic variables – Industrial Production Index, treasury bills rate, wholesale price index, exchange rate and money supply. Vector error correction model and Johansen's cointegration are used to examine the long term relationship between the macro-economic variables and share prices. It was observed that Industrial Production Index and money supply had positive impact on the share prices, and the short run interest rate and exchange rate are the ones who were

not having any significant relationship with the share prices. Long run relationship exist but not short relationship between macro-economic variables and share prices when it comes to Granger Causality.

Understanding the influence of interest rates on the Islamic banks is a critical aspect in understanding the framework of monetary and fiscal policies and even having a proper risk management of these institutions Arslan (2013). The research examined the impact of the volatility in interest on the working of Islamic banks. Using Vector Error Correction model they found that conventional theory that Islamic banks as work as interest free institution does not get impacted by the fluctuations in interest rates, stands incorrect when researched in Turkey – as the Islamic banks were influenced by the fluctuations that happens in the interest rates.

Kabir (2014), real growth of economy highly influences the overall growth of share market. It was found that there lies strong statistical relationship between, Malaysian stock prices, foreign stock prices and exchange rates with the exchange rate as the most significant factor.

Chan (2017), researched the dynamic relationship between the various macro-economic variables – forex, GDP, interest rate and inflation rate and the performance of Small and Open Economy (SOE) in Malaysia. The research shows that, there lies long-term relationship among the macro economic variables, forex and GDP have positive relationship and GDP-interest rates and GDP-inflation rate had negative relationship.

Uncertainties in interest rates strongly influences the stock market. Hajilee (2017) researched the long run and short run relationship between interest rates and stock market of 12 emerging economies by using cointegration and vector correcting model. There was significant influence of interest on all 12 emerging economies in short run, but in 9 out of 12 cases interest rates in long run significantly impact emerging economies. Results also showed the monetary and fiscal policies making is a critical task especially in the emerging economies.

The following study employs the time series data obtained from two major sources i.e., Bombay Stock Exchange official website and from Reserve Bank of India official website. From the BSE official website the sectoral indices time series data was extracted and from the RBI official website, historical exchange rate time series data was taken. We have undertaken exchange rate as the only macro-economic variable, as it is one of the most vital macro-economic variable. In addition, we have taken BSE AUTO, BSE FMCG, BSE IT, BSE Capital Goods and BSE BANKEX from the period of 2009 - 2019. These are some of the major sectors that depicts the growth of the overall economy, show also to see how the capital market of India is growing; these indices are taken in for research. The data undertaken has been from the time period of February, 2009 to February, 2019 on monthly basis. The data has been taken from BSE website and RBI official website.

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The variables selected in the study has been based on the currently available theoretical propositions and the empirical evidences. As we know that in time series, must follow some of the properties, as it must be stationary, which means the mean and variance must always remain constant over the time and the covariance between the two time periods depends on the time frame between the required time period. The mostly and commonly used test to check the stationarity is the unit root test. Now three unit root tests are available Augmented Dickey Fuller test, Phillips-Peron test and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test, and in this research, KPSS test has been selected to check the stationarity.

Then we need to check that whether there is autocorrelation, it is a common problem in the time series. Moreover, when the data series is having autocorrelation in it, the error term of the regression follows a pattern, which proves that there is something incorrect. Then Johansen cointegration test have been conducted to check that whether lies any cointegrating relationship between the data series. It helps us to establish the long run relationship or equilibrium in system with unit root variables (Rao, 2007).

III. METHODOLOGY

Table No.1 Acronyms of the variables selected.

Acronym	Meaning
BSE AUTO	Index of auto and related companies listed on BSE.
BSE IT	Index of Information Technology and related companies listed on BSE
BSE FMCG	Index of Fast Moving Consumer Goods and related companies listed on BSE
BSE Capital Goods	Index of Capital Goods and related companies listed on BSE
BSE BANKEX	Index of Banking and other related companies listed on BSE
US DOLLAR	Amount of Indian Rupees to buy 1 US Dollar

Hypothesis

The below shown hypothesis are the ones that will be used in identifying the relationship between the independent variable and the dependent variables.

For **BSE AUTO**:

H0 = US DOLLAR does not have a significant relationship with BSE AUTO (p-value > 0.05)

H1 = US DOLLAR do have a significant relationship with BSE AUTO (p-value < 0.05)

For **BSE IT:**

H0 = US DOLLAR does not have a significant relationship with BSE IT (p-value > 0.05)

H1= US DOLLAR does have a significant relationship with BSE IT (p-value < 0.05)

For **BSE FMCG**:

H0 = US DOLLAR does not have a significant relationship with BSE FMCG (p-value > 0.05)

H1 = US DOLLAR does have a significant relationship with BSE FMCG (p-value < 0.05)

ISSN: 2349-4190

For **BSE Capital Goods:**

H0 = US DOLLAR does not have a significant relationship with BSE Capital Goods (p-value > 0.05)

H1 = US DOLLAR does have a significant relationship with BSE Capital Goods (p-value < 0.05)

For **BSE BANKEX**:

H0 = US DOLLAR does not have a significant relationship with BSE BANKEX (p-value > 0.05)

H1 = US DOLLAR does have a significant relationship with BSE BANKEX (p-value < 0.05) Analysis

KPSS Test

Now let us check the KPSS test between the US Dollar and share market indices.

Table No. 2 KPSS Test analysis.

Indexes	Test statistic	10%	5%	1%	First difference
BSE AUTO	0.147	0.12	0.148	0.216	-
BSE IT	0.110442	0.12	0.148	0.216	-
BSE FMCG	0.138512	0.12	0.148	0.216	-
BSE Capital Goods	0.257135	0.12	0.148	0.216	0.0868293
BSE BANKEX	0.31216	0.12	0.148	0.216	0.0599227
US DOLLAR	0.228074	0.12	0.148	0.216	0.0754618

Now let us check the stationarity in the various data series that are undertaken in the research, that are 5 sectoral indices and 1 macro-economic variable, KPSS (Kwiatkowski-Phillips-Schmidt-Shin) test has applied to check the stationarity. Based on the above shown table we can see that t-stat of BSE AUTO, BSE IT and BSE FMCG are below the significance level of 1% i.e., asymptotic value of 0.216 and the t-stat for respective indices are BSE AUTO (0.147), BSE IT (0.11) and BSE FMCG (0.139) which clearly depicts that it is lower than 0.216. This means that all the three indices are stationary at the level itself. Now in case of BSE Capital Goods, BSE BANKEX and US DOLLAR we can see that the t-stat of theirs is bigger than the significance level of 1% with the

asymptotic value of 0.216; BSE Capital Goods (0.257), BSE BANKEX (0.312) and US DOLLAR (0.228). Now this shows that the data series is not stationary at level so now we need to add the first difference for the following three time series and now if we see the results, all of them are stationary at first difference i.e., BSE Capital Goods (0.087), BSE BANKEX (0.060) and US DOLLAR (0.075). Now we have to check the optimal lag order for each sectoral indices.

VAR LAG Selection

The below shown table depicts the VAR Lag selection model outcome for every sectoral indices selected for the research:

Table No. 3
Optimal lag order selection.

Lag Order	BSE AUTO	BSE IT	BSE FMCG	BSE Capital Goods	BSE BANKEX
1	16.501165*	15.383694*	14.412004*	16.602634	16.945699*
2	16.528936	15.398129	14.434499	16.622537	16.973476
3	16.523956	15.425899	14.417021	16.61053	16.958354
4	16.54743	15.45099	14.438514	16.577069*	16.982155
5	16.549205	15.475001	14.466552	16.586961	16.974294
6	16.576637	15.50227	14.477985	16.59959	17.000051
7	16.602207	15.524399	14.500155	16.620793	16.997765
8	16.629556	15.544684	14.504674	16.625002	17.02229
9	16.657724	15.573036	14.531793	16.651035	17.045355
10	16.685295	15.60104	14.523963	16.67053	17.068409
11	16.702324	15.617087	14.514803	16.696004	17.091562
12	16.730446	15.617092	14.542604	16.721268	17.11911

The above shown table depicts the no. of lags that are optimal for the study for each of the data series. The maximum no. of lags undertaken for the study are 12, and the figures with (*), shows that particular variable is optimal at that no. of lags. So now we can see the HQC (Hannan Quinn Criteria) for each of the sectoral indices, like for BSE AUTO, BSE IT, BSE FMCG and BSE BANKEX the optimal lag order is

one. Whereas for the BSE Capital Goods the optimal lag order is 4. This in turn is going to help us in examining Vector Autoregression.

ISSN: 2349-4190

(a) Autocorrelation

The below show table shows the test of autocorrelation of all the variables.

Table No. 4 Correlation of the data series.

Test fo	r correlat	ion
No.of lags	Rao F	p-value
lag 1	2.175	0.0002
lag 2	1.718	0.0005
lag 3	1.717	0.0001
lag 4	1.589	0.0001
lag 5	1.592	0.0001
lag 6	1.553	0.0001
lag 7	1.599	0
lag 8	1.511	0.0001
lag 9	1.577	0
lag 10	1.568	0
lag 11	1.553	0.0001
lag 12	1.516	0.0003

Here we can see that the p-value in all the lag order is less than 0.05. So we can reject the null hypothesis, which in turn means that our series don't have autocorrelation in it. Now let us check the normality of the data series.

(b) Normality of the data series

The below shown table shows us the chi-square of the data series, which will help us to know that whether the data is normally distributed or not.

Table No. 5
Normality Distribution of the data series.

0.63679

0.17616

0.40499

0.78438

-0.053441

1.0000

Residual correl	lation matrix	, C (6 x 6)
1.0000	0.22602	0.66008
0.22602	1.0000	0.24495
0.66008	0.24495	1.0000
0.63679	0.17616	0.40499
0.68230	0.19723	0.58667
0.00075757	0.083685	0.090789
Eigenvalues of	С	
0.177072		
0.298424		
0.601356		
0.862087		
1.08471		
2.97635		
Doornik-Hansen	test	
Chi-square(12)	= 36.0899 [0.0003]

From the above table we can understand that the data series are normally distributed as the p-value in Chisquare is much below the required level of 0.05. So hence, we can reject the null hypothesis and say that the data is normally distributed.

Now we will check that whether there lies any relationship between the volatility in the exchange

rate (US DOLLAR) and the various sectoral indices undertaken, using Johansen cointegration test.

0.00075757

0.083685

0.090789

-0.053441

-0.030773

1.0000

0.68230

0.19723

0.58667

0.78438

-0.030773

1.0000

ISSN: 2349-4190

(c) Johansen Cointegration test

The below shown table shows us the cointegration test between the (dependent variables) all 5 sectoral indices and the (independent variable) US DOLLAR.

Table No. 6 Johansen cointegration test analysis

		oniungen come	· ·	
Rank	Eigenvalue	Trace stats	Max-Eigen stats (Lmax test)	p- value
0	0.3471	101.77	46.47	0
1	0.22111	55.298	27.238	0.0075
2	0.18617	28.06	22.455	0.0796
3	0.048416	5.6047	5.4093	0.7428
4	0.0017903	0.19532	0.19532	0.6585

Here from the above table we can see that there is 2 cointegration equation, as the p-value is less than 0.05 so the null hypothesis is rejected. BSE AUTO and BSE IT are having p-value less than 0.05. And as max-eigen value is less than the trace stats so we shall examine the granger causality for all of the indices.

(d) Granger Causality Test

The below shown table shows us the granger causality between the independent variable (US DOLLAR) and the dependent variables (BSE AUTO, BSE IT, BSE FMCG, BSE Capital Goods and BSE BANKEX).

Null Hypothesis	lag order	p-value	Results
US DOLLAR do not granger cause BSE AUTO	1	0.12	ACCEPT
BSE AUTO do not granger cause US DOLLAR	1	0.28	ACCEPT
US DOLLAR do not granger cause BSE IT	1	0.17	ACCEPT
BSE IT do not granger cause US DOLLAR	1	0.20	ACCEPT
US DOLLAR do not granger cause BSE FMCG	1	0.06	ACCEPT

BSE FMCG do not granger cause US DOLLAR	1	0.07	ACCEPT
US DOLLAR do not granger cause BSE Capital goods	4	0.37	ACCEPT
BSE Capital Goods do not granger cause US DOLLAR	4	0.84	ACCEPT
US DOLLAR do not granger cause BSE BANKEX	1	0.14	ACCEPT
BSE BANKEX do not granger cause US DOLLAR	1	0.23	ACCEPT

Here it is proved that there is no "cause and effect" relationship between the macro-economic variable (US DOLLAR) and various sectoral indices. As the p-value of every equation is more than 0.05 so we fail to reject the null hypothesis. The null hypothesis over here is for eg. Independent variable (US DOLLAR) do not granger cause dependent variable (sectoral indices).

IV. CONCLUSION

The research undertaken had the main objective of examining the relationship between the macroeconomic variable i.e., US DOLLAR and various sectoral indices of India - BSE AUTO, BSE IT, BSE FMCG, BSE Capital Goods and BSE BANKEX. The macro-economic variable acted as an independent variable whereas all the sectoral indices acted as the dependent variable. Firstly, we checked the stationarity of the data series using the KPSS test, and found that BSE Capital Goods, BSE BANKEX and US DOLLAR were not stationary at level unlike other time series but were stationary at first difference. Then optimal lag order for every data series was calculated where it was found that apart BSE Capital Goods which was having optimal lag order of 4, every indices were having the optimal lag order of 1. Then autocorrelation was checked among all the data series, where it was found that there was no autocorrelation exist in the data series. Then to check whether the data is normally distributed Chisquare was calculated where it is also proved that the data is normally distributed. Now Johansen cointegration test was applied to check that whether there is cointegration between the US DOLLAR and any of the sectoral indices, it can be seen that there is cointegration at 2 equation. So now to check the granger cause and effect relationship we have applied granger causality test. Here in turn we found that we failed to reject the null hypothesis as the p-value was above 0.05 in every case. So we can conclude that though exchange rate is a leading macro-economic variable but there are many other leading macroeconomic variable that might be impacting the following sector significantly. So growth of these sectors is not significantly impacted by the volatility in the US DOLLAR.

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Effect of Perceived Control Behaviour, Personal Attitude and Subjective Norm on Entrepreneurship Intention: Special case of Punjab University Students

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ABSTRACT

Entrepreneurship, start-ups, incubators etc. are buzzwords in the world of business today. With huge valuations to Indian start-ups lately and so many success stories out there, the area of entrepreneurship is abuzz with new ideas and even better new ventures. The environment has changed a lot in India from the times when new ventures were only limited to business families and their children. Today there is a considerable increase in the number of people willing to take the risk of setting up a new business. Intention is the genesis of any behavior (Ajzen 1991). Thus it is very logical and important to study entrepreneurial intention at the student level so that we can understand the entrepreneurial scenario prevalent in the society. The present research is to check whether model fits to the students of Punjab University and also make a regression model for the same.

Keywords: Entrepreneurship, Entrepreneurship intention

I. INTRODUCTION

Entrepreneurship, start-ups, incubators etc. are buzzwords in the world of business today. With huge valuations to Indian startups lately and so many success stories out there, the area of entrepreneurship is abuzz with new ideas and even better new ventures. The environment has changed a lot in India from the times when new ventures were only limited to business families and their children. Today there is a considerable increase in the number of people willing to take the risk of setting up a new business. According to a Randstad Work monitor survey 2017, 83 per cent of the Indian workforce would like to be an entrepreneur. Around 86 per cent of the surveyed felt that the environment to start and run a startup was favorable in India and 84 per cent said that the Indian Government is supporting the startups.

The IT boom facilitated by the government's initiatives is providing a wholesome environment for the startups to flourish in India. The Startup India initiative which provides mentoring and facilitation to the startups is one of the most comprehensive initiatives of recent times by the government to make the Indians job creators and not job seekers. Initiatives such as Make in India and Digital India are also helping the current situation.

The success of Indian Startups like Flipkart (about to close a billion dollar deal with Walmart), OYO and Paytm have only heightened the ambitions.

II. REVIEW OF LITERATURE

A lot of research has taken place on the following model of Entrepreneurship intention derived from model of planned behavior amongst students. These studies have compared Entrepreneurship Intentions across different countries, cultures and educational backgrounds (Autio et al 2001; Lüthje&Franke 2003; Souitaris, Zerbinati& Al-Laham 2007, Ismail et al. 2009).

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Intention is the genesis of any behavior (Ajzen 1991). Thus it is very logical and important to study entrepreneurial intention at the student level so that we can understand the entrepreneurial scenario prevalent in the society. Entrepreneurial intention is influenced by a number of factors ranging from the society to personal abilities of an individual.

To study these factors (Linen and Chen 2009) based on the theory of planned behavior given by (Ajzen 1991) developed an entrepreneurial intention questionnaire which helps measure entrepreneurial intention as well as the impact of the three factors i.e. attitude, subjective norms and control behavior.

The above model of entrepreneurship intention has been tested and validated across various cultures and settings. (Autio et al. 2001) conducted and tested the theory of planned behavior among university students in US, UK and Finland and compares the entrepreneurial intent among these students. The results indicated that Perceived behavior control emerged as the strongest determinant of entrepreneurial intent.

Considerable research has taken place on the theory of planned behavior being the model based on which entrepreneurship intent studies are conducted. (Carr and Sequeira 2007) extended the model to act as mediating variable with prior family business exposure acting as the Independent variable to the dependent variable of

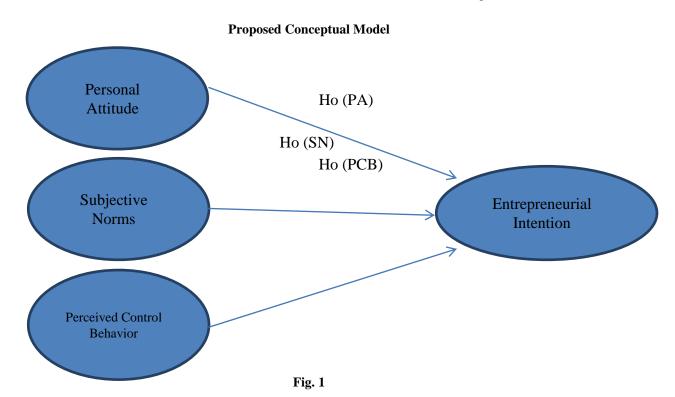
Entrepreneurial intention. (Kautonen, Gelderen& Fink 2015) highlight the robustness and relevance of the model in predicting the Entrepreneurial intent. The study conducted in Austria and Finland with a sample of 969 adults showed that the three factors/motivators explained 59% of variance in Entrepreneurial intention.

(Zerbinati and A. 2007) conducted research to understand the educational aspect of intention. The study used a sample 250 students who were provided entrepreneurial education. Using the model the researchers found that entrepreneurial education programs provide a boost to entrepreneurial intent.

III. NEED FOR THE STUDY

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The present research is to check whether model fits to the students of Panjab University and also make a regression model for the same. The data is collected through a self-administered questionnaire developed by Linan and Chen in 2009. The questionnaire measures the impact of Personal Subjective Norms and Perceived Attitude, behavioural control (Aizen 1991) Entrepreneurship Intention amongst the university students. The study highlights the validity of the questionnaire developed in the context of Indian society. The study will use confirmatory factor analysis to test the reliability of the model in the Indian setting and also consequently study how each factor influences entrepreneurial intention.



IV. VARIABLES OF THE STUDY

- (a) Dependent Variable- Entrepreneurial Intention is a person's attempt at entrepreneurial behaviour (Linan& Chen, 2009).
- (b) Independent Variable
 - (i) **Personal Attitude** refers toone's perception about them about being an entrepreneur (Ajzen 1991).
 - (ii) **Subjective Norm**is how the important people i.e. the reference people perceive

- the decision to become an entrepreneur (Ajzen 1991).
- (iii) **Perceived Control Behaviour** is how confident one is about being an entrepreneur.
- (iv) Hypothesis formulation
- (v) For Regression
 - **Ho** (**PA**) There is no significant impact of Personal Attitude on Entrepreneurial Intention
 - **Ho** (**SN**) There is no significant impact of Subject Norms on Entrepreneurial Intention

• **Ho** (PCB) - There is no significant impact of Perceived Control Behavior

on Entrepreneurial Intention.

ISSN: 2349-4190

(c) Sample Details-

Sample Size - 108

- (i) **Sample Description** The sample consisted of equal representation from the major education fields in the University:
 - Arts
 - Commerce and Management
 - Engineering
 - Sciences

Each background was represented by 30 Students each. The Departments were chosen randomly through Random sampling tables on list of departments under the different backgrounds as per the Panjab University Website.

The departments selected after the tables are -

- (i) **Arts** Department of Laws
- (ii) Commerce and Management UBS
- (iii) Engineering Chemical Engineering
- (iv) **Sciences -** Department of Physics

V. DATA ANALYSIS

The reliability of the model was tested using confirmatory factor analysis on AMOS. CFA is relevant for evaluating a scale's/model structure and consistency. Confirmatory factor analysis was conducted with the of help of the estimation method of the Maximum Likelihood over the variance-covariance matrix for the four factor model through the AMOS 21.0 statistical package. Goodness-of-fit statistics were used on the factor models. The fit statistics include the comparative fit index, goodness of fit index and incremental fit index ranging between 0 to 1 with a value of 0.9 being considered as good (Wang et al. 1996). If the value of the root mean square error of approximation is≤0.08 it indicates that it is a 'satisfactory fit', whereas if the values are ≥ 0.1 then the model is rejected (Browne &Cudeck 1989). The goodness of fit indices for this model are as follows

Table 1

The above indices in Table 1 all lie within limits and thus point towards the fact that the model is a good fit. The model constructed in AMOS is as follows –

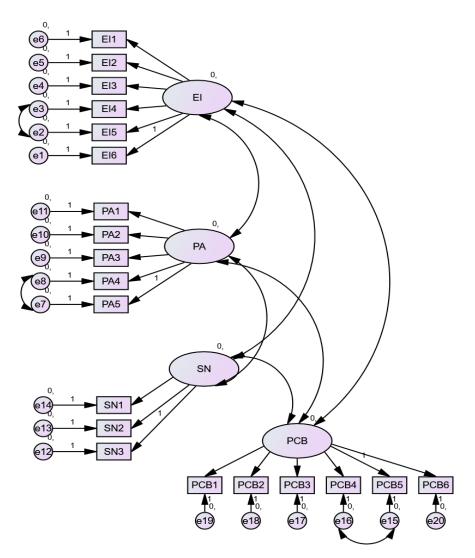


Fig. 2

Before proceeding further for regression analysis, the multicollinearity needs to be checked once. As per literature, no multi-collinearity must exist amongst the independent variables. This is one of the assumptions for carrying out Regression analysis. In case of multi-collinearity, the analysis of the data to develop a regression model is inapp^ropriate. Collinearity statistics provide

Tolerance and VIF (Variance Inflation Factor) levels. Some argue that a tolerance value less than .1 or VIF greater than 5 roughly Indicates significant multi-collinearity. Upon multi-collinearity analysis, the following results in Table 2 were attained which indicate that there is no multi-colinearity amongst the independent variables.

Table 2

Variable	Tolerance	VIF
Personal Attitude	0.688	1.453
Subjective Norm	0.973	1.028
Perceived Control Behavior	0.688	1.453

This gives us a go ahead for carrying out regression analysis. Moving forward with exploration of the model to form the equation in the form of –

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 \dots$$

Here, Y – Entrepreneurial Intention

X₁- Personal Attitude

X₂ – Subjective Norm

X₃ – Perceived Control behavior

Upon further analysis it was found that the value of R^2 for the model came out to be 0.712 which

signifies that 71.2 % variance in Entrepreneurial Intention can be explained by the three factors.

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Also the p –value as shown in the table 3 below is 0.000 i.e. below 0.05 thus highlighting that the regression model is significant.

Table 3

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	213.113	3	71.038	85.684	.000 ^b
	Residual	86.223	104	0.829		
	Total	299.336	107			

Now we move to form the regression equation based on regression coefficients and p-values. The table4 for the regression coefficients and significance values highlight that Ho (PA) and Ho (PCB) are rejected whereas the Ho (SN) is accepted for the sample of students.

Table 4

Model	Unstandardized Coefficients			Standardized Coefficients	t	Sig.
		Beta	Std. Error	Beta		
1	(Constant)	-0.584	0.422		-1.385	0.000
	PA	0.677	0.066	0.649	10.224	0.000
	SN	0.025	0.065	0.021	0.385	0.701
	РСВ	0.343	0.078	0.281	4.366	0.000

The Regression equation comes out to be -

Entrepreneurship Intention = -0.584 + 0.649 (Personal Attitude) +0.281 (Perceived Control Behavior

VI. CONCLUSION AND FUTURE RESEARCH

Personal attitude has a fairly stronger impact on Entrepreneurship Intention. This implies more than anything else it's the person's attitude toward becoming a job creator that will push the person towards starting a new venture. The 'attitude of a person is everything' as told in the book by Jeff Keller. With the overall environment very positive in terms of agency push for better infrastructure as well as so many successful stories, attitude is only bound to get better as more and more people try their hand entrepreneurship. This is in with the various surveys being conducted that show that people want to be entrepreneurs as well consider this the best time to be one.

The second factor that's significant in terms of its impact is Perceived control behavior which signifies more of the control belief component of behavior. This highlights that people with high control behavior are expected to have higher entrepreneurial intent. It refers to the conviction that one can successfully pull off the task at hand. This is a very important aspect as self-confidence takes a person a long way when faced with challenges like that of starting up a venture.

The model can be extended for future research with factors like educational backgrounds, entrepreneurship education, family backgrounds etc. be included to understand how these factors can influence the given model of entrepreneurship intention.

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Video Instructional Material (VIM) Integrated Teaching & Learning in Science at Secondary Level

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ABSTRACT

The present study is carried out to examine the effectiveness of Video Instructional Material (VIM) on secondary level students' achievement in science at knowledge, understanding and application level and their attitude towards VIM in Wardha district of Maharashtra, India. This research is based on pre-test and post-test single group experimental design. In this study, one secondary school was selected using simple random sampling technique. All 40 students of class 9th of that school were included in the experimental group for conducting the experiment. Lesson plans of science were developed by the researcher using VIM. For data collection, self-made Science Achievement Test (SAT) and self-made Attitude Scale towards Video Instructional Material (ASVIM) were used. SAT comprised of 30 multiple choice questions of secondary school science at knowledge, understanding and application domain. The reliability coefficient value of SAT was 0.70 calculated by split-half method. ASVIM comprised of 20 statements. The pre-test of SAT was administrated on the group before starting the experiment. The next stage involved the treatment phase in which the researcher taught 2 chapters of science (Digestive System of Human and Air Pollution) to students with the help of lesson plans which were developed by researcher. When the treatment was over, post-test of SAT and ASVIM were administrated on the group. After collecting the data, the Shapiro-Wilk test was used for checking the normality of the data and then analysis of data was done by using both descriptive (Mean, Standard deviation) and inferential (t-test) statistics. A hypothesis was tested on 0.01 level of significance. After the analysis of data the findings of the study revealed that the students taught by the VIM performed better on Science Achievement Test at all three levels of the cognitive domain and students have positive attitude towards VIM. These findings indicate that the VIM was found to be significantly effective in terms of achievement in science. Therefore it can be concluded that the VIM is effective to learn science. Based on the result obtained, it is therefore recommended that teachers should use VIM for teaching science and other subjects at secondary level to facilitate learning of higher levels of cognition.

Keywords: Effectiveness, Video Instructional Material, Achievement in Science, Attitude towards Video Instructional Material.

I. INTRODUCTION

In this 21st century, the term "technology" is an important issue in many fields including education. This is because technology has become the knowledge transfer highway in most countries(Nath& Srivastava, 2015). Technology integration nowadays has gone through innovations and transformed our societies that has totally changed the way people think, work and live (Hamidi, Meshkat, Rezaee, &Jafari, 2011). As part of this, schools and other educational institutions which are supposed to prepare students to live in "a knowledge society" need to consider ICT integration in their curriculum (Ghavifekr, Afshari & AmlaSalleh, 2012).

Over the past two decades, Information Technology (IT) has broadened to become Information and Communication Technology (ICT), and has become better established within schools, colleges and universities (Abbott, 2001). ICT can play a major role in developing such a classroom environment and bringing in a paradigm shift in education practices across the world (Niederhausen & Stoddart, 2001). ICT based learning is filled with active and engaged

learning. It inspires students to obtain a deeper knowledge gained through this method far more readily than through traditional textbook centered learning. In addition, students develop confidence and self-direction as they more through both teambased and independent work (Cox and Marshall, 2007)

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The importance of ICT is quite evidence from the educational perspective. ICT has the capacity to provide higher interactive potential for users to develop their individual, intellectual and creative ability. (Shavinina, 2001). At the instructional level, computers are used by pupils to learn reading, mathematics, social studies, art, music, simulation and health practices (Tezci, 2011).

UNESCO (2002) highlights how the application of ICT could benefit the students, employers and the governments. While technology can bring about a learner centered Information Communication and Technology in Higher Education in India. It could also be harnessed for multiple purpose such as increasing the capacity and cost effectiveness of education and training systems and enhance the quality of higher education.

Video Instructional Material (VIM) is a systematic planned, skillfully arranged and effectively controlled video instruction for providing individualized instruction or learning experiences. The subject matter is logically sequenced into small segments. It is an application of the principles of behavioral science and technology in the field of education. In VIM concepts were made more comprehensive with the help of daily life examples and pictures. Students were free to learn on the basis of their capacities. They may also clear his or her doubts by discussion with teacher after study through VIM (Sharma, 2013).

II. LITERATURE REVIEWS

Ishika (2007)conducted a study entitled Effectiveness of Video as an Instructional Medium in Teaching Rural Children Agricultural and **Environmental Sciences.** The main aim of this study was to determine the effectiveness of video in comprise with selected instructional media foe teaching primary school pupils agriculture and environmental sciences. The quasi pretest- posttest experimental research design was used in research. 240 pupils from 3 rural primary schools were selected with the help of purposive sampling technique for research. Self-made achievement test was used for data collection. T-test was used by researcher for analysis of data. After analysis of data, it was found that video is an effective as the traditional teacher in teaching primary school children agriculture and environmental issues.

Mendoza, Caranto& David (2015) conducted a entitled **Effectiveness** of Video research Presentation to Student's learning. This study was conducted to identify the effectiveness of video presentation to student's learning. 224 students of Benguet State University were included in this research. For collection. self-made data questionnaires were used. T-test, ANOVA were used for analysis of data with the help of SPSS version 20. After analysis of data researcher was found that video based study materials boots student's creativity and cooperation. It was also found that there is no significance difference on student's perceptions of the effectiveness of video presentation to student's learning when grouped according to gender and there is a significance difference exists among student's perceptions of the effectiveness of video presentation when grouped according to their academic level. Furthermore, it was revealed that video based study materials can help motivate students and create learning-friendly environment to learn new concepts.

Effiong, Ekpo & Igiri (2015) conducted a research to determine the **Impact of Instructional Materials in Teaching and Learning of Biology in Senior**

Secondary Schools in Yokurr LG A. 5 secondary schools were selected to study. Self-made questionnaires were used to data collection. After collection of data, it was analyzed through the use of frequencies and percentages. The result of the findings revealed that there is a positive achievement in students taught by highly qualified biology teachers and those exposed to instructional materials during lessons.

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Idris, Shamsuddin, Arome&Aminue (2018) studied the Use of audio-visual materials in teaching and learning of classification of living things among secondary school students in sabongari LGA of Kaduna State. The main objective of this study was to identify the effectiveness of Audio- Visual aids on the academic achievement of secondary level students. 100 students were selected as sample with the help of purposive sampling technique. In this study quasi-experimental research design was used. Self-made Classification of Living Things Achievement Test (CLTAT) was used for data collection. T-test was used for data collection with the help of SPSS, 22 versions. After analysis of data it was found that there is unavailability of such materials in the study area and with a significant level of 0.001, it shows that using audio-visual aids in teaching classification of living things plays the role of enhancing academic performance.

III. OBJECTIVES OF THE STUDY

The study was conducted with the following objectives-

- (a) To develop science lesson plans using Video Instructional Material.
- (b) To study, the effect of VIM on the student's achievement in science at secondary level.
- (c) To study, the attitude of students towards Video Instructional Material in Science.

IV. HYPOTHESIS

The following were the hypothesis of the present study-

H₀ There is no significant difference in the mean scores of pre-test and post-test of achievement in science of secondary level students taught through the Video Instructional Material.

H₁ The students have positive attitude towards Video Instructional Material.

V. VARIABLES

In the present research following were the variables-

- (a) Independent variable: Independent variables the condition or characteristic that the experimenter manipulates or in his/ her attempt to ascertain their relationship to observed phenomenon. In the present study, method of Treatment acted as an independent variable. The treatment involved the Video Instructional Material.
- (b) **Dependent variable:** Dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable. The achievement in science of students taken as dependent variable. Which was measured twice before and after treatment for experimental group.

VI. RESEARCH DESIGN

Present research was Experimental in nature. In this research Pre-test and Post-test single group experimental research design was used as research design.

- (a) Sample and Sampling- In order to select the representative sample from the population, random sampling technique was used. In this study, Maharashtra State Board affiliated one secondary school from Wardha city was selected using simple random sampling technique and all the 40 students of 9th standard of that school were included in the experimental group for the research purpose.
- (b) Research tools of the Study- In the present research, data were collected in respective of variables, namely, Achievement in Science and Attitude towards Video Instructional Material were assessed with the help of tools developed by the researcher.
 - Science Achievement Test Achievement of students in science was assessed with the help of Science Achievement Test (SAT) which was developed by the researcher and it was given to some of the experts for the establishment of face and content validity. Some indispensable modifications were done according to their suggestions. The preliminary try out for SAT was made on 120 students of 9th class of other schools. It has reliability coefficient value 0.70 calculated by split-half method. The SAT comprised of 30 multiple choice questions of secondary school science pertaining to knowledge, understanding and application

level. There was no negative marking. For each correct response, the students were given 2 marks whereas in case of incorrect response, they were allotted 0 marks.

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Attitude Scale towards Video Material **Instructional** (ASVIM): Attitude of students towards Video Instructional Material was assessed by Attitude Scale developed investigator. The scale comprised 20 statements (10 Positive statements and 10 Negative Statements). Against each statement five point (Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree) rating scale was quality given. In case of positive statement Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree were assessed weightages of 5, 4, 3, 2and 1 while for negative statement it was 1, 2, 3, 4 and 5 respectively. Thus total scores ranges from 20 to 100. The score above 50 shows positive attitude.

VII. STATISTICAL TECHNIQUES

The researcher used the Shapiro-Wilk test to check the normality of data after it the objective wise data analyzed in the following manner-

- (a) Correlated t-test was used for comparing mean scores of pre-test and post-test of achievement in science of secondary level students taught through the Video Instructional Material.
- (b) Mean, Standard deviation and Coefficient of Variation were used to study attitude of students taught through the Video Instructional Material in Science.

VIII. PHASES OF THE STUDY

The present research involved three viable stages as pre-testing, treatment and post-testing stage. The earliest stage involved pre-testing of all the students on achievement. The next stage involved the treatment, in which the researcher taught 2 chapters of science (Digestive System and Air Pollution) to students with the help of lesson plans that were developed using Video Instructional Material. In last stage SAT was administrated as Post-test and ASVIM was also administrated on students to know attitude of students towards Video Instructional Material.

Table 1

First Stage	Second Stage		Third Stage
Administrated	Taught 2 chapters of science (Digestive System and Air Pollution) to	1.	Administrated
SAT as Pre-test	students with the help of lesson plans that were developed using		SAT as Post-test.
	Video Instructional Material.	2.	Administrated
	(For 14 working days and 45 minutes/ day)		ASVIM on
			students.

IX. ANALYSIS AND INTERPRETATION OF DATA AND DISCUSSION OF RESULT

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Before applying the appropriate statistics, the normality of the data was checked by the researcher with the help of Shapiro-Wilk test (Because N<50). A schematic view of the result of Shapiro-Wilk test is presented in the following table-

Table 2

	Shapiro-Wilk			
Achievement Scores	Statistics	Df	Significance	
Pre-test	0.928	40	0.004	
Post-test	0.942	40	0.008	

From the table number 02, it is evident that the Shapiro-Wilk test value for pre-test score of achievement is 0.928 whose probability of significance with df=40 is 0.004 which is less than 0.01 level of significance, hence not significant at 0.01 level of significance. Thus the null hypothesis that the distribution of pre-test scores of achievement does not deviate significantly from normality is accepted. Thus the distribution of pre scores of achievement is normally distributed.

The Shapiro-Wilk test value for post-test score of achievement is 0.942 whose probability of significance with df=40 is 0.008 which is less than 0.01 level of significance, hence not significant at 0.01 level of significance. Thus the null hypothesis that the distribution of post-test scores of achievement does not deviate significantly from

normality is accepted and hence the distribution of post-achievement scores is normally distributed.

(a) Comparison of mean scores of pre-test and post-test of achievement in science of secondary level students taught through the Video Instructional Material, parametric statistic i.e. correlated t-test was used for the analysis of data.

With the help of Shapiro-Wilk test it was proved that the data was normally distributed hence for Comparison of mean scores of pre-test and post-test of achievement in science of secondary level students taught through the Video Instructional Material, parametric statistic i.e. correlated t-test was used for the analysis of data.

Table 3
Mean, S.D., Correlation, df and t-value of Pre-Test and Post-Test Achievement Score of the Group

Grou	Measurement	N	Mean	S.D.	R	Df	t-value	Sig. (2-tailed)
Selecte	d Pre-test	40	19.25	2.14				
Group	Post-test	40	32.42	2.19	0.420	39	35.70	0.000

From the table number 3, it is evident that the mean score of pre-test and post-test of the selected group are 19.25 and 32.42. Standard deviation (S.D.) of Pre-test and post-test of the group are 2.14 and 2.19. The value of r is 0.420. The t-value calculated from

above two scores is 35.70 whose p value on two tailed is 0.000 which is less than 0.001, so it is significant at 0.01 level of significance. Therefore, the null hypothesis that there is no significant difference in the mean scores of pre-test and post-test

of achievement in science of secondary level students taught through the Video Instructional Material. Hence, there is a significant difference between mean scores of pre-test and post-test of achievement in science of secondary level students taught through the Video Instructional Material. Thereby it can be concluded that the Video Instructional Material is more effective for teaching science at secondary level.

(b) Attitude of students towards Video Instructional Material in Science.

ISSN: 2349-4190

The third object was to study the attitude of students towards Video Instructional Material in Science. The attitude towards VIM was assisted at the end of treatment. The data was analyzed with the help of Mean and Standard Deviation and Coefficient of Variation. The result is given in the following table-

Table 4

Group Mean		Standard Deviation	Coefficient of Variation	
Taught through Video				
Instructional Material	78.42	21.09	26.65%	

From the table number 4, it is evident that the Mean score of Attitude towards Video Instructional Material was found to be 78.42. The Attitude Scale towards Video Instructional Material contained 20 statements related to different aspects of Video Instructional Material. Against each statement a five point scale was given on which students were to give their responses. Thus, the score of the students could range 20 and 100. The Mean score of ASVIM was towards 100 signifying strong positive. The Coefficient of Variation was found to be 26.65% which is quite low. It indicates that, as a group the Attitude towards Video Instructional Material were almost irrevocable and strong favorable. It may, therefore be concluded that the students have positive attitude towards Video Instructional Material.

X. CONCLUSION

The present research on the Video Instructional Material reported indicates towards an overall positive outcome related to students learning in science. Video Instructional Material has several positive effects on student' knowledge content. Student performed better on assessment of science's content knowledge if they are taught with the help of Video Instructional Material. In summary, the present study indicate that the VIM had a positive effect on students' content knowledge of science and the development of skills such as collaboration, critical thinking and problem solving in real life situations.

XI. DELIMITATIONS OF THE STUDY

Due to the constraint of time, resources and finance, this study is confined only to the Maharashtra State Board affiliated secondary schools in Wardha district of Maharashtra. The study is confined to only 40 students of class 9th of a single school. In this research only two chapters of science subject were taught.

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Reinventing the Role of Entrepreneurship on Economic Development and Social Transformation

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ABSTRACT

Entrepreneurship is a creative discipline having innovative scope for developing economy of a nation. It assures human empowerment and secures life with all-round development activities. It acts as the soul of socio-economic activities as architectural foundation for nation building, human progress and social transformation in all-comprehensive manner to solve the problems of human deprivation, social marginalization and regional disparities. So, the study seeks to analyze all such objectives for increasing opportunities and act as the rejoinder to strengthen potential value of human life bringing possibilities with respect to holistic growth, sustainable development and dynamic social rolling in forward moving tendencies. Reinventing role of entrepreneurship laudably discusses issues pertaining to the picture of civil society norms for economic development and social transformation. Hence, the study provides relevant findings, appropriate suggestions and judicious recommendations in 'path-goal' relativity approach. At the end, conclusion will be provided to make the study relevant to policymakers, administrators, researchers, social architect, academicians and others for building the foundation of civil society to the existential autonomy of life with value added norms of human living pursuits for better future, healthy living and potential development.

Keywords: Economic Integration, Human Marginalization, Make-in-India, Regional Disparity, Smart City.

I. INTRODUCTION

Entrepreneurship is a vibrant discipline in modern world in an age of technological reformation, social transformation and global population growth in market complexities as well as business redesign for complementary scale of operating the socioeconomic productive activities with competitive edge, integrative nature of human living parameters and dynamic social rolling. Empirical studies on the role of entrepreneurship in economic growth reveals mixed evidence. Whatever be the case, it is observed that entrepreneurship has long been considered as a crucial mechanism of economic development¹. It is clear therefore that in modern times, we cannot ignore the role of entrepreneurship for high income generation, employment creation and transition of the prospective growth of modern civil societies, in so far as the imbalances of the rich and poor are concerned to the social living parameters with respect to free existential autonomy of life bringing possibilities are there in the economies. Thus, it needs to be mentioned here undoubtedly that the Global Entrepreneurship (GEM) Monitor provides comparative data on entrepreneurship from a wide range of countries, which predicts there is positive correlation between growth oriented concept and human development that ultimately concerns to social transformation. As a matter of fact, we may cite the case of China, Hungary, Poland, Russia and Slovenia which are having effects of the entrepreneurial activity on economic growth in high income social transition; whereas, the countries as observed having low income are Argentina, Brazil,

Chile, India, Mexico, South Africa and Thailand. Thus, the role of entrepreneurial activities for growth in general and the growth with transformative development in particular is quite evident from these examples. Again, it can be said that the production factors: capital, labor, technology entrepreneurship are all the proximate causes of economic development, whereas institutions are a fundamental cause of economic development². Hence, the argument of Nelson and Pack³ that next to productivity growth and technological change in established sectors, the development process in less advanced countries is largely about structural change holds good under the circumstances. So, it can be predicted well that the role of entrepreneurs in developing countries does not equal innovation and R&D commonly understood in advanced economies. Their role is to discover that a certain good, well established in world markets can be produced at home at low cost⁴. From the discussions made so far, it is clear that in modern times entrepreneurship has to reinvent its role in new dimensional way with level playing norms of institutional mechanism for social transformation, in terms of economic development through income generation, employment creation and higher order of growth rate by means of assured quality services, excellent productive activities, innovative skill development and business policy redesign with reformative means, along with the change of market competitiveness to come out successfully in competitive edge through business process reengineering⁵ (BPR). All such paradigms shift in reformative technological order of changing global business world will find healthy discourses in this paper, in coagulating the reinventing process of

entrepreneurship role model to illuminate the picture of the civil society for existential freedom of human life bringing possibilities.

II. OBJECTIVES OF THE STUDY

The study is devoted to wide range of parameters on reinventing the role of entrepreneurship for economic development and social transformation in holistic approach. Entire research is based on development goals for bringing quality of work life (QWL), to rejuvenate the structure of civil society as per norms of business vision, entrepreneurial mission of work and strategies for balanced growth. These facts are illuminated in sparkling manner with empirical research findings to embrace the policy framework issues for effective entrepreneurial activities. Thus, the study is expected to find out means and ways for eliminating social poverty, eradicating regional imbalances and reducing gaps between rich and poor in terms of committed services to solve the problems of social inequalities with justice driven principles of working, in fighting against all types of social ills and maladies with good governance paradigms. Hence, the objectives of the study are to take into account fundamental aspects of human entrepreneurial life to professionalization of entrepreneurship discipline with visionary goal, missionary way of dealing with the things and strategic solution of human social problems for regional development, peace initiating measures and existential freedom of life bringing possibilities for purposive economic development and social transformation. Reinventing the role of entrepreneurship fulfills the agenda of development mantra: 'Sabka Saath, Sabka Vikas' through creative business pursuit, innovative work culture and realistic growth perspective in nurturing human resources, protecting social assets with cost-benefit analysis and making holistic progress in dynamic nature to march in forward looking tendencies reaching at the goal of integral humanity. The entire research endeavor has been focused to enlightening the path of modern civil society in dealing with issues, policies and strategies of entrepreneurship in objective manner.

III. SCOPE OF THE STUDY

This is an exploratory research endeavor made to reinventing the role of entrepreneurship in holistic approach for professionalization of the discipline with judicious policy framework, reformative business guidelines, ethics, values and code of conduct for performing socio-economic activities

with valuable economic measures and transformative practices concerning human economic development agenda. The study has wide scope to illuminate the picture civil society on the screen of human social living foundation with prudent administrative guidelines for good governance paradigm shift to lift the corporate veil. It recommends securing life of deprived masses to the promotion of civil living existential of autonomy with business driven principles, QWL and continuous improvement. Hence, there is ample opportunity to ensure nurture of scarce resources with justice driven principles of entrepreneurial work in equanimity thought. As a whole, the reinventing role of entrepreneurship can be seen as the vista and rejoinder for fundamental breakthrough in ice-breaking reformative social reconstruction and transformative nature of business performance. Thus, the edifice of liberal living goal can be strengthened for emancipation of human beings from severe social sufferings. With a view to reduce human poverty, eliminate regional disparity and disseminate social transformation in terms of reformative business policy, resurgent work quality and entrepreneurial skill building excellence norms, the empirical research is relevant for cementing effective public relationships and explore avenues for peace, progress and prosperity in the long-run perspective to dynamic rolling of society. Findings and conclusion of such theoretical research effort will provide suggestions to policymakers, administrators, entrepreneurs, researchers, academicians, reformers, social thinkers and others for framing models of development with BPR techniques in integrated approach.

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IV. METHODOLOGY

The study is mainly devoted on the basis of theoretical research practices, and therefore, all secondary sources are taken care of for historical analysis of things and thereby, the essential facts are reflected in terms of government reports, reports of international institutions, agencies and organizations. Policy decisions of government institutions and international organizations are attentively observed with path-goal relational approach under the empirical study. Again, information technology and internet services, books, journals, newspapers, magazines periodicals, reviews and some other important sources well warrant the methodology of discussions for reinventing the role entrepreneurship pertaining to employment creation, income generation, social growth initiatives and alike elements for economic development and social progress in equipoise nature of doing things with a view to profess, promote and practice such discipline. Thus, the entire study ranges to the protection of human beings from their deprivation and social

marginalization for the greater interest of eliminating poverty and social injustices to establishment of peaceful living measures. All these are accentuated discussed chronologically scientifically, lamented for healthy exercises with relativity aspects for objective conceptualization purposes to adopting entrepreneurship policies, programs and procedures. As a whole, the secondary sources strengthen the pillars of civil society in terms of academic discourses for developing models of social progress, implementing policies for dynamic growth and framing strategies for realistic journey of life with civil liberties in the existential autonomy of human life bringing processes. Hence, the secondary sources adopted under the study for scientific explanations of things have enriched the whole research in holistic and all-comprehensive manner, to work as complementary to prepare the road map for economic development and social transformation.

V. ENTREPRENEURSHIP AND INNOVATION

Innovation is essential part of entrepreneurship development activities. By means of innovative research, it is possible to carry out creative productive activities for economic empowerment of people and bringing higher growth rates in the overall economy of a country. It can therefore be argued that high rates of investment in human and physical capital are themselves stimulated by effective innovation. It cannot be maintained in the absence of innovation. So, it can be said permeably that entrepreneurs experiment with new combinations of which the outcomes are uncertain, but in order to progress, many new variations have to be tried in order to find out which ones will improve economic life⁶. Thus, empirical research findings substantiate the view point that entrepreneurship is the driver of economic development, for which it requires fourth generation reform in production factor through innovative practices in the macroeconomic policy making issues with a view to enhance production function⁷, to accelerate the objectives of social transformation in terms of human capital formation. Innovation, therefore, acts as a rejoinder to entrepreneurship as a factor in the production function activities for creating wealth by combining existing production factors in new ways. Under the circumstantial evidence about the reinventing role of entrepreneurs, it can be undoubtedly suggested that the developing countries where innovation and R&D does not equal unlike commonly understood in advanced economies should put due importance on such principle, rather than relying on their entrepreneurs only to play dominant role to discover that a certain good, already well established in world markets can be produced at home at low cost⁸.

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VI. ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

Development is a wide concept entailing the raising of human capabilities9. It is one of the central challenges in improving the standards of living for individuals and growth of the economy in holistic manner. Economic growth in itself is a narrow target. But, the fact about economic growth cannot be denied probably because; it is to be one of the important targets for development policies. Hence, it is treated to be as one of the measures which are very easy to access for the researchers and analysts. Maddison¹⁰ opines that it is the best measure of historical analyses of the development economies. Again, Barro and others are of the opinion that the subject matter of development is mainly concerned with the best measure to make cross-national analyses¹¹. From such discourses, it is clear that the empirical evidence on the relationship between entrepreneurship and economic development gives fresh insights on the postulates of making entrepreneurship policy. Accordingly, it is predicted that development is multidimensional concept; whereas, entrepreneurship is the innovative practices adopted for the purpose of holistic development thought in creative endeavors with realistic growth perspective for reducing human poverty, social marginalization and bringing overall transformation. From this standpoint, development scholars assert their view that entrepreneurs are those who facilitate adjustment to change by spotting for profitable arbitrage (and opportunities disequilibrium situation in the market). Baumol further comments thus: entrepreneurial ability can be allocated towards productive, unproductive, or even destructive activities¹². Whatever be the case, it is suggested that the reinventing entrepreneurship for economic development should be associated with innovativeness and is required to be characterized by shouldering high risk and uncertainties. From the viewpoint of development scholars, government policy implications require to reduce uncertainty and transaction costs; so that economic development becomes more convenient, reliable and viable through entrepreneurship between activities. synthesis Thus, the entrepreneurship and economic development can be found from the combining role of behavioral and occupational views and it percolates three major areas: (a) the resource, (b) process and (c) the state of being through, in which individuals utilize positive opportunities in the market by creating and growing new business firms¹³.

VII. INTERFACE BETWEEN ENTREPRENEURSHIP AND ECONOMIC DEVELOPMENT

Entrepreneurship plays an influential role in the economic growth of a country and helps raising standard of living of people for reducing regional disparities in terms of job creation, wealth creation and sharing, increasing per capita income, export promotion, community development and so on. In this way, there is effective interface between entrepreneurship and economic development for social transformation, human existential freedom of life bringing capacities and empowerment of people forward moving tendencies. entrepreneurship role model helps reinventing the whole spectrum of socio-economic activities. Accordingly, it is observed that entrepreneurs by establishing business entities invest resources and attract capital in the form of debt, equity, etc. from aspirant investors, lenders and the public at large. Thus, public resources are mobilized¹⁴. This kind of pooled capital in business venture strengthens the base of the economy and brings overall socioeconomic development. Another aspect of interface between entrepreneurship and economic development is done by way of creating jobs, because entrepreneurs are basically job creators. The new horizons of business growth in the economy multiply other job seekers and provide employment to many people. For this reason, at present the government of India has launched many initiatives such as Startup India, promote and support new startups, Make-in-India initiative to attract foreign companies and inflow of foreign direct investment¹⁵ (FDI) into the economy. All these help entrepreneurs for setting new business and industrial units in different regions of the country. As a result, regional development is made by locating less developed areas for industrial infrastructure, effective rail-road coordination, airports, stable electricity, water supply, schools, colleges, universities, hospitals, shopping malls and other public and private Consequently, by creating direct and indirect jobs entrepreneurship help lifting backward regional economies in different ways. Under this system, the central and respective state governments promote registered MSME in terms of various concessions and benefits for speedy regional development through employment generation¹⁶, income yield and standard of living. Entrepreneurship activities in this way promotes export, increases per capita income, stabilizes gross domestic product (GDP), strengthens human capacity building, capabilities, initiates community development projects, builds up social infrastructure, reforms markets and so on for the purposive nature of economic development. Thus, there is effective interface between entrepreneurship and economic development. The reinventing role model of entrepreneurship acts as catalytic element of growth.

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VIII. ENTREPRENEURSHIP AND ECONOMIC INTEGRATION

Entrepreneurship activities provide integration by way of reducing concentration of economic power in a few hands and creating employment opportunities. Equitable distribution of income is made possible through new business entities and venture capital pool for ameliorating sufferings of people in needy areas. It is further observed that government adopts certain business and economic policies from time to time and frames laws for the purpose of economic integration¹⁷. It is done with a view to relocate industries, renovate existing business enterprises and diversify economic activities in backward areas through special economic zones (SEZs) on urgent basis to optimize income potentials of the masses, minimize crisis in those areas and realize the goals of welfare with objectives of citizens' development charter and agenda of Sabka Saath Sabka Vikas¹⁸. The present government at the center has initiated many programs by chalking out plan of action and road map for balanced development; so that economic integration is made possible in terms of regional development, holistic growth and realistic progress of the whole country in dynamic nature. Thus, the vista of peace, prosperity and progress is harmonized by way of reform, perform and transform policy measures of the government with the norms of economic integration, diversification and socio-economic regional developmental strategies. The central government at present with many other state governments have been making collective efforts to implement policies and complete projects on the basis of time-line approach with radical administrative measures and vibrant entrepreneurship development activities such as skill development programs, Pradhan Mantri Mudra Yojana (PMMY) schemes¹⁹, social infrastructural packages for rediscovering the fields of regional integration and economic empowerment of people. As a matter of fact, it is observed that backward areas are given due stress for their speedy development through various means of entrepreneurial services, quality assurance process and human skill building norms for social transformation and living excellence to restore cordial balance in living standard of people between rich and poor. The impact of such type of lateral integration has strengthened the pillars of national economy, stabilized the base of regional growth and cemented human interrelationships for reducing gaps between forward and backward zones.

Hence, it is suggested that entrepreneurship policies should work more efficiently as reformative path to attain the goal of liberal administrative guidance and judicious governance mechanism for incrementing benefit to people, reducing social marginalization²¹ and eradicating all sorts of human deprivation. In the long-run, it will bring in holistic development towards social transformation in never ending manner for realization of the objective of New India slogan through Make-in-India program.

IX. ENTREPRENEURSHIP AND BUSINESS PROCESS REENGINEERING (BPR)

Entrepreneurs work as the agent of social change. They rediscover new innovative ideas, reshape policy implications by means of their strategies adopted for the purpose of business growth, frame different models of development and implement the resurgent socio-economic packages with BPR²² for social transformation, human empowerment and living freedom with existential autonomy of life bringing possibilities. Thus, it is observed that there is positive relationship between entrepreneurship and regional growth²³. Another important observation from the empirical studies reveals the fact that the impact of entrepreneurship on productivity change over time. Hence, it can be predicted that variations in the birth rate and the death rate for firms are related mainly to positive changes and productivity²⁴. Accordingly, entrepreneurs redesign business models for taking opportunities out of the competitive market advantages to strengthen business potentials through BPR techniques, streamline productive possibility curve in positive direction and with cost-benefit analysis. All these require quality assurance excellence building norms, skill development²⁵ initiatives and innovative ideas of business growth perspectives. Consequently, the BPR provides a paradigm shift in productive activities in regard to inventive creativity, fund management efficiency and enrichment of human capabilities for social transformation in terms of steady business growth, enormous scope of human empowerment and employment generation facilities. Thus, there is positive relationship between entrepreneurship and BPR, which helps to overcome redundant business situations by means of ice-breaking between entrepreneurial abilities and government policy measures. It is therefore pertinent to predict that of unbounded quality human knowledge characterized by special training and bounded rationality of modern entrepreneurs in technical know-how society makes entrepreneurship activities possible to reshape society in new dimensional way with strategic decision-making²⁶, to cope up with the

market changes in terms of BPR techniques, methods and policies. Building on these insights, Hayek had observed long back with visionary idea that the key feature of market economy is the distribution of knowledge across a large number of individuals²⁷. BPR principles help entrepreneurship preparation in holistic approach to attain realistic success working in this line for self-actualization purposes with redesign of core business values, ethics and code of conduct to the substantial improvements in business performance, productivity and quality. The whole process interlinks business tasks and activities performed to achieve a specified outcome²⁸. Adopting BPR in entrepreneurship adjusts with change, the way an individual performs the work to attain the better results accomplished by means of dramatically improving customer service, achieve higher levels of efficiency, cut operational costs and entrepreneurs become a world-class competitor.

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X. FINDINGS, SUGGESTIONS AND RECOMMENDATIONS

There are ample scope and enough opportunities in entrepreneurship for growth and stability of economy, development and advancement in nation building process and progress and prosperity to citizens, which require reinventing the role of entrepreneurship with correct policy implications, judicious government regulations and adequate skill building operations. Thus, various discourses made so far provides some important findings as noted below:

- (a) Entrepreneurship is a creative discipline and innovative idea of developing the superstructure of the civil social living norms with human existential freedom of autonomy in life bringing possibilities requiring professionalism, human values, business ethics and code of conduct. It is therefore needed due attention for human skill building qualities in terms of special training and executing policies of the government for continuous improvement of business, initiating holistic economic growth with realistic development process in purposive manner.
- (b) Entrepreneurship requires reinventing role model for economic development in terms of responsibility building notion and responding nature of quality services, efficient productive mechanism and accountability. In all these lines there should be citizens' charter of development agenda, road-map for carrying out activities with good governance paradigms and liberal business environment to eliminate social gaps between rich and poor.

- (c) Reinventing role of entrepreneurship should focus on human empowerment, employment generation and increasing capabilities of people by way of creative productive activities and innovative nature of doing things for initiating Make-in-India through Digital India programs and skill building policies to implement resources in efficient manner with resource pool, financial transparency and administrative justice.
- (d) Regional disparities are due to backwardness of people and their social marginalization. Hence, entrepreneurial activities are required to be performed in professional manner for human satisfaction, customer value orientation, QWL and efficient utilization of local resources for mitigating local needs. In this way, there will be economic development, social peace and human prosperity in equitable manner.
- (e) Last but not the least, it is essential to reinvent the role o entrepreneurship on the grounds of reducing regional imbalances, increasing national development and realizing the welfare goal with BPR techniques for quality assurance in human living norms to bring in social transformation in terms of economic growth perspective.

Some suggestive measures recommended below are need special attention for reinventing the role of entrepreneurship in fields of socio-economic activities:

- (i) It is essential to develop whole economy in holistic approach for increasing income of people, decreasing human sufferings and realizing goal of social transformation by various means and ways in speedy as well as urgent manner for balancing gaps between rich and poor and forward zones and backward zones.
- (ii) Entrepreneurship discipline should be made a compulsory subject in school, college and university levels to cater the needs of job creation by means of academic discourses in bringing consciousness amongst the young generation.
- (iii) Skill building training should be imparted to young educated citizens with professional ethics, business value driven guidelines and liberal code of human conduct. Thus, all the principles of entrepreneurship should be made practical oriented in syllabi with research backgrounds to reinvent the role of entrepreneurial activities in new dimensional way.
- (iv) Entrepreneurship knowledge should be made compulsory agenda of human socioeconomic development process in all walks of life for easy, convenient and reliable

living pursuits with existential autonomy and freedom towards social rolling in moving for forward looking tendencies. It will thus pave the way for Sabka Saath Sabka Vikas through holistic development.

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(v) Professionalization of entrepreneurship is concerned with the philosophy of business mantra: 'Vasudhaiva Kutumbakam', which is needed for citizens' care with sustainable development model. This ideology can be propagated with profound knowledge of civil society living norms entrepreneurial activities are required quality circle (QC) concept and human excellence building objectives. All these are possible through inventive creativity, nurturing system and human capabilities. Hence, the research and development (R&D) policy should be made working culture of human life with convergent business combinations and continuous improvement goal to perform reform and transform modern civil society in dynamic approach.

XI. CONCLUSION

Reinventing the role of entrepreneurship is essential reducing regional imbalances, creating employment opportunities and empowering people with quality driven work culture, service delivery norms and good governance mechanism. All these are essential for economic development and initiating balanced growth in society to minimize gaps between rich and poor. Thus, innovative nature of work and creative research base will strengthen the foundation of modern civil society free existential living pursuits of human beings. Hence, the principles of entrepreneurship are coagulated in terms of inventive creativity for good governance, quality assurance and service related excellent building norms driven by judicious administrative affairs and guided by the policy of work culture. Thus, it is permeably said that reinventing the role of entrepreneurship can diversify business activities with continuous improvement for reaching at the goal of New India slogan through Make-in-India project and the subsequent programs such as, Startups, Standup, Skill India, Digital India and so on of the central and respective state governments to safeguard human beings from social marginalization, regional inequalities and living deprivation for the existential freedom of life. As a whole, entrepreneurship with its inventive creativity in holistic approach can build up social pyramid with the agenda of reform, perform and transform to eliminate human poverty from societal foundation, eradicate problems of growing volume unemployment by creating new job opportunities and cement human relationships for social peace,

prosperity and progress to achieve the objectives: 'Sabka Saath, Sabka Vikas', common welfare and integral humanity. There should be effective interface between entrepreneurship and BPR techniques for quality assurance and human excellence building norms with skill initiating processes to greater economic integration purposes. All these are fundamental principles of innovation needed creative research base backed by strong professionalism and special attention, for bringing social transformation in terms of reducing gaps between forward and backward zones through accentuating reinventing role of entrepreneurship, and relocating the process of industrialization measures with rationalization schemes and resurgent business policies on the part of government authorities, administrators and legal experts. Thus, entrepreneurship as a creative discipline and social changing instrument can help to stabilize economic development process, harmonize human living pursuits with the 'Ease of Doing Business', 'Swadeshi Movement' and 'Vasudhaiva Kutumbakam' ideology of work culture for bringing social transformation in terms of reformative performance criterion, to restore growth potentials, revisit regional balance and move in forward looking tendencies in dynamic approach.

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Evaluation of Consumer Perceptions towards Social Networking Sites

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ABSTRACT

As we all know that social media usage has become an essential part of our day to day life. It has shown an effective and influencing change in the behavior of today's consumers. It has been playing a vital role in consumer decision process. The word 'social' refer to interacting with other people by sharing and receiving information with them where as 'media' refers to instrument of communication like the internet. Facebook, Instagram, LinkedIn, Twiter, Google plus and Myspace are some of the most popular social media websites with over 100 million registered users. They have become an effective tool of comparing one product with other in an easy way. This paper presents current status of use of social networking sites by consumers in India and also explains why, when and how the social media affect the buying behavior of Indian consumer.

Keywords: Social media, consumer behavior, decision making process.

I. INTRODUCTION

As we are living in an era of digitization and information technology is progressively growing, we are using websites like Facebook, LinkedIn, Twitter, Instagram, Snapchat etc. Social media is a phrase that we throw around a lot these days, often to describe what we post on sites and apps like Facebook, Twitter etc. The term is used so hazily that it can basically be used to portray almost any website on the internet today. There is a positive and negative impact of social media on society. Social media has revolutionized the way people communicate and socialize on the web. There is a positive effect on business, politics, socialization as well as some negative effects such as cyberbullying, privacy, and fake news.

Social media has definitely made us closer to other parts of the world. We can contact anyone around the world at any time, with just a few keystrokes. Since internet technology paved a new way for interaction between the market participants. Customers can tell brands exactly what they want. Businesses can then use that information to tailor their products of more appeal. Sites like Facebook, Twitter, YouTube and others are a cost effective means of spreading the word and getting support. The social media has gained attention as the most media has gained attention as the most viable communication choice for the bloggers, article writers, and content creators.

II. REVIEW OF LITERATURE

Based on the findings from McKinsey (2011), it has revealed that when companies go about their business and interact with individuals, they are generating a tremendous amount of digital "exhaust data," i.e., data that are created as a by-product of other activities. Social media sites, smartphones, and other consumer devices have allowed billions of

individuals around the world to contribute to the amount of big data available. (McKinsey 2011.) By looking at the enormous amount of social media campaigns, e-commerce websites, sales emails, forums, etc., it appears that companies of all sizes have been translating their marketing approaches to the Internet because of its accessibility to their target audience and the money required to do so.

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(Chui and Manyika 2012.) By contrast, the traditional advertising approach of mass media communication, for instance newspaper, magazines, and televisions, aims at conveying messages to a broader group of audience in the hope of reaching the few interested ones. Traditional advertising via mass media is on decline; Sergio Zyman (1999), former Chief Marketing Officer, Coca Cola, believes, "The era of marketing as we have known it is over, dead, kaput – and most marketers don't realize it..." he further clarifies that technology has given people many more options than they had in the past and has created a consumer democracy in which people around the world constantly use social-media platforms to seek and share information from discussing consumer products to organizing political movements (see Chui Manvika 2012). With more bombardments, individuals are more cautious and adept in allocating attention to information; thus it is essential for marketers to find the reasons that speak to particular customers' concerns, and to seek ways to speak to customers individually, or in smaller communities (Zyman 1999). Internet offers favorable solutions to marketers these days. Marketing through social media would be an alternative perspective of interfacing with individuals, and yet the most influential applications of social technologies in the global economy are largely untapped (Chui and Manyika 2012).

Social media puts consumers back to the center of the business world and provides marketers a new set of tools to interact with consumers and to integrate them into the brands through innovative ways. In essence, marketers have to understand how the social media has influenced consumers' perception and buying behavior.

III. OBJECTIVES OF RESEARCH

- (a) To study the awareness of SNS among consumers.
- (b) To study the most popular SNS among the Indian consumers.
- (c) To study the average purchasing amount of consumers via SNS.
- (d) To analyze any relationship exist between time spent and the value of shopping through SNS.

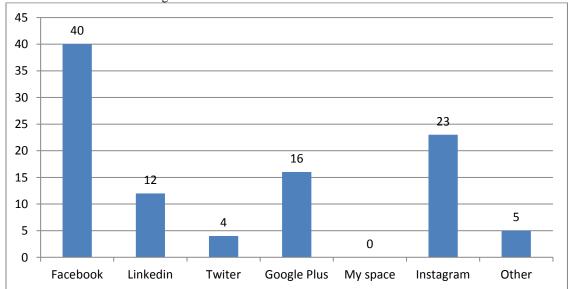
IV. RESEARCH METHODOLOGY

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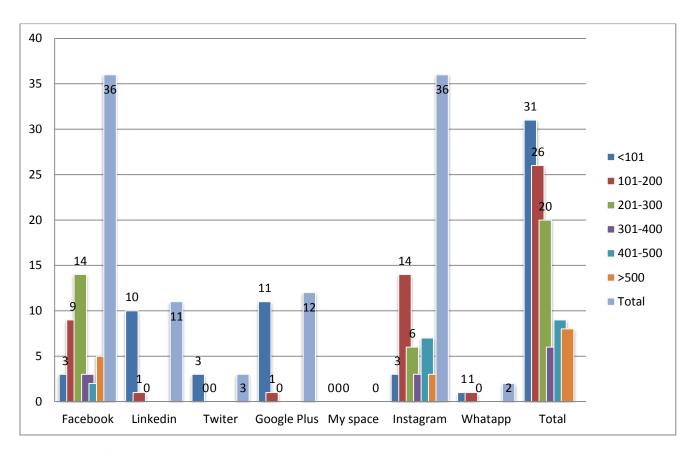
This paper incorporates the quantitative approach to study the research objectives. Sampling has been done effectively and the tool that has been employed to work on the data collection is particularly questionnaires where the questions were close ended along with usage of tools such as pie charts, Bar chart and correlation. A survey was conducted in order to target the age bracket (15 to 24). The sample has been taken mainly from Prayagraj region. In all, 100 questionnaires were filled and reciprocated enthusiastically by the respondents. They were asked a total of 10 questions and the analysis of the same is given in the following section:-

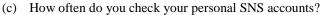
V. DATA ANALYSIS

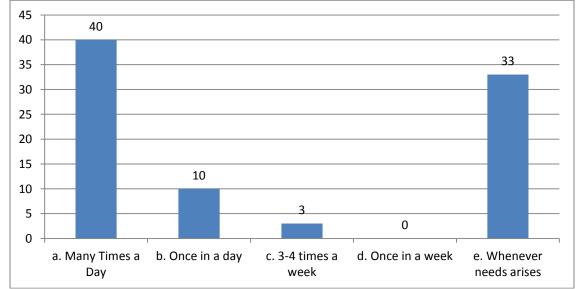
(a) Users of Various social networking sites.



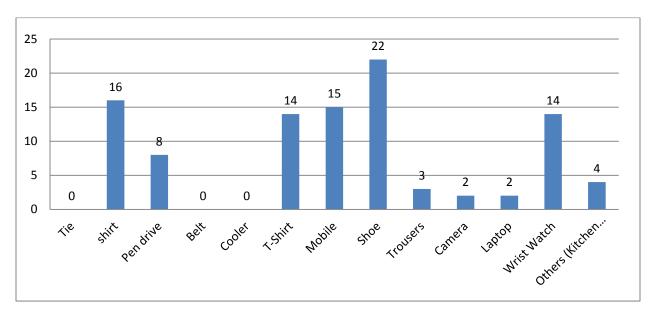
(b) How many friends do you have in each of the following SNS?

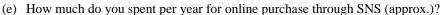


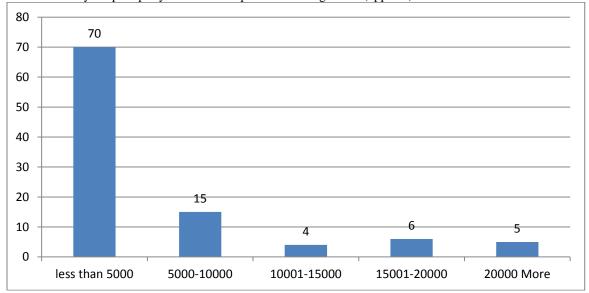




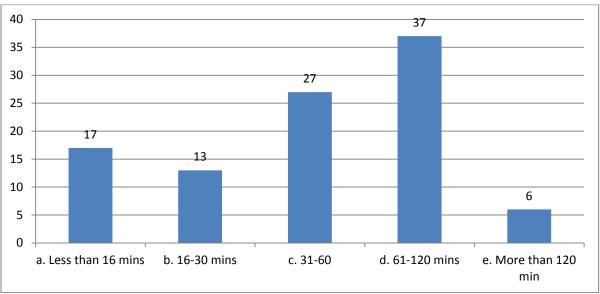
(d) What category of products do you purchase frequently through online SNS?



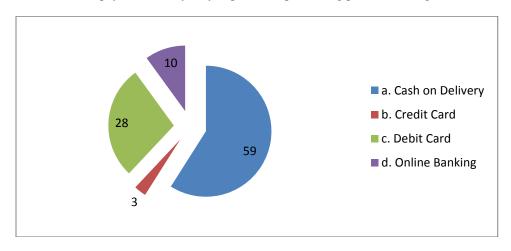




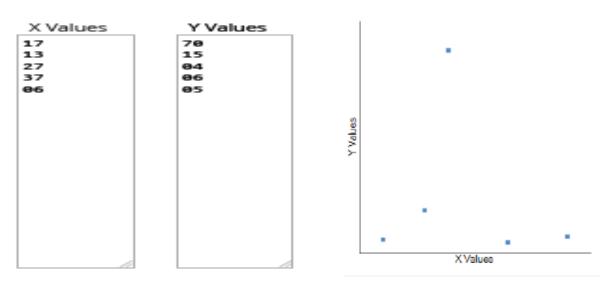
(f) Approximately how many minutes on the day do you spent on SNS?



(g) Which mode of payment usually do you prefer for purchasing products through SNS?



(h) Correlation between time spent and the value of shopping through SNS.



X - M _x	Y - M _y	(X - M _x) ²	(Y - M _y) ²	$(X - M_x)(Y - M_y)$
-3.000	50.000	9.000	2500.000	-150.000
-7.000	-5.000	49.000	25.000	35.000
7.000	-16.000	49.000	256.000	-112.000
17.000	-14.000	289.000	196.000	-238.000
-14.000	-15.000	196.000	225.000	210.000
Mx: 20.000	My: 20.000	Sum: 592.000	Sum: 3202.000	Sum: -255.000
	/		/	/

VI. RESULT DETAILS & **CALCULATION**

X Values

 $\Sigma = 100$

Mean = 20

 $\sum (X - Mx)2 = SSx = 592$

Y Values

 $\Sigma = 100$

Mean = 20

 $\sum (Y - My)2 = SSy = 3202$ X and Y Combined

N = 5

 $\sum (X - Mx)(Y - My) = -255$

R Calculation

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

 $r = -255 / \sqrt{((592)(3202))} = -0.1852$

Meta Numerics (cross-check) r = -0.1852

Key

X: X Values

Y: Y Values

Mx: Mean of X Values

My: Mean of Y Values

X - Mx & Y - My: Deviation scores

(X - Mx)2 & (Y - My)2: Deviation Squared

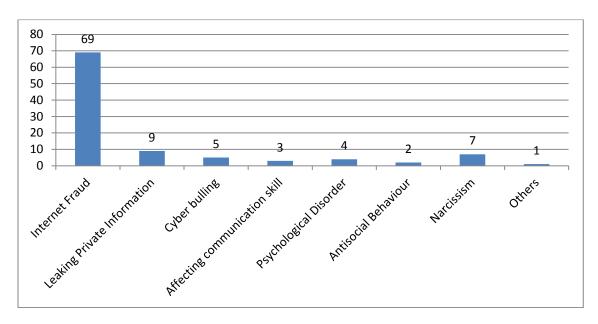
(X - Mx)(Y - My): Product of Deviation Scores

The value of R is -0.1852.

Although technically a negative correlation, the relationship between your variables is only weak (nb. the nearer the value is to zero, the weaker the relationship).

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(i) What problem do you think SNS can possibly cause?



VII. FINDINGS

On the basis of the sample survey conducted the researcher made the following findings:

- (a) On the basis of sample survey conducted the researcher found that due to the rising usage of smart phones in the cities of India people also have grown a tendency to access social networking sites but of all the sites the social portal which is highly popular specially amongst youth and middle aged segment alike is facebook.
- (b) When the researcher compared the various SNS it was found that maximum social contacts or friend circle of the surveyed population exists on facebook and instagram.
- (c) On the basis of sample survey conducted it was found that maximum people have the tendency to check their SNS login several times a day.
- (d) On the basis of sample survey it was found by the researcher that people are also using SNS for the purpose of shopping but a very highly proportion of this shopping is dedicated for purchasing apparels and daily use items like Shirt, T-shirt, shoe, pen drives etc.
- (e) On the basis of the sample survey the researcher also found that almost 80 percent of the population surveyed spent INR 5000-10,000 per year on shopping through SNS.
- (f) On the basis of analysis of the questionnaire the researcher concluded that approx 60 percent of the population surveyed spends at least an hour or two on SNS of their choice.
- (g) The researcher also found that COD (Cash on Delivery) is the most popular method of payment amongst those who are using SNS for shopping.

(h) The researcher also applied Karl Pearson's Coefficient of Correlation in order to find the relationship between time spent on SNS and value of shopping the result was that there exist a negative correlation which means that spending time on SNS may not necessarily result in shopping from the SNS portal.

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(i) The researcher also found that the fraud associated with Internet based shopping is the biggest issue which is preventing the sample under study to shop from the SNS.

VIII. CONCLUSION & RECOMMENDATIONS

The objective of the research paper was to to explain why, when, and how social networking sites has impacted on consumer decision making process. Research paper was designed to narrow down the subject and to help the researcher to identify the explanations of the issue. The three objectives of this research paper were as follow:

- (a) To study the awareness of SNS among consumers.
- (b) To study the most popular SNS among the Indian consumers.
- (c) To study the average purchasing amount of consumers via SNS.
- (d) To analyze any relationship exist between time spent and the value of shopping through SNS.

This study examined the effects of using social networks sites by consumers in India. A specialized questionnaire was prepared to verify the level of consumers' knowledge and study the impact of this level on penetration of the consumers' privacy during the use of social media. In the first axis, the researcher found that the level of turnout on the use

of social networking sites has significantly high. In response to the second objective, the most popular SNS is facebook i.e. 40%. As far as the third objective regarding average purchasing amount is concerned through SNS is less Rs 5000/ and when researcher tries to examine the relationship between time spent and the value of shopping through SNS then researcher found there is no relationship exist between them it mean the time spent on SNS does not affect the amount and frequency of buying behavior of consumer via SNS.

Overall the use of social networking sites by consumers is associated with many benefits such as — they get a feeling of connectedness, get exposure to a supportive environment to explore the relationships and they also get a key source of information. But on the other side, a number of risks associated with use of social networking sites such as cyber bullying, exposure to illegal content and privacy violation. This happens when the consumers are not aware of the privacy policies of social networking sites and they share their personal information which they should not. Consumers need to educate themselves about the ways of using social media and the common risks associated with it, to help them understand and navigate the technologies.

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'A Study of Impact of Losses on Shaping People's Destiny in Kiran Desai's Book "The Inheritance of Loss"

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ABSTRACT

Everyone on earth grapples with the inevitable process of losing in life. This Paper presents a Study of Impact of losses that each of the characters had had and their affect on their Personality and Destiny in the book "Inheritance of Loss" by the Booker Prize winner Kiran Desai. Losses in life play a significant role in shaping one's personality in a negative or a positive way. The characters in the book had to deal with loss at one point or the other in their lives. As life is marked by a variety of losses, some were life changing, some intangible, some insignificant, some irrevocable but some subtle like in the life of Biju Sai, Nimmi, etc.

Key Words: Tangible, Intangible, Personality, Destiny, Suffer

I. INTRODUCTION

The Author has managed to present effectively the losses in each of the chapter which gives the impression that almost everything and all the incidents about every individual in the Novel is dominated by some kind of losses in their lives throughout the book. The unfortunate negative vicious cycle of life seems to hover over and envelop each character in such a way that they tend to feel helpless and powerless to do anything about it.

Jemubhai Patel, the judge has the loss of his wife, his daughter & husband, his past glory, wealth, loss of significance, loses his dog Mutt. Sai, Judge' granddaughter, a teenager loses her parents, schooling at the convent, friends, her 1st tutor Nomita and then Gyan, her lover. Biju, the son of Judge's cook, keeps suffering from loss of jobs and also being an illegal immigrant had to return later that further resulted in the loss of money, hopes and dreams of prospering in US and was stripped and robbed on his return. The cook loses his wife whom he loved, had loss of innocence and suffered the loss of self dignity as a human being when dealt badly by the Gorkha fighters and later by the policemen. Lola loses her husband and her sense of security along with Noni her sister when their house was invaded. Father Booty lost his house, property and had to return to Europe and as a result of which uncle Potty who loses his friend.

KIRAN DESAI, the youngest Booker Prize winner in 2006, is an Indian American Author. She won this award for her novel "The Inheritance of Loss" and was honored with "The National Book Critics Circle Fiction Award", too.

Kiran Desai was born in 1971. She studied in Cathedral and John Cannon School. At the age of fourteen, she left India and lived in England and then later moved to America. She studied creative writing at Bennington College Hollins University and

Columbia University. Kiran had said "I've to break out of it to be sweet. But as a writer I'm trying to understand hate and anger." Incorporating real life characters and incidents in her work is one of her distinct ability in her writings. She gives her reaction to the prize that she had received for her novel "The Inheritance of loss" in the following way-"It (The Booker Prize winning) had a really serious effect. You realize that to win a prize is basically childish. The pleasure you feel is childish which is nice too. But the frightening thing is that it has a serious effect."-Kiran Desai

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II. STUDY OF DIFFERENT KINDS OF LOSSES

Loss can have so many meanings such as misfortune, deficit, something misplaced or lost, bad luck, accident, mishap, damage, defeat, disaster, failure, impairment etc. They are mainly categorized into Tangible and Intangible losses. Tangible losses are Materialistic, Relational, Physical, Financial and Professional whereas Intangible losses are Spiritual, Mental, Emotional, Cognitive and Psychological. Tangible losses, most of the time leads into Intangible losses. So far most of the researches have been found to be done in the area of Tangible losses and its effect on the individual lives. Some examples of Tangible losses that the characters in "The Inheritance of loss" had are like loss of loved ones (cook losses his wife and Sai her parents etc), friends (Biju losses Saeed and Jemubhai his friend Mr Bose), job or profession (Biju loses job after job), Money and Wealth (Biju loses money as he had to return to India and Jemubhai his wealth as they hardly has things at home to live by), Health (Jemubhai became old and so does his cook), Accident (cook's wife fell from the tree), Documents and things (Jemubhai's house ransacked and Noni & Lola lose their books etc) and Intangible ones are loss of identity (Jemubhai at Kalimpong and Biju in US), loss of

Values (Sai Noni Loa etc had), sense of security (Felt by Sai, Biju and Father Booty), cultural & psychological identity ,loss of significance, past glory, self dignity, social adequacy, freedom, love, happiness, memory, peace, hope, trust, belief system etc. Every day we are either losing or winning. It decides our destiny, plays a role in the course of life that we would take, like Sai had to move down to the remote Kalimpong from Dehradoon convent school because of the loss of her parents. It has a great impact on our perception about the world and it changes our attitude and behavior. 'Could fulfillment ever be felt as deeply as losses?' (Kiran Desai). It's true that the losses are much deeply felt than fulfillment in life.

III. IMPACT OF LOSSES IN SHAPING THE DESTINY

In spite of the fact that the characters in the book by Kiran Desai, go through various kinds of losses in life and have a significant influence of them on their lives, there are three groups that can be seen on the basis of their reaction to the losses. Firstly, the group that is optimistic, knows to tackle them and leverage from their losses like Mr. Bose, Father Booty. They bounce back, learn from their losses, make progress & seem to have a great life. Second group is the one that barely manages to go through their losses, struggle and have an average life like the Judge, cook, etc. And the third group is the one that goes through a number of losses and that too in the major part of their lives and are overpowered by them. They suffer a series of tragedy in their lives and a lot of pain and bereavement like Sai, Nimmi and Biju. Their perspective towards life and others changes. In case of a major loss the whole outlook changes.

IV. CONCLUSION

There are number of factors involved in causing losses that are either External-like the turn of events in life (as in Sai's case), the changes in the

surrounding (Judge's retirement life), the political situation around (as of Kalimpong,) etc and also the Internal - like the wrong decisions taken, changes in the outlook and behaviour that we make in ourselves. The way we look at the losses that we suffer in our lives decides our reaction to them which in turn impacts our personality and plays a significant role in shaping our destiny. We should learn to minimize their negative impact by way we react to it and take definite action and maximize their impact by leveraging from them resulting in maturity, growth and stronger determination to press forward in order to pursue our dreams.

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लेखांकन में संगणक (कम्प्यूटराईज्ड एकाउंटिंग) के प्रयोग का अध्ययन

पवन कुशवाह

शोधार्थी, वाणिज्य विभाग, बरकतउल्लाह विश्वविद्यालय, भोपाल (म.प्र.) भारत

सारांश — संपूर्ण विश्व में आज तक का इतिहास है कि किसी न किसी राजा महाराजा व्यापारी, साहूकार सभी अपने व्यवसाय या आय—व्यय के हिसाब व लेखा जोखा के लिए निश्चित तौर पर एक न एक मुनीम अवश्य ही रखते थे। तािक वह समस्त लेन देन की संपूर्ण जानकारी प्राप्त कर सके पर धीरे धीरे समय के बदलाव के साथ लोगों की विचार व विचार धाराओं में तथा लेखांकन पद्धितियों में तकनीकी में परिवर्तन होता रहा। जिसका प्रभाव कही न कही किसी न किसी रूप में प्रत्यक्ष व अप्रत्यक्ष रूप से पड़ता है।

I. प्रस्तवाना

वर्तमान युग में यह परिवर्तन लेखांकन की विभिन्न विचार धाराओं पर हो रहा है। क्योंकि लेखांकन के भारतीय बही खातें के प्रयोंग के साथ साथ लेखांकन पद्धतियों में बहुत से परिवर्तन समय समय से आवश्यकता अनुसार किये गये है। परंत् जब से संगणक (कम्प्यूटर) में लेखांकन पद्धति का अविष्कार हुआ है। तब से लेखांकन में समय की बचत के साथ साथ त्रुटिया पूर्ण रूप से समाप्त हुई हैं व लेखांकन की शुद्धता पूर्णतः विश्वसनीय होती गई है। क्योंकि लेखांकन के माध्यम से कई वर्षों पुराने से पुराने हिसाब किताब को हम मिनटों में देख सकते है व कई वर्षों तक सुरक्षित रख सकते है। संगणक के माध्यम से कई प्रकार के सॉफ्टवेयर व ऑनलाईन (इंटरनेट) के माध्यम से कम्प्यूटराईजड एकाउंटिंग का चलन व प्रचलन धीरे-धीरे बढ़ता ही जा रहा है। इस प्रचलन के द्वारा लोग कम्प्यटरकृत लेखांकन करके समय व रूपयो की बचत करने में सक्षम है। हमने इस शोध में यही अध्ययन करा है की लेखांकन संगणक के माध्यम से होने पर क्या-क्या फायदे हमें ह्ये है। वर्तमान में ऑनलाईन लेखांकन का भी प्रयोग अधिक किया जा रहा है। क्योंकि आयकर देने वाले 100 दुकानदार के बीच यह सर्वेक्षण कर पाया गया कि 70 प्रतिशत दुकानदार संगणक के माध्यम से लेखांकन करना पसंद करते है।

II. उद्देश्य

- (क) संगणक के माध्यम से हो रहे लेखांकन के बारे में पता लगाना
- (ख) लेखांकन में संगणक कितना उपयोगी है पता लगाना
- (ग) संगणक के आने से क्या लेखांकन कीं प्रक्रिया में बदलाव आया है क्या?
- (घ) भारतीय बही खाता प्रणाली व कम्प्यूटरीकृत लेखांकन में से कौन सी पद्विती सरल है
- (च) वर्तमान में कौन सी पद्विती का चलन सबसे ज्यादा है

III. साहित्य समीक्षा

- (क) प्रोफेसर एस.पी गुप्ता के अनुसार "कम्प्यूटरों ने वर्षों के गणना कार्य को महीनों में , महीनों की गणना कार्य को दिनो में, दिनो की गणना कार्य को मिनटो में तथा मिनटो की गणना कार्य को सेंकंडो में करना संभव बना दिया है।"
- (ख) प्रोफेसर एस.पी गुप्ता के अनुसार ''आज कम्प्यूटर पर शीघ्रता से गणना कार्य की सुविधा उपलब्ध होने के कारण सुगमता से संपादित किये जा सकते हैं।''
- (ग) डी.के. गोयल, राजेश गोयल, शैली गोयल के अनुसार 'बाजार में कई प्रकार के लेखा सॉफ्टवेयर उपलब्ध हैं। भारत में इस्तेमाल किये जाने वाले सबसे ज्यादा प्रचलित सॉफ्टवेयर टेली व ई एक्स है। लेखा सॉफ्टवेयर कम्प्यूटरीकृत लेखांकन प्रणाली का अभिन्न अंग होता है। सॉफ्टवेयर लेने से पहले उसे इस्तेमाल करने वालों के ज्ञान के स्तर को ध्यान में रखना अति आवश्यक है। क्योंकि अंततः लेखा की ज़िम्मेदारी मनुष्य पर ही है न कि किसी कम्प्यूटर पर।"
- (घ) डॉ ओ.पी शर्मा डॉ के.के शर्मा, डॉ डी.के शर्मा के अनुसार लेखांकन तथा वित्तीय क्रियाओं में कम्प्यूटर की सहायता से तथ्य संगणना का मुख्य कार्य किया जाता है।"
- (च) एम.जी. राठी, गिरिश कुसुमाकर के अनुसार"लेखांकन सॉफ्टवेयर आपको समय और पैसा बचाने में मदद कर सकती है, और अपने व्यवसाय में आपको बहुमूल्य अंतदृष्टि प्राप्त कर सकता है।"
- (छ) एम.सी. बड़जात्या एवं डॉ प्रवीन सक्सेना के अनुसार 'कम्प्यूटरीकृत लेखा पद्धिति ने लेखांकन प्रक्रिया को स्वचलित कर लागत में कमी तथा कार्यक्षमता में वृद्धि कर दी है। कम्प्यूटरीकृत लेखांकन से लेखांकन कार्य अधिक सटीक, तीव्र व त्रुटिरहित हो जाता है।''

IV. शोध प्रवधि

उक्त विषय में हम लेखांकन में संगणक के अनुप्रयोग के अध्ययन के बारे में बात कर रहें हैं। इस विषय के लिए हमने दैवनिदर्शन विधि का चयन करा है, क्योंकि इस विषय को समझने व समझाने हेत् यह विधि ही सर्वोत्तम होगी। वर्तमान में विभिन्न प्रकार के व्यापार, संस्था, स्कुल, विश्वविद्यालय में समस्त लेखांकन कार्य सम्पन्न करने हेत् संगणक (कम्प्यूटर) का प्रयोग किया जाता है। यह प्रयोग लेखंकन के लिये बहुत ही उत्तम होता है, क्योंकि लेखांकन में पहले बही खाते का प्रयोग करा जाता था। वर्तमान में अभी भी कई साहुकार, व्यापारी आज भी बही खाता प्रणाली का उपयाग करते है, हिसाब रखने के लिये परन्तु इस भारतीय बही खाता प्रणाली धीरे-धीरे लुप्त होने की कगार पर पहुंच गई है। क्योंकि बही खाता रखना आज कल पहले से कई गुना खर्च व समय अधिक लेता है और इसे प्रयोग करने में कई प्रकार की परेशानियों का सामना करना पडता है क्योंकि यह हर किसी को आसानी से समझ नही आती है न ही हर कोई इस प्रणाली को दैनिक प्रयोग में लाने से सक्षम नही है। सबसे ज्यादा इस प्रणाली में समय अधिक लगता है क्योंकि मोटी-मोटी बहियों में हिसाब लेने देने लिखना व इसे कई वर्षी तक संग्रह कर रखना संभव नही हो पाता है परन्तू संगणक (कम्प्यूटर) माध्यम से करा गया समस्त लेन-देन कई वर्षी तक आसानी से सुरक्षित रखा जा सकता है और पूर्ण शुद्धता के साथ कम्प्यूटर के माध्यम से कितना आय कितना व्यय हुआ है चंद मिनटों में समस्त हिसाब को देखा जा सकता हैं व पहले कई वर्षों का हिसाब हम कुछ ही मिनटो में बिना किसी परेशानी के देख सकते हैं। वर्तमान में कम्प्यूटरिकृत लेखांकन में भी कई प्रकार के सॉफ्टवेयर के माध्यम से सम्पन्न हो रहे है क्योंकि इन सॉफ्टवेयर के माध्यम से लेखांकन का हिसाब आय-व्यय सबका एक साथ, या अलग–अलग अपनी स्विधा अनुसार हम इन सॉफ्टेवयर के माध्यम से देख सकते है जिससे संगणक के व सॉफ्टेवयर के प्रयोग से लेखांकन और भी ज्यादा अधिक प्रभावशाली हो जाता है। वर्तमान में कम्प्यटर के माध्यम से लेखांकन व लेखांकन को ऑनलाईन (इंटरनेट) के द्वारा करने का प्रचलन दिन-प्रतिदिन बढता ही जा रहा है क्योंकि ऑनलाईन

(इंटरनेट) के माध्यम से लेखांकन करना आसान होने के साथ सुविधाजनक होता है एक ही स्थान पर बैठकर हम कहीं भी और कभी भी हिसाब देख सकते है एवं ऑनलाइन अकाउंटिंग के माध्यम से यह जान सकते है कि कितना लेन—देन हुआ है जिसे हम ऑनलाईन एकाउंटिंग कहते हैं जिसका प्रचलन काफी बड़ा है। हमने सौ दुकानदार जो आयकार दाता है जिला भोपाल (म.प्र.) उनके बीच जाकर हमने यह जानने की कोशिश की, हमने 125 आयकर दाता दुकानदारों को लिया फिर उसमें से हमने दैवनिदर्शन विधी के माध्यम से 100 लोगों का चयन करा जिनसे हमने साक्षातकार व प्रश्नावाली के माध्यम से जानकारी प्राप्त की जो हमारा प्रथमिक समंक है और इसके अलावा पुस्तकों के माध्यम से द्वितीय समंक एकत्रित करा है।

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प्रश्नावाली में पूछे जाने वाले प्रश्न

- (क) लेखांकन का कौन सा माध्यम आप उपयोग करते है?
- (ख) संगणक के माध्यम से लेखांकन आपको कैसा लगता है?
- (ग) भारतीय बही खाता व कम्प्यूटरीकृत लेखांकन कौन सा ज्यादा उपयोगी है?
- (घ) लेखांकन की कौन सी पद्विती समय की बचत करती है?
- (च) हिसाब का लेखा करने पर कौन—सी पद्विती मितव्वयी है?
- (छ) किस पद्विती को सीखना आसान है?
- (ज) आप भविष्य में लेखांकन की कौन—सी पद्विती अपनाना चाहते हैं?
- (झ) आयकर देने की गणना करते समय किस पद्विती से समय बचता है?
- (ट) लेखांकन हेतु किस पद्विती में तकनीक अच्छी है?
- (ठ) किस पद्विती में लेखांकन में अधिक शुद्वता होती है?

V. परिणाम एवं विश्लेषण

क्र	प्रश्न	संगणक /	बही	दोनों / ठीक
		सरल / ज्यादा	खाता / कठिन / कम	
1.	लेखांकन का कौन सा माध्यम आप उपयोग करते है?	79:	15:	6:
2.	संगणक के माध्यम से लेखांकन आपको कैसा लगता है?	85:	12:	03:
3	भारतीय बही खाता व कम्प्यूटरीकृत लेखांकन कौन सा	75:	20:	05:
	ज़्यादा उपयोगी है?			
4.	लेखांकन की कौन सी पद्विती समय की बचत करती है?	82:	18:	00:
5	हिसाब का लेखा करने पर कौन—सी पद्विती मितव्वयी है?	78:	18:	04:
6.	किस पद्विती को सीखना आसान है?	86:	12:	02:
7.	आप भविष्य में लेखांकन की कौन—सी पद्विती अपनाना	82:	14:	04:

	चाहते हैं?			
8.	आयकर देने की गणना करते समय किस पद्विती से समय बचता है?	84:	16:	00:
9.	लेखांकन हेतु किस पद्विती में तकनीक अच्छी है?	76:	18:	06:
10.	किस पद्विती में लेखांकन में अधिक शुद्वता होती है?	83:	12:	05:

VI. शोध विश्लेषण

उक्त शोध में हमने विभिन्न प्रष्नों के माध्यम से हमने पाया की प्रष्न क्रं. 1 के अनुसार 79 प्रतिषत लोग संगणक 15 प्रतिषत लोग बाही खाता व 6 प्रतिषत लोग दोनों पद्धति का उपयोग करते है प्रष्न क्रं. 2 के अनुसार 85 प्रतिषत लोगो के अनुसार सरल है और 12 प्रतिषत लोगो के अनुसार कठिन और 3 प्रतिषत लोगों को दोनों ही माध्यम ही ठीक लगते है। प्रष्न क्रं. 3 के अनुसार 75 प्रतिषत लोगों के अनुसार संगडक लेखाकंन व 20 प्रतिषत लोगों के अनुसार बही खाता पद्धति व 5 प्रतिषत लोगों के अनुसार दोनों ही पद्धति ज्यादा उपयोगी है। प्रष्न क्रं. 4 के अनुसार 82 प्रतिषत लोगों के अनुसार संगडक लेखांकंन 18 प्रतिषत बही खाता पद्धति समय की बचत करती है। प्रष्न क्रं. 5 के अनुसार 78 प्रतिषत लोगों के अनुसार संगडक लेखाकंन 18 प्रतिषत लोगों के अनुसार बही खाता पद्धति व 4 प्रतिषत लोगों के अनुसार दोनों ही माध्यम मितव्ययी है। प्रष्न क्रं. 6 के अनुसार 86 प्रतिषत लोगों के अनुसार संगडक लेखाकंन 12 प्रतिषत लोगों के अनुसार बही खाता व 2 प्रतिषत लोगों कें अनुसार ही पद्धति सीखना सरल है। प्रष्न क्रं. 7 के अनुसार 82 प्रतिषत संगडक लेखाकंन 14 प्रतिषत बही खाता व 4 प्रतिषत लोग दोनों पद्धति भविष्य में अपनाना चाहेत है। प्रष्न क्रं. 8 के अनुसार 84 प्रतिषत लोग संगडक लेखाकंन 16 प्रतिषत लोग बही खाता पद्धति के माध्यम से आयकर की गणना करने में समय की बचत करते है। प्रष्न क्रं. 9 के अनुसार 76 प्रतिषत संगडक लेखाकंन 18 प्रतिषत लोगों के अनुसार बही खाता 6 प्रतिषत लोगों के अनुसार दोनों माध्यम में तकनीक अच्छी है। प्रष्न 10 के अनुसार 83 प्रतिषत संगडक लेखाकन 12 प्रतिषत लोगों के अनुसार बही खाता व 5 प्रतिषत लोगों के अनुसार दोनों पद्धति में शुद्धता अधित रहती है।

VII. निष्कर्ष

उक्त शोध में हम यह निष्कर्ष निकलता है कि लेखांकन का संगणक में अनुप्रयोग की लोकप्रियता दिन—प्रतिदिन बढ़ती ही जा रही है व लोग बहीखाता प्रणाली की अपेक्षा संगणक के माध्यम से की जा रही लेखांकन विधि को ज्यादा पसंद कर रहे है और भविष्य में लोग संगडक लेखांकन के आदी होते ही जा रहे है व व्यापार जगत भी संगडक लेखांकन पर ही निर्भर होते जा रहा है।

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Consumer Behaviour Attributes towards Luxury Products: A Review Study

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ABSTRACT

The overall luxury market is estimated at more than \$ one Trillion and it grew by 5% in 2017 globally. In India it is at present US \$ 23.8 Billion and expected to reach by US\$ 30 by 2020 (Assocham Report). It is estimated the market size would increase by 5 fold and number of millionaires would increase by 3 times in India. The market is divided by classification in terms of products, gender (male, female), mode of sale, location, disposable income, Experiences, Services etc. The present study reveals the facts and dynamics of luxury brands in India vis a vis across globe. The study is descriptive in nature and is based on purely secondary data which has been gathered from various published sources. The study intent to get into the consumer behaviour aspects towards luxury brands and how the affordable luxury is gaining importance around.

Keywords: Luxury, Brands, Fashion, Consumer Behaviour

I. INTRODUCTION

According to Kapferer, Consumer Behaviour is the behaviour consumer's exhibit while searching for, purchasing, using, evaluating and disposing of products and services. The factors affecting Consumer behaviour are cultural, Personal, Social and psychological which includes motivation, Perception, Attitude, Personality and self-concept, and Learning etc. The purpose of studying consumer behaviour is, once we understand consumer Behaviour we can suggest suitable marketing strategies.

As per Assocham, Luxury market worldwide size is 1.2 Trillion Dollors and growing at a pace of 5%. In India it is estimated that at present market size is US \$23.8 Billion and expected to reach US\$ 30 by 2020.Many Luxury Brands have entered India and some are planning to enter India. Consumer Behaviour towards Luxury particularly luxury Brands is different, hence Brands have to understand consumer Behaviour to fare better.

According to economists, luxury is one which is having highest price and quality. Unlike others economic activities, luxury market growth normally create problems because the luxury dream is partly based on the notion of rarity and deals with Privileged life, products of exception and to great life .Derived from French word LUX- which means glitters, Luxury glitters like light where ever it is. This differentiates Luxury consumers from normal Consumers.

II. INDIAN LUXURY MARKET

Even though the concept of luxury is not new for India, the way Luxury Business turned in the last few years is new for India. India was known for its

prosperity before the British came to India. Even after, there were many royal families and business classes which were buyers of western luxury brands. India is known as production outsourcing destination for a long time for luxury particularly Fashion. India has fast transformed into a huge market for luxury products. According to a recent report by Technopak, out of the existing \$2.5 billion luxury market in India, luxury products and services constitute around 15 percent of the market.

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Indian Luxury Consumer: As we see now demographic, Psychographic, behavioural changes have taken place in the Indian population which have led to increase in purchase of luxury brands. After the reforms and of globalization of Indian economy, the Indian youth have better job opportunities, higher incomes and higher disposable incomes which have increased their exposure and purchasing power. Youth normally have less of liabilities, more disposable income at the start of their career and are more materialistic. This leads them to be more luxury spenders. With the advent of neo rich class the market for Luxury has grown further. Out of all the spends, people spend much on clothing and accessories. Hence most luxury brands are in the business of fashion, clothing and accessories.

The Indian consumers pay a lot of importance to physical appearance now because of which they have a positive attitude towards purchase of counterfeits, and in order to always look presentable they purchases all the items that would help them look presentable. They are willing to purchase counterfeit luxury brands as they feel that it would help them look rich and better in public.

Though India was not materialistic, of late Indian consumers are extremely concerned with what luxury branded products they carry and use. This is the fact that materialism plays a vital role in the attitude of Indian consumers towards their purchase of counterfeit products. Integrity and price-consciousness have no linear relationship with counterfeits.

Factors that influence the attitude of Consumer:

- (a) The desire to be in tune with the fashion, value for money and the society also drives consumers to buy counterfeits.
- (b) Most individuals are prestige-conscious, they believe in possessing branded items and the one who can't pay the original price look forward to counterfeits of those brands

III. A BRIEF REVIEW OF THE WORK ALREADY DONE IN THE FIELD (LITERATURE REVIEW)

On the basis of past studies reviewed some of the following extracts are given:

- (a) Truong et al. (2010) explained that luxury consumers can be classified as those with intrinsic orientation and extrinsic orientation. Those with intrinsic orientation do not show a preference for buying luxury brands as per their study. Normally the advertising campaigns of luxury brand companies are aimed at people with extrinsic orientation. Hence they should not ignore people with intrinsic orientation, who do not identify themselves with these advertisements and plan for reaching both the.
- (b) Qin Bian et al. (2010) found that luxury brands mean indulgence of senses for many consumers. Luxury brands have a low ratio of functional utility to price and high ratio of intangible utility to price. Consumers buy luxury brands basically for symbolic reasons to reflect their status and social goals. As luxury is a subjective concept, the perception of consumers about luxury brands will differ for different market segments.
- (c) Sinha et al. (2011) found that urban youth are the major sources of luxury product consumption. As they have less liabilities in the starting of their careers there is a higher tendency to buy luxury brands. They also found that Indian luxury consumers are value conscious and search for stylist and aesthetically appealing (Fashion) products which compliment them. Hence if we educate the Indian customers there is going to be big Business.
- (d) Haataja, Maria et al. (2011) have found around two-thirds of the people had a positive attitude towards purchase of luxury products. They analysed the knowledge, opinions, personal tastes and style, thoughts and feelings of the people and found that customers perceived

Luxury as something expensive, unique, exclusive and something extra with a brand name. The study found high price and good quality are part of luxury products. The consumers based on level of consumption, purchase intentions in the future and the attitudes to luxury can be classified into four groups: hard, regular, potential and non-interested luxury consumers. The study wants business to focus on young students and treat them as potential customers.

- (e) Luxe Avenue Publication et al (2012) in their research wants Luxury Business to concentrate on Generation Y as they make their aspirational life style come true by using luxury products. There is a conflicting relationship between Generation Y using social media and luxury brands. This shows that millennial are strongly influenced by peer pressure and at the same time be exclusive. Using technology and communication they want to show that they are current, care free and enhance their image. Hence marketing companies focus on consumers more than product. The product should fulfil the deeper meaning of life and dreams by giving required experiences.
- (f) Sood, N. (2016) studied differences and similarities in luxury value perceptions across three prominent Asian markets, namely China, India and Indonesia. The results varied in terms of perceptions like symbolic, experiential, and functional value of luxury brands. With Increase in wealth in Asian markets, consumers increasingly spending its discretionary income on travel, Experiences, healthcare, and luxury goods. Many luxury brands such as LVMH, Gucci, and Hermes have been highly successful in penetrating the Asian markets. The root cause of failure of some brands is treating Asian markets as homogeneous and misunderstanding about consumers understanding of luxury.
- Srichan Sriviraj et al. (2016) have studied the consumer behavior of young consumers towards purchase of luxury products in three countries namely the United Kingdom, Thailand and China. The research shows that though Chinese bought luxury products to show achievement status; United Kingdom and Thai consumers don't purchase products to show status or for materialistic possessive reasons .The study there does not find gender based purchase differences of luxury brand products. With respect to motivation, this research has suggested that the Snob, Perfectionist, and Hedonic effect motivate UK and Thai consumers into purchasing luxury products. Luxury consumers in China are motivated by

- the Hedonic and Perfectionist value while purchasing luxury brands.
- (h) Husic et al. (2016) found that while purchasing luxury consumers feel quality is the utmost factor .It is observed that there is a snob effect observed while consumers buy luxury as they want unique and exclusive products so that they can differentiate themselves from others. They identified two sub-categories of luxury consumers, i.e old aristocracy and new money. It is pertinent that developing economy like India will have more people in the new money category. This is more likely to be found in other developing economies as well.
- (i) Mishra (2016) examined the relationship between materialism and consumption innovativeness among urban Indian. The study tried to establish the fact that more materialistic Indian consumers tend to possess greater consumption innovativeness in comparison to the less materialistic consumers.
- (j) Shukla et al (2016) studied the luxury value perceptions in the Asian consumer context. Most of the earlier studies have treated Asian consumers as a homogenous, and this misconception has resulted in lopsided strategies. The study found out that Asian consumers vary in their value perceptions of luxury goods. Asia is a vast continent, consisting of several countries whose cultures and subcultures, and hence poses significant challenges to the marketers of luxury products. The study emphasises country specific study in Asia.
- (k) MSL China et al (2017) found that young women in China buy luxury products based on of the following factors like status symbol, endorsements, social media, Peer pressure, living for the moment, love for material goods, hate counterfeits, etc. They also hate counterfeits. This shows the buying motives and consumer behaviour differs from market to market.
- (1) Sanyal et al. (2017) stated about the buying pattern among Indian consumers has witnessed dramatic change over the past decade. Higher income has enhanced consumer buying power. As a result, consumers are readily adopting global luxury brands at a much faster pace. Indian consumers are attracted towards acquiring luxury brands and purchasing these brands has become a prestige symbol. Luxury brands are helpful in communicating one's uniqueness, fashion style and individuality in social circles. This study analysed the impact of dimensions of consumers' need for uniqueness and fashion consciousness on the attitude towards luxury brands. Luxury is typically

consumed for reasons related to impress others, social positioning and status symbol manifestation. As a reason of our conclusion that intention to purchase does not necessarily result in purchase of luxury brands, we can mention that while Indian consumers talk about uniqueness, exclusivity and appeal to personal taste, the majority of market is still far away from this perception and the brand/logo value highly influences luxury usage.

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In a study Pubuddi S. (2018) found that Fashion is a term, which is considering beyond the normal purchasing behavior and it has become a modern attraction. When considering the people related to every class, try to follow up new and changing trends of fashion. It depends on the choice of people whether they choose funky, cool or decent trends. And also when it commercialize with luxuries concept it is totally dependent on the consumer attitude, because people try to expose off their personality by using branded products. Hence marketers interest is to study in emerging markets what impacts attitude of online purchase intention and attitude to purchase online.. After studying particularly Sri Lankan market factors like brand consciousness, social comparison, fashion innovativeness, fashion involvement and online purchase intention affects Fashion Luxury Brand purchase. . It is also found social comparison and fashion innovativeness has positive impact on luxury brand online purchase intention.

IV. CONSUMER BEHAVIOUR TOWARDS LUXURY FASHION BRANDS BASED ON PLANNED THEORY

Luxury perceptions can be seen in terms of non-personal perceptions and personal perceptions (Vigneron and Johnson 1999, 2004). As per Groth and Mcdaniel Non-personal perceptions of luxury are based on opinions, influences and suggestions of interactions with others. As per Dubois and Laurent, personal perceptions of luxury are based on feelings and emotions. While studying non-personal perceptions of luxury we have to study

- (a) Perceived conspicuousness (what can be seen) that is social position, representation and status.
- (b) Perceived uniqueness which means a sense of exclusivity which normally comes from style, expensive pricing of luxury goods. Uniqueness enhances one's personality and self image by adhering to one's personal taste, or breaking the rules, or avoiding duplication.

- (c) Perceived quality which is an indication of greater quality coming from higher price of luxury brands and reassurance compared to nonluxury brands.
- (d) Personal perceptions of luxury are indicated by two concepts:
- (e) Perceived extended self refers to an extension of one's self by gadgets and accessories to integrate symbolic meanings which gives that distinguished look.
- (f) Perceived hedonism (pleasure) relates to personal rewards that I have arrived and achieved are emotional benefits from luxury derived from sensory gratification and pleasure.

V. CONSUMER'S PERCEPTION TOWARDS LUXURY BRANDS

Though traditionally it is high price and quality, in the world of digitalisation and globalization, where the luxury has its own predefined standards, it's important to understand what does the consumer of today's world think of luxury brands. Basically, how an individual values the particular luxurious brand in his mind defines his understanding of luxury for that particular product he is buying.

- (i) Some consumers consume luxury goods because of their desire to differentiate themselves. It acts as a social stratifier.
- (ii) Some consume it because they want to let others know they are financially that well off that they can afford that luxury .It is very qualitative hedonistic experience.
- (iii) While some use it simply because they have the genuine want and demand for it backed by their purchasing power.
- (iv) Some buy because of exclusive Distribution and highly personalised services.

Luxury brands are known for their quality, service and style with products that they can offer to their consumers where it is also important that their customer recognises all these elements in the brand. Consumers who go for luxury brands are associated with esteem and power.

Consumers definitely derive higher satisfaction from the consumption of the high end products. For example, people buy Wedding lehangas from Sabyasachi even though when they have a lot of other options available because, Sabyasachi is a wellknown luxurious name in the Indian market of wedding trousseau. The luxurious brand has a distinctive brand identity in consumer's mind which is why he goes to buy from the Luxurious Brands.

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The customer perception towards luxury brands can be looked upon through two aspects- non personal and personal perceptions. This means that perception of the Indian customer is formed under the influence of non- personal and personal factors. Further how he selects, organizes, interprets stimuli are responsible for his perceptions. The perception of luxury consumption is influenced by the position and social representation attached to luxury possessions. It is also susceptible to reference groups. These reference groups could include Hollywood and Bollywood celebrities, CEOs, Achievers, international brands, cultural customers and traditions.

- (a) Diverse Characteristics of Indian Consumer-Indian consumers are very different from a consumer in West or China, Japan. Indian consumers culturally are value conscious and always look for a bargaining. Because of globalisation, better communication, technology and global travel, high end consumers often find it cheaper to purchase luxury goods from USA, Dubai, Singapore or Europe or London.
- (b) Great Demand for Affordable Luxury Brands-How much affordable is a fordable is a big debate. But today Luxury is segmented by affordable luxury, Bridge luxury, entry level luxury etc. Affordable luxury brands like CK, Michael Kors, Kate Spade, Coach and Charles & Keith have been successful in capturing the hearts of young aspirational Indian buyers, thanks to online retailing. Even brands like Gucci etc. are testing online, to lure this type of entry level Luxury customers through their pricing. According to Euro monitor International, this affordable luxury is growing at the rate of 40% per annum.
- (c) Standards of Living-The standard of living among people is increasing, owing to higher disposable incomes, Urbanisation. Improvement in lifestyle, Technology revolution, and increase in corporate culture. With the proliferation of corporate entities and their corporate culture in developing nations popularized the carrying expensive & luxurious products culture among their employees.
- (d) Growth in Online Sales and Worldwide Sales-Online Retailing is the new trend in the global luxury goods industry. Increase in the number of online portals as well as their rising popularity coupled with discounts the online sales are growing. Growth in the number of women working professionals, busy lifestyle, convenience, Door delivery, coupled with mobile and technological advancements are the factors responsible for boosting online sales.

(e) Growth of Asia-Pacific, Brics and Lamea Markets-Asia-Pacific, BRICS and LAMEA are the three important emerging regions that hold immense growth potential for luxury market. Growth in Wealth and standards of living, awareness on Luxury and importance of Luxury brands in these markets is creating huge opportunities for the Luxury Brands and these markets are virgins and untapped.

So when the author looked at various papers to find out research on perception and Attitude towards luxury the following was noted.

VI. FINDINGS

(a) In a study to understand various markets and their understanding of Luxury like USA, China, Japan, Brazil, Germany and France Kapferer in his book "How Luxury Brands can Grow Yet Remain Rare" gives various understandings on what luxury concept evokes and how perceptions differ.

Only the Chinese equated luxury with very expensive, and exclusively for a privileged minority. In rest of the markets like France, USA, Germany, Japan what is common is the Luxury means high quality first. But it also evokes Prestige, Expensive and pleasure, in that order in France. Where as in USA, Luxury means High quality, Expensive, Prestige and Pleasure in that order. So the common perceptions of luxury are High quality, High Price, high prestige, Pleasure, dream, Fashion and belongs to rich minority etc.

- (i) In his book Kapferer on Luxury, he summarizes how luxury brands create high value through specific levers and how these levers work in combination to build the overall luxury perception today. He talks of selection and seduction as major leavers. The seduction plays major role which includes prestige and Creative. Glamour, Hi price, selected Distribution, in accessibility, Fashionable, Style, Design, Artistic, rare and unique material usage etc. are other aspects which make Luxury more attractive.
- (ii) In an article published by Kapferer and C Klippert , published in Journal of Revenue and Pricing Management,13,PP 2-11,2014 ; the authors research finds out that
 - Consumers perceive that there is a threshold of prices for Luxury;
 - Unlike other products, when Luxury products reduce the price the consumer perception is, it is no longer Luxury;

 Consumers think Counterfeits are not luxury etc,

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The overall findings are every market is different and consumers perceive Luxury Brands differently than normal Brands.

In this context when we look at Indian market, the following may be observed.

VII. CONCLUSION

We may conclude that consumption of luxury goods reflects affluent lifestyle. The product's superior quality is the main reason for buying luxury goods. Quality is one of the important aspects of the functional value of a luxury brand. The quality of raw materials used and the excellent craftsmanship, experiences given, services of the company and employees contribute to the functional value which is a very important dimension of luxury. Consumers experience gratification and satisfaction purchasing luxury goods. Luxury brands have good looks or aesthetics which is an important motivation for consumers to buy luxury brands. They derive pleasure and hedonic value by consumption of these brands. It gives them a feeling of happiness, relieves them of stress and makes them feel good. They have a high rating for unique value of luxury goods. Luxury consumers want to buy goods which are rare and exclusive. They should have products which are not possessed by many. These products are not massproduced. The luxury buyers stop buying these products when they become common among other people. Young consumers with new money are the prime target of future luxury market. The effect of higher prices, counterfeit understanding, gender differences in perceiving Luxury, Discounting, Value money, selling luxury online, quality understanding, Experiences role in Luxury, Rarity, Exclusivity play major role in understanding luxury and in forming Attitude.

As we see there are various factors which every country, society and culture uses to perceive and evaluate Luxury and fashion Luxury Brands. Hence India needs a separate study to understand Indians particularly, Indian Urban consumer's perception and Attitude towards Fashion Luxury brands, so that the luxury companies already present and those who want to launch their Brands can strategize in terms of marketing, promotion and positioning etc. This troughs opportunity for further scope and opportunity for further Research.

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Determinants of FDI: Analysis of BRICS Countries

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ABSTRACT

The study aims to investigate how FDI Flows are affected by various economic factors prevailing in that particular nation. The study analyses country wise six determinants which are Real Gross Domestic Product, Consumer Indices, Services Trade Openness, Workers Remittances and Compensation of Employees, Gross Capital Formation and Electric Power Consumption. E-Views is being used to apply Augmented Dickey Fuller Test and Multiple Regression for each country separately to identify significant determinants of FDI Flows. The data is collected from various resources mainly comprising of United Nations Conference on Trade and Development and World Development Indicators of The World Bank for the years 1995-2017. The study finally concludes that all the independent variable do not have the same significance pattern toward FDI. The study also highlights the significance of panel data analysis to generate results.

Key Words: Foreign Direct Investment, Gross Domestic Product, Inflation, Trade Openness, Gross Capital Formulation

I. INTRODUCTION

Gone are the days when the world market was solely ruled just by the developed countries, now is the time of the strongly emerging countries and the nations. Over the past few years the market share of the nation's globally has been conquered to a good extent by the developing nations like China, Russian Federation, India and many more. But the most significant increase financially has been in these five nations, which are Brazil, Russian Federation, India. and the most recent addition of South Africa. There are a lot of reasons and factors responsible for this growth in their trade at the national and the international level. One of the main factors that contribute to the significant economic hold these nations have had in recent past is the Foreign Direct Investment. This involves nations other than the mentioned ones investing in the mentioned nations for their own personal benefit and also the latter becomes strong and economically powerful. These nations have continuously made a strong hold in being able to attract investors from all over to world to make their business grow also they have been able to nearly make their performance twice of what was at the time of the crisis level. Over twenty percent of the FDI at international level have been accounted by these nations and China, Russia and Brazil have been ranked in the top ten nations for the inflow of such investments. These nations have been able to generate over \$680 billion in the year 2017.

(a) Foreign Direct Investment:

FDI can be defined as a country or its unit investing into another country by various means mostly for their own personal benefit. These investments are not similar to the ones where there are investments made in direct terms with the destination nation by being an investor or the contributor to the company's actual

stock exchange. Whenever such a direct investment is made into a company of another nation by a unit of some other nation then the latter generally has center level of say and control over the former company.

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Nations that have easy and not so regulated access channels for the outsiders and also have an abundance of skilled and trained workforce have more foreign direct investments made than the ones which seem to be bound and closed by various sorts of laws.

There are possibly three types of FDI that can take place. First on the list is called the FDI of Horizontal type as in this scenario the unit of the source country replicates its activities in the destination nation by arranging equivalent chain of value. The second type of FDI is of Platform type as in this scenario the investment to the latter is made for the generation of export stuff to a third nation. The third and the last type of FDI is of Vertical type wherein the scenario is to introduce activities that add value to the business and not only generate core benefits in the destination nation.

In this paper we look at the factors or the independent variables that have some sort of significance in determining how much Foreign Direct Investment shall be made in all the five nations constituting the BRICS. Now we shall be discussing about those independent factors in detail. These investments are also know to elevate the level by which in the destination country the employment chances are growing, new technologies are being introduced, new level of employee training is being considered and there is generation of new brands, products and various types of skills developed for management purposes.

(b) Gross Domestic Product:

Gross Domestic Product (GDP) can be considered to be the measure for estimating how large the target market will be, and it is a general notion that if the target market for a nation is big then that entity will make more investment in the former nation. But this is not accurate enough as GDP also causes various other types of effects on FDI like it being the indicator of the disposable income for the middle class households of a nation may result otherwise. When there is an increase in the GDP of a nation that means some amount of investment has been made which increases its sum thus it can be said that in the middle period of run though the GDP has only a temporary effect but when we talk about the longer period GDP has a substantial effect on these investments.

(c) Trade Openness:

This basically a ratio that holds significance in controlling the Foreign Direct Investments that are made into a country as it is viewed as the ratio of the total trade of a nation i.e. is the sum total of the nation's export and import to its GDP value. The term's latter half that say openness does not always mean that if a low ratio has arrived so it would be tough to make investments in these nations, this misunderstanding can be removed by reading factors such as size of the economy for that nation and its demographic and geographic barriers for their investment partners. This ratio also signifies how much the nation integrates with the economy of the world. Nations smaller in sizes have more number of imports in comparison to exports so that they can feel content but need to increase the latter as well. Factors like culture, society, and politics also play a major role in determining this ratio which tends to affect the inflow of investments made into these nations.

(d) Inflation Rate:

Whenever there is a significant and consistent elevation in the price levels for products and services, it is known to be caused because of Inflation. An increase in terms of annual percentage is used as a measure for the inflation. Whenever there is a drop in the percentage of purchasing power of your currency, then we can say that the inflation is the reason behind it. It is major key factor in determining how FDI's will be made in a nation, but its effect can be either positive or negative in such terms in the longer run. Inflation has three types, first being Hyperinflation when there is significant consistent increase in inflation, second being deflation that's the opposite of the former and last being when there is a combined effect of high levels of unemployed coupled with low growth factors and persistent inflation.

(e) Workers' Remittances and Compensation of Employees:

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The earnings of workers who fall into the category of the non-long term workers and can be seasonal and are employed by either the units who are not a part of the nation or the ones who are a part of the nation and are keeping workers who are not a part of the nation constitute the Compensation of employees. All the money transfers that are made by workers migrating from some other nation or our nation's workers employed by non-resident units form the workers remittances and compensation of employees. These both are instrumental in determining the labor cost of a nation , thus with higher labor cost the cost of production may also increase causing at times a negative impact on FDI inflows into a nation.

(f) Gross Capital Formation:

Whenever there is an economy that under goes a lot of transitions, attempts are made to improves its investment inflows by adjusting the country's economic climate in terms of ease. Larger is the value of this measure better is the growth in terms of economy for the nation. Thus both a positive and a negative relation can be expected between these investments and the measure.

(g) Electric Power Consumption:

This measure is a proxy to the infrastructure index for a nation under BRICS experiencing investment inflows and accounts for the fact that whenever there is a better infrastructure in a nation more investors would want to invest in there, thus continuous supply of electric power may result in a positive effect on the FDI.

II. LITERATURE REVIEW

A plethora of research are being conducted in the area of determinants for FDI, a brief review is presented below:

Jadhav(2012) The paper discussed the role of political and institutional factors in addition to the widely perceived economic factors that influence the inflow and outflow of Foreign Direct Investment (FDI) in BRICS countries. It takes economic factors such as Market Size, Trade Openness and Natural Resource Availability and augments their use with empirical data by assigning values to factors such as Corruption Control, Macroeconomic stability and Accountability. By way of using panel data with panel unit-root test and multiple regressions over a decade's worth of data from 2000 to 2009, the report comes out with a conclusion that supports that economic factors are of paramount importance for

FDI and goes on to state that organization select conditions similar to their current operating structure to exploit their familiarity with the resources required to run their operations.

Vijayakumar et al(2010) The study takes a fresh view on the various variables that affect the inflow of FDI in the fast developing countries of the world, especially BRICS, by employing panel data analysis using an annual data set from 1975 to 2007 with data for Russia being available from 1990 only. The study comes up with robust results for general application with alternative variables that determine FDI flows. The study has come up with results that may have policy implications that could help the BRICS to attract higher FDI with a better investment climate. The study lists Inflation (as an economic stability indicator) and Industrial Production (from a growth point-of-view) as being critical indicators for FDI flows.

Agrawal(2013) The paper attempts to establish a relationship between FDI and economic development in the BRICS countries by employing empirical co integration and causality analysis at the panel level over a data set spanning 1989-2012. The paper concludes by implying a bi-directional relationship between FDI inflow and economic stability of the BRICS countries and goes on to imply that various policy measures that are in place to attract FDI inflows might not be necessary if policy makers look at various other avenues for better economic growth, which, in turn, would automatically attract higher FDI inflows for the economy and further continue to fuel the growth. This hypothesis supported panel cointegration test and Granger causality test on the panel data.

Holtbrugge et al (2010) the paper looks at key determinants that guide FDI outflow for companies established in the BRICS countries that aim to have an international footprint. The study takes a comprehensive look at the determinants at the country, industry as well as an organizational level utilizing an exploratory approach spanning eight case studies with within-case and cross-case approaches. As an example, the paper cites an example of location viability when it comes to choosing locations abroad for BRICS based organizations. These organizations look for different traits as compared to organization from the developed countries such as BRICS organizations look for technological reach, management know-how and other resources whereas firms from developed nations look towards lower labor and manufacturing costs for international destinations.

Elfakhani et al (2010) the paper takes look at the determinants of FDI in BRICS countries using an

eclectic approach to international production. By way of regression on net FDI inflows on the full data series from 1980-2008, the study concludes that there are various social, political and financial factors guiding the flow of FDI in these countries. But, social factors account for a significant percentage of the change that is observed in the net inflow of FDI whereas political factors only influence significant percentage of the change over the same full data set. During the decade from 1999 to 2008, the research indicates that the trend changes in these years to show that financial motives account for significant percentage change whereas social variables account for significant percentage change. This throws light on the fact that during the full data set analysis, international organizations that are looking to invest in foreign markets are looking for places with a large healthy workforce with a high number of college degree holders. But, at the same time, organizations do not shy away from strong single-handed governments due to their ability to steer the process. The paper observes that during 1999-2008, countries with favorable financial characteristics such as high GDP and stable currency attract FDI easily when combined with strong social characteristics such as good health and college education. The paper analyses the involvement of EU in the role of a foreign direct investor not only at a global level but in finer detail for the BRICS countries. It takes into account two methodologically diverse databases namely, Eurostat FDI data for FDI flows and stocks and the FDI Intelligence data published by Financial Times Ltd for the number of investment projects. The paper goes on to display the much larger role that China plays than the one depicted in the FDI data due to the prominent role of Hong Kong and offshore centers for Chinese FDI and Mauritius as an offshore center for Indian FDI. Correcting for these, China is still the third largest destination for FDI for EU. Based on a broad sector based analysis, manufacturing accounts for nearly one-third of FDI whereas services account for a significant percentage of FDI from EU to the BRICS. Analyzing the various factors affecting EU investment in BRICS, the paper observed that only large organizations prefer to enter new geographically distant markets while SMEs tend to limit their foreign operations to neighboring countries. The paper observes that most EU investments can be leveraged and increased using policy interventions by mutual and balanced liberalization to allow for higher FDI limits in sectors such as finance or telecommunication. But, it also points out that foreign ownership might not be in the best interest of the BRICS countries especially when it blocks the transfer of technology.

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Hunya et al (2009) The research here is targeted at a relationship between FDI and innovation that occurs

in the BRICS countries. The study takes into account the many-fold increase in the FDI in countries such as Russia and India from 2011 to 2012 - 14.2 times for Russia and 12.3 times for India, and attempts to find a co-relation between the increased FDI and innovation. The research indicates that Russia lags behind the rest of the BRICS countries for FDI due to various limitations on Innovation and R&D when it comes to research. The paper demonstrates the need for innovation that would lead to better FDI inflows, which would in turn allow for better R&D facilities combined with better industry and academia integrations. This increase in FDI coupled with an increase in it the innovation potential would lead to better integration of the BRICS economies with the world economy as they are poised to become the driving force of the world economy in the next 50

Gusarova(2013) The research analyses the outward flow of FDI and the various investment motives and modes of ownership used by firms established in the BRICS countries. The paper takes a closer look at Outward Foreign Direct Investment (OFDI) from the BRICS countries and analysis sectoral composition as well as the typical destinations of OFDI and comes up with a detailed report where Russia leads the charge with the highest percentage of average outflows over four years as a share of its GDP at a significant percentage with its main focus being Resource extraction and manufacturing in the European Union and Commonwealth of Independent States comprising of former Soviet Republics.

Polodoo et al(2012) The research paper examines the impact that international trade has on economies of the BRICS countries by utilizing panel unit root analysis and random coefficient estimates. The study finds that trade is just one of the major factors allowing for better economic growth but also factors such as human capital formation, Gross Domestic Fixed Capital Formulation (GDFCF) and exchange rate appreciation positively influence growth in the BRICS countries for the time period considered. The research shows empirical results for developing countries that can employ policies to boost their economies by allowing for open trade, government spending on human capital formation as well as government spending in the public as well as private sector for better economic growth.

Duan(2010) The paper analysis the overall trends and performs a sector-wise analysis on the inflow of FDI in the BRICS nations from a decade. The paper reaches a conclusion wherein it is noted that the tertiary sector, which comprises mainly of the service sector, receives the most FDI inflows in Brazil, Russia and India followed by the secondary sector and the primary sector trailing behind for these

countries. But this trend changes for China wherein it received most of its FDI inflow towards its manufacturing units that comprise the secondary sector and its primary and tertiary sectors get only meager FDI inflows for the decade considered.

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Popa et al(2013) The paper looks at the relation that BRICS countries have when it comes to economic growth and FDI inflows using a quantitative and comparative analysis. The research points out the BRICS growing role in both goods as well as service trade along with an increased in FDI flows as compared to the G7. It shows the current and the growing international influence of the BRICS countries even in times with a serious financial downturn. The paper suggest establishment of mechanisms that allow for financial cooperation and economic agreements between the BRICS countries to avoid possible conflicts that may arise due to varied levels of development in the BRICS but also for more sustained and lasting gains for everyone involved.

Chaitanya et al (2007) the study aims to establish a relationship between FDI inflows for other countries and the FDI inflows of China. It aims to do so by utilizing co-integration analysis along with unit root tests that allow for an analysis that would allow the research to be conducted on the parameter about how other market behaviors influence the inflow of FDI in one country. The research utilizes data from 1970 to 2006 to derive an empirical result wherein a linear relation does exist between FDI inflows for the economies of Brazil and India in relation to China. It has also been observed that the relation is stationary for the data set in 2006. However, these findings do not hold true for the relation that Mexico and South Africa hold with China. It throws light on the policy implications that policy makers of Brazil and India have to keep in mind during policy formulation to attract FDI as the rise and fall of FDI inflows in China also influences the FDI inflows in Brazil and India.

Mlachila et al(2011) The working paper analysis the role that FDI outflows from BRICS countries towards Low Income Countries (LICs) play in economic growth of the LICs. The qualitative analysis the available partial data showcases a positive impact of the FDI outflow from the BRICS countries. Even though BRICS FDI outflow forms a small proportion of the global FDI, BRICS FDI is a major growth drive for some LICs. Though BRICS countries generally focus FDI on natural resource industries through state owned companies, investment generally moves towards other sectors as well such as manufacturing. service industries telecommunication as well as agriculture. The findings also point to the fact that BRICS countries

also invest in non-resource-rich LICS allowing for development in the LICs which would further allow them to receive FDI from a broader set of countries due to economic growth and proven potential. LICs can augment their position as favorable FDI destination by development mechanisms that allow for higher fiscal return while not discriminating against domestic firms.

III. RESEARCH METHODOLOGY

(a) Statement of the Problem:

Various determinants of Foreign Direct Investment inflows in the nations constituting BRICS i.e. Brazil, Russian Federation, India, China and South Africa are studied and the purpose is to find the significant determinants out of all the mentioned ones for each country. The data for each country is taken from the years 1995-2017.

(b) Objective of the study:

As the problem statement says to find out the significant determinants of the ones taken into account which are Real Gross Domestic Product, trade Openness, Inflation Rate, Workers Remittances and Compensation of Employees, Gross Capital Formation and Electric Power Consumption for the Foreign Direct Investment. As all of these will be different for the five countries and so we will:

- Finding out the kind of impact determinants have on investment inflows.
- (ii) Note and reason out the presence of the significant determinants.

(c) Methodology:

The methodology followed in this project has been executed in four phases, the first phase was to study a number of published paper so that the problem statement could be defined and it also helped in ascertaining whether the problem is feasible to be addressed or not. The second phase was about collecting the data for the project which will be discussed in the next subsection. After the relevant data for sampling has been selected then it is important to determine what time frame should be selected, as the data needs to be available equally for all the five countries.

The next phase was to conduct the actual data analysis. Since it is decided to perform multiple regressions, and effect of various selected determinants had to be checked via the multiple regression equation on FDI so the determinants become the independent variables and FDI becomes

the dependent variable. We had applied the augmented Dickey Fuller test (ADF) which tests for unit roots in a time series type of sample such as our starting from 1995 to 2017. This test forms the augmented version of the Dickey Fuller test which is used for correction of larger and more complex type of time series data. A negative number is used as the statistic in this test, thus we can say that more the number is negative, and greater are the chances for it to be able to reject the null hypothesis that states it having unit roots or in other words the data being volatile in nature.

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We check the probability value or the p value, if comes out for the series as less than 0.05 than the null hypothesis of having unit roots can be rejected, otherwise the null hypothesis has to be accepted and we need to find out whether the unit root exists for the first difference level or not, if it exists at the base level or simply the level. If it exists at the level and not at the first difference level that means the series needs to be converted to its first difference but if the problem persists then the second or the 2nd difference has to be used. Even then if a unit root exists then either by taking the log of the series the unit roots can be removed or by using Z values of the series.

It is important to make the data free from unit roots because otherwise while estimating the equations for multiple regression proper results won't come. After this has been done we analyze the results of the multiple regression equation we suggested and get to know from the coefficient value whether the independent variable has a positive effect or a negative effect on the dependent variable by the sign of the value it bears, the standard error column estimates the measure for the standard deviation for the sample. If the probability value of the independent variable is less than 5%, then the regression coefficient can be termed as significant at the level of 5 %.

(d) Sources of the sampling data:

Since the data for this project included seven economical parameters, thus most of the data has been sourced out from the United Nations Conference on Trade and Development's Statistic database for the years starting from 1995 to 2017.

Real Gross Domestic Product of the nation measured as annual average growth rates and total per capita, the Foreign Direct Investment flows measured in US Dollar at current prices and current exchange rate in millions, the Goods and Services Trade Openness measured as the percentage of ratio of total of imports and exports by the GDP and the Consumer Price Indices or the Inflation Rate measured as the

annual growth rates all have been sourced from the official website of UNCTD.

Workers Remittances and Compensation of Employees has been taken from another online database, and it is measured in US Dollar at current prices and current exchange rate in millions also only the payment values have been used. The Gross Capital Formation and the Electric Power Consumption measured as the percentage of GDP and kilowatt-hour per capita respectively have been sourced from the World Development Indicators of The World Bank.

(e) Tool used for data analysis:

E views or the Econometric Views is the software that I have used for the data analysis of this project. It is a descendent of the Time Series Processor Software which was used for main large frame computers.

IV. DATA ANALYSIS AND INTERPRETATION

ISSN: 2349-4190

Foreign Direct Investments inflows are denoted as "FDI" or "fdi", Real Gross Domestic Product is denoted as "RGDP" or "rgdp", Inflation or Consumer Indices as "INF" or "inf", Services Trade Openness as "TO" or "to", Workers Remittances and Compensation of Employees as "REM" or "rem", Gross Capital Formation as "GCF" or "gcf" and lastly Electric Power Consumption as "EPC" or "epc". These denotations might differ from country to country in a certain way due to the unit root test that was performed to avoid the problem of volatility of data. After this test was performed the multiple regressions was checked for the model to predict the significant determinant of all for FDI in that particular country. Equation: $fdi = \alpha + \beta_1 (rgdp) + \beta_2$ $(inf) + \beta_3(to) + \beta_4(rem) + \beta_5(gcf) + \beta_6(epc)$

Table 4.1 Brazil:

fdiw= $\alpha+\beta_1(rgdpw)+\beta_2(dinfw)+\beta_3(ddtow)$ + $\beta_4(ddremw)+\beta_5(dgcfw)+\beta_6(depcw)$

Dependent Variable: LFDIW Method: Least Squares Date: 17/06/19 Time: 13:28 Sample (adjusted): 1 15

Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	-15.58959	28.89343	-0.628196	0.59172
RGDPW	0.345467	0.498873	0.610002	0.59002
DINFW	0.008223	0.000922	7.018762	0.0001
DDTOW	-0.032228	0.105139	-0.392072	0.6099
DDREMW	0.032001	0.228888	0.134544	0.9200
DGCFW	-1.916948	1.120812	-1.82223	0.1344
DEPCW	1.764432	2.833356	0.501123	0.7222
R-squared	0.934221	Mean dep	endent var	0.064105
Adjusted R-squared	0.899291	S.D. dependent var		7.999372
S.E. of regression	2.378882	Akaike in	fo criterion	5.012333
Sum squared resid	44.33322	Schwarz o	criterion	4.999006
Log likelihood	-28.89547	Hannan-Quinn criter.		4.982233
F-statistic	26.83334	Durbin-W	atson stat	2.566443
Prob(F-statistic)	0.000059			

As it can be seen in the case of Brazil the "LFDIW" is the dependent variable so that means log value of FDI was taken to make the data free of any unit roots, and accordingly RGDP is "RGDPW", INF is "DINFW" as its first difference is taken to remove its unit roots, similar stuff has been done for GCF as "DGCFW" and EPC as "DEPCW". To remove the

unit roots of TO and REM their second difference were taken as "DDTOW" and "DDREMW". So it can be seen from the result that TO and GCF have a negative impact on the FDI but is not significant, the only significant that appears here is the inflation which has a positive impact and is the major contributor FDI flows of Brazil as it allows a better

competition to sustain even when the prices grow high and there's a better market developed for the investors to work in.

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Table 4.2 Russian Federation:

 $\begin{aligned} dfdi &= \alpha + \beta_1(ddinf) + \beta_2(ddto) + \beta_3(ddrem) + \beta_4(gcf) \\ &+ \beta_5(epcn) \end{aligned}$

Dependent Variable: DFDI Method: Least Squares Date: 17/06/19 Time: 13:45 Sample (adjusted): 3 15

Included observations: 15after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	-13221.11	20134.45	-0.607098	0.4555
DDTO	1101.3455	503.88778	1.998877	0.0656
DDINF	99.0344	65.88764	-2.008448	0.1011
DDREM	15.02134	4.78223	2.999878	0.0134
GCF	760.4456	997.899	0.699823	0.5012
EPCN	5.46678	3.886677	1.388556	0.1998
R-squared	0.890123	Mean deper	ndent var	2402.876
Adjusted R-squared	0.667891	S.D. dependent var		15443.34
S.E. of regression	9102.3343	Akaike info criterion		20.9876
Sum squared resid	8.78E+09	Schwarz criterion		22.44556
Log likelihood	-121.9807	Hannan-Quinn criter.		23.29982
F-statistic	4.34556	Durbin-Wat	son stat	1.2656
Prob(F-statistic)	0.034225			

As it can be seen in the case of Russian Federation "DFDIW" is the dependent variable so that means first difference of FDI was taken to make the data free of any unit roots, and accordingly INF is "DDINFW", TO is "DDTOW" and REM is "DDREMW" as their second differences are taken to remove the unit roots. GCF has been used as itself while for EPC, the result of its division by GDP has been used as "EPCN" thus separately RGDP has not

been used. It is evident that Inflation has a negative effect on FDI flows for this country but is not significant; REM has a positive and significant relation with the FDI. Thus in this country in the longer run remittances generating a better environment financially would bring in better FDI flows. The second significant factor contributing to FDI flows is the TO.

 $\begin{aligned} & \textbf{Table 4.3} \\ & \textbf{India:} ddfdi = \alpha + \beta_1 (drgdp) + \beta_2 (ddinf) + \beta_3 (dto) + \beta_4 (ddrem) \\ & + \beta_5 (dgcf) + \beta_6 (ddepc) \end{aligned}$

Dependent Variable: DDFDI Method: Least Squares Date: 17/06/19 Time: 13:53 Sample (adjusted): 316

Included observations: 15after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	-5007.934	2234.5617	-1.765433	0.0876
DRGDP	-986.445	908.9018	-0.78334	0.2893
DTO	1824.567	799.3456	2.33099	0.06993
DDINF	0.99834	501.3346	-0.003067	0.8988
DDREM	0.68902	0.675431	1.164432	0.3018
DGCF	523.8990	1233.4533	0.398889	0.7022
DDEPC	90.1234	201.34565	0.470002	0.6445
R-squared	0.85647			-879.2334
Adjusted R-squared	0.73990	73990 S.D. dependent var		1233.5678
S.E. of regression	6056.334	Akaike info criterion		34.44522
Sum squared resid	2.02E+06	Schwarz criterion		21.32114
Log likelihood	-134.234	Hannan-Quinn criter.		21.09887
F-statistic	6.996720	Durbin-Wats	on stat	2.30123
Prob(F-statistic)	0.016071			

As it can be seen in the case of India FDI's second difference has been taken to remove the unit roots as the dependent variable i.e. "DDFDI". The first differences of RGDP as "DRGDP", TO as "DTO", and GCF as "DGCF" has been taken to make the data nonvolatile. The second differences of INF, REM and EPC as "DDINF", "DDREM" and "DDEPC" have been taken to remove the unit roots. India's Gross Domestic Product and Inflation have a negative but not significant effect on FDI flows rather the easy trade rules, much appreciated cross country trade and demand for ever increasing export material favors FDI flows in this nation in the longer run.

Table 4.4 China:

 $ddfdi = \alpha + \beta_1(dinf) + \beta_2(to) + \beta_3(ddrem) + \beta_4(ddgcfn) + \beta_5(depc)$

Dependent Variable: DDFDI Method: Least Squares Date: 17/06/19 Time: 13:53 Sample (adjusted): 3 16

Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-29085.23	20118.234	-1.87654	0.1223
TO	1233.345	499.345	1.992342	0.0699
DINF	2209.231	1234.3321	1.874452	0.1002
DDREM	0.86645	0.89960	0.998233	0.3823
DDGCFN	1809.33	4003.2311	0.392233	0.7233
DEPC	213.456	83.3367	-1.993556	0.0389
R-squared	0.89001	Mean dependent var	-1400.334	
Adjusted R-squared	0.65778	S.D. dependent var	13199.3422	
S.E. of regression	7988.3422	Akaike info criterion	20.99887	
Sum squared resid	4.87E+05	Schwarz criterion	20.88967	
Log likelihood	165.443	Hannan-Quinn criter.	20.987768	
F-statistic	5.02234	Durbin-Watson stat	2.67728	
Prob(F-statistic)	0.034225			

As it can be seen in the case of China "DDFDI" has been taken as the second difference of FDI to show the dependent variable. While TO have been taken as it is, EPC and INF have both their first differences being taken to remove the unit roots as "DEPC" and "DINF" respectively. GCF was initially changed to (GCF/RGDP) which later had to be taken as their second difference as "DDGCFN", so was the case with "DDREM" to remove the unit roots. Thus

explicitly RGDP was not taken in the equation. In the case of this nation TO is the significant to the FDI Flows as the easy trade rules, much appreciated cross country trade and demand for ever increasing export material favors FDI flows in this nation in the longer run. It is also evident that EPC has a negative and significant impact on FDI flows as because of high consumption values FDI investors don't always find it a favorable reason to invest in the nation.

$\begin{aligned} & \textbf{Table 4.5} \\ & \textbf{South Africa:} \\ & \text{fdi} = \alpha + \beta_1(\text{dinf}) + \beta_2(\text{ddto}) + \beta_3(\text{ddrem}) + \beta_4(\text{gcfn}) \\ & + \beta_5(\text{depc}) \end{aligned}$

Dependent Variable: FDI Method: Least Squares Date: 17/06/19 Time: 13:45 Sample (adjusted): 3 15

Included observations: 14 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4238.4567	977.3454	4.66234	0.0056
DINF	745.3345	240.4433	3.00345	0.0269
DDTO	221.3456	189.2234	0.987764	0.4033
DDREM	28.454	18.99795	1.56783	0.2113
GCFN	-198.4456	110.3345	-1.988791	0.0765
DEPC	-20.987456	7.32245	2.89970	0.0445
R-squared	0.716676	Mean deper	ident var	2099.345
Adjusted R-squared	0.480572	S.D. dependent var		3204.342
S.E. of regression	2264.140	Akaike info criterion		17.9903
Sum squared resid	30757975	Schwarz criterion		19.99456
Log likelihood	-105.5678	Hannan-Quinn criter.		19.0345
F-statistic	3.035430	Durbin-Watson stat		1.67003
Prob(F-statistic)	0.104492			

As it can be seen in the case of South Africa the dependent variable FDI has been taken as itself. The first differences of INF and EPC as "DINF" and "DEPC" have been taken to remove the unit roots. In case of REM and TO, their second differences have been taken to remove the unit roots as "DDREM" and "DDTO". Last independent variable has been taken of GCF as (GCF/RGDP), thus RGDP is not taken explicitly. It is clear that the inflation which has a positive impact and is the major contributor FDI flows of South Africa as it allows a better competition to sustain even when the prices grow high and there's a better market developed for the investors to work in. It can also be seen that EPC and GCFN have negative and significant impact on FDI flows in the shorter run i.e. increase in their value may cause slight dip in FDI flows though only for a shorter period.

V. CONCLUSION AND FINDINGS

From the study it can be concluded that in different countries different factor contribute majorly to FDI Flows. Starting with Brazil, FDI Flows there are majorly affected by the Inflation Rate as it tends to generate a competitive market, in Russian Federation Workers Remittances and Compensation of

Employees and the Services Trade Openness have a positive and significant impact on FDI Flows. In India FDI Flows are majorly affected by Services Trade Openness as there are easy trade practices and demand for imported goods and services. In China Services Trade Openness has a significant and positive effect whereas Electric Power consumption as the approximation of Infrastructure Index may have a short term negative impact on FDI Flows. Lastly in South Africa Inflation plays a positive and major role in contributing to the FDI Flows whereas Electric Power Consumption and Gross Capital Formation may have a short term negative effect on it. We were able perform appropriate multiple regression and thus generate the above mentioned results, though there is a lot of space of improvement in this model and for the future scope a Panel Analysis would be a much better option so that comparative study of the nations can be undertaken.

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Analyzing the Relationship between the Social Media and the Decision Making Process of Travelers: A Case Study of Delhi NCR

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ABSTRACT

Millennials have been exerting a peculiar fascination not only on business leaders but also on the academic experts. Since the members of Generation Y are also called Digital Natives, their life has begun with the digital environment and information technology profoundly affects how they live and work. Most of the business managers, researchers and policy makers are interested in the identification of use of social media by millennials because this can reflect the positive and negative outcomes of these digital natives and subsequently managers can design and develop their products and the product line. Most of the business managers form customer identity by analyzing their habits and their brand loyalty along with their use of social media. With this, they can also assess the purchase behavior of these consumers and their perceived value towards the business organizations. The present study focuses on the relationship between social media and the purchase decisions made by the generation with regard to their travel. The study is done on the basis of responses received from the generation Y population. A questionnaire has been designed to assess the hypothesis that there is a strong relationship between the use of social media and the travel decisions made by them. Out of total 300 responses, 244 were found to be significant. Based on the responses received inferences have been made.

Keywords: Social Media, Generation Y, Millennials, Travel Decisions

I. INTRODUCTION

With more businesses going from offline to online mode the life of individuals have changed and internet technology has integrated into their daily routine. It is very much evident that after 1990 the influence of Information Technology and particularly the use of social media have revolutionized the information searching and sharing not only by the common man but also by the millennials to a great extent. (Asur & Huberman, 2010; Smith & Anderson, 2018)

People born between 1980 and 2000 have integrated the information technology and social media into their daily life and activities (Asur & Huberman, 2010; Tkalac Verčič & Verčič, 2013) and this does not seem to be a challenge for them because they can move from their local outreach to a global outreach understanding with these technologies influencing and simplifying their life(Kilian, Hennigs, & Langner, 2012).

It is widespread known that more than 80% of generation Y people want to share their information or opinion or reviews online (Kilian et al., 2012) with their friends as they can somehow influence the purchasing decisions of their friends and relatives with such opinions.

Generation Y considers the review websites as a strong source of influence from their personal experience to their influential experience while discussing their travel plans. This is also reflected in the decisions made by this generation when it comes to making travel decisions as social media not only stands for creating more friends online but also sharing information and

deciding where to go, how to go there and at what particular destination they should visit. This has actually opened up a new era of options and decision making processes for this generation (Al-Badi, Tarhini, & Al-Sawaei, 2017; Fotis, Buhalis, & Rossides, 2011b, 2011a; Icoz, Kutuk, & Icoz, 2018; Sinha & Fung, 2018).

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The growing number of people using social media worldwide also confirms that it has become an important activity among the users with more than 300 billion people across the length and breadth of the Nations using social media in the year 2018 (Smith & Anderson, 2018). The immense popularity of social media clearly indicates that it is not a temporary trend but it is likely to be the inseparable part of young people developments more and technological advancement in coming vears (Schroeder Pennington-Gray, 2015).

It is clearly indicated that social media cannot be now taken away from the generation Y and generation Z as it has created an online culture that encourages its users to share their experiences and has changed the way they think and behave in their day to day life. Most of the members of this generation have taken and are taking enough time to consider whether their personal experiences should go online (Munar & Jacobsen, 2014) and their likes and dislikes should also be discussed in public domain (Cabosky, 2016).

Major social media platforms like Facebook, Snapchat and Instagram not only attract users because of the features of editing their content but also they can share their experiences and group with the like-minded people around them (Bouchillon, 2014; Davies, 2019).

While sharing their experiences and reviews, sometimes this generation shows the characteristics of split personality like a difference between who they are and what they really want to project on these social media platforms (Golbeck, Robles, & Turner, 2011). A further investigation can be done to assess the split personalities on social media.

Most popular social networks worldwide as of October 2018, ranked by number of active users (in millions)

Facebook	2234
YouTube	1900
WhatsApp	1500
Facebook messenger	1300
We Chat	1058
Instagram	1000
QQ	803
Tiktok	500
Sina Weibo	431
Twitter	335
Reddit	330
LinkedIn	303
Skype	300
Snapchat	291
Viber	260
Pinterest	250
Telegram	200

(Source: https://www.statista.com)

(Rita, Brochado, & Dimova, 2018) discussed about the millennials' travel motivations and desired activities within destinations through push and pull factors and found out that 'relaxing' and 'escape from the ordinary' are among the most motivating factors when millennials decide about their destination. The destinations need to focus on the uniqueness and provide attractive activities including availability of indigenous and local food and off the track sightseeing. Since activities contribute greatly into the overall tourist experience, the destinations which can provide a wide range of unique activities will survive for a longer time as compared to the destinations which have not diversified their tourism product range.

Millennials look for hedonic motivations at the destination and this can be reflected in the search behaviour while making the final decisions for their travel. Recording of such searches is still in the nascent age and industry has to understand the importance of these search behaviour of the millennials and record it. (Bloch, Sherrell, & Ridgway, 2002) resulted in their exploratory study about the hedonic motives of search behaviour and projected them to be important elements in the marketplace.

II. BACKGROUND OF THE STUDY

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It is clearly indicated that social media cannot be now taken away from the generation Y and generation Z as it has created an online culture that encourages its users to share their experiences and has changed the way they think and behave in their day to day life. Each and every day new social media platforms and Apps are being designed and developed keeping this vast user base of millennials as these Apps and platforms change their lifestyles too. New social media platforms are being designed every day and most of the people from this generation want to try and find out that how these new platforms can create a better life or a positive life to them.

Last few decades tourism has seen a lot of changes and the business has gone tremendously transformed with new preferences from the customers. It is not only the preferences of the customers but the changing Information sharing and discussing platforms which have kept industry people on their toes to identify and develop new tools to tap this ever-changing industry. With so much of ready information available on various platforms (Laroche, Habibi, & Richard, 2013; Osatuyi, 2013; Xiang & Gretzel, 2010; D. Zeng, Chen, Lusch, & Li, 2010) generation y has become more critical and often try to compare prices, guest reviews and collect useful information online rather than going to a travel agent or an information centre. Generation Y forms their opinion with the reviews and online information available more quickly. It is therefore the need of the hour that marketers should evolve their marketing strategies keeping this uses of social media by generation Y and Z. This paper also wants to analyze the relationship between the social media and the decision making process of travelers.

In the tourism literature, a number of research articles (Diga & Kelleher, 2009; Keegan & Rowley, 2017; Metaxas & Mustafaraj, 2012; Power & Phillips-Wren, 2011; Schroeder & Pennington-Gray, 2015; B. Zeng & Gerritsen, 2014) have clearly defined that how Technology can influence the decision making choices of the travelers. This study is empirical in nature and a quantitative research approach has been employed keeping the objectives in consideration. The research has been done among the members of millennials community in Delhi NCR.

The main research objective is to assess the impact of social media on the decision making process of millennials in their travel plans. Hypothesis was formulated on the basis of research objective and an online questionnaire was circulated among the members of millennials. To collect data, an online survey questionnaire was designed and the respondents were asked about their choices on different aspects which could certify their use of social media for making travel

decisions. Total 244 responses were collected through a self-administered questionnaire.

III. DATA ANALYSIS

One-Sample Statistics

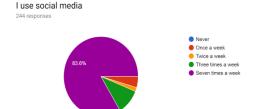
	N	Mean	Std. Deviation	Std. Error Mean
Which is the most used social network by you	244	2.7049	1.06333	.06807

One-Sample Test

			Test	Value = 3	3	
			Sig. (2-	Mean Differe	95% Con Interva Diffe	
	t	df	tailed)	nce	Lower	Upper
Which is the most used social network by you	107. 166	243	.000	7.2950 8	-7.4292	7.1610

The p-value of the test is 0.000, which is less than the level of significance 0.05. The one sample t-test statistic is 107.166 and the p-value from this statistic is .000 and that is less than 0.05 (the level of significance usually used for the test) Such a p-value indicates that the most used social network of the sampled population is statistically significantly different from that the most used social network of the population.

Out of 244 responses received through this questionnaire, 47.1% were the female students whereas 52.9% were male members. Since this study is being conducted among the members of generation Y who are born between 1981 to 2000 so it was evident that most of them have started using computers, smartphones and other technological devices in the past 5 to 10 years.

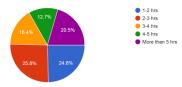


When these respondents were asked about their use of social media during the entire week, it was found out that 83.6 % of the respondents use social media

everyday whereas there was a very less number of people who used social media only once in a week.

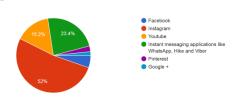
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How much time of a day do you spend using social media 244 responses



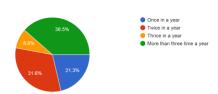
As far as the time is spent by generation Y everyday on social media was concerned, it was found that 20.5% of the respondents use social media for more than 5 hours and 24.6 percent people use social media for 1 to 2 hours every day. 25.8 percent of the respondents use social media for 2 to 3 hours every day.

Which is the most used social network by you



On asking about the social network used by generation Y, it was found out that more than 50% (52%) of the members of generation Y now are on Instagram which allows them to update their experiences as soon as they undertake a trip or finish it. It was very much surprising to note that Facebook users have come down to 13% only which shows the decline of once leader of social networks. Instant messaging application like WhatsApp, Hike and Viber are also being used significantly by 23.4 % by the members of generation Y.

How many times in a year do you travel?



On asking about their frequency of travel in a year, 38.5% respondents travel for more than 3 times a year whereas 31.6 percent of the respondents travel twice in a year. 21.3% percent of the respondent travel only once in a year. 36.9% respondents say that they always want to go on short duration trips. As far as the vacation trips of more than 7 days are concerned, only 12.7% of the respondents clearly indicated that they want to travel for more than 7 days in a year whereas almost equal 25% of the respondents want to go on weekend trips or extended weekend trips.

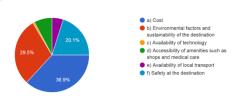
More often, my prime purpose of undertaking a holiday is? 244 responses



While inquiring about the prime purpose of their holiday, it was found out that 23.4 percent of the respondents always want to explore new culture and places whereas same 23% want to have a routine break from their mundane work and 19.7% percent of the respondents visit their friends and relatives. While asking about their preference of going to nature, only 17.2% responded wished to go to natural sites and very few of them want to visit historical sites.

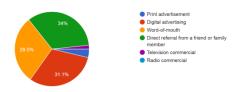
For me, the main practical concerns while choosing a holiday destination is?

244 resonance



36.9% percent of the respondents clearly state that they look after the cost while deciding about their holiday destination. 20.1 % respondents also care about the safety at the destination as it has been many a times debated that India is not a safe country so the government has to look upon this important aspect, not only for domestic tourists but also for the international tourist and make destinations secure.

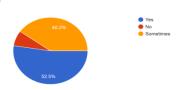
In the past, what has been the most influential in terms of helping you decide where to go/stay/eat, etc. when you're traveling?



Most of the millennials have been influenced by some kind of promotional activities by the companies and 31.1% of the people of this generation always find out digital advertising which has prompted them to think of their destination. It is also worthy to note that 34% of the respondents always take a referral from a friend or a family member.

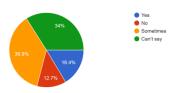
When booking traveling, do you read other traveler's reviews of the locations and/or accommodations?

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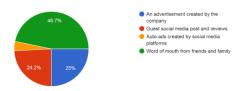
It is impressive to note that more than 52.5 % of the respondents check reviews of other travelers before they finalize any destination or location or accommodation for their future travel.

Do you think that the reviews made by travelers on reviews sites like TripAdvisor, WAYN, Travelocity and Expedia are biased?



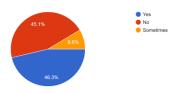
This generation believes in their own decisions and the reviews made by other travelers for a particular service is sometimes believed by 56.6% respondents whereas 11.5% respondents never rely on the reviews made by other travelers on review sites like TripAdvisor. It is 13.9% of the respondents rely on the reviews. On asking about the reviews made on review sites weather these are biased or not, 36.9% of the respondents claimed that they believed the reviews to be biased sometimes where as 16.4% of the respondents said that they believe the reviews are biased. 34% of the respondents also felt that they have no knowledge about these review sites being biased

In terms of advertising, which would you trust more?



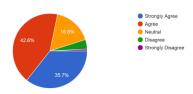
46.3% of the respondents have a buying experience on the social media sites and platforms. But at the same time it also needs to be accounted that 45.1% respondents have never tried buying a service on social media. Moreover 82.4% of the respondents believe that they have always looked for more about a destination after an advertisement on social media

Have you ever booked a trip to a destination or hotel through social media?



It is also observed that this generation books most of the air travel product online as it can be seen that 53.7% of the respondents have accepted their bookings done through online media. They mostly believe on word of mouth from friends and family as it is 46.7% of the respondents have claimed that.

I think the social media is a new word of mouth



The business houses have to realize now that word of mouth is a strong effect on the buying patterns of the generation Y members so they have to be very careful in design and delivery of their products online and in operations. (Aarikka-Stenroos & Makkonen, 2014) identified the different roles of references and word of mouth and suggested that experience based information offers a real time solution to many problems arising out of expectations and satisfactions gaps in the buying process.

Marketeers can always tap this potential of social media as it is very much evident from 59% of the respondents that they are neutral when they were asked about the products being sold on social media platforms and 19.3% of the respondents believe that it is not true that product sold on social media are not trustworthy so it clearly signifies that social media can be used to promote tourism related products.

IV. FINDINGS

Out of 244 respondents 71.7 % were born between 1996 and 2000 and 23.8% were born between 1991 and 1995. Since it is the time to utilize social media at its best that is why most of these young generation people are on social media and the study found only 0.8% percent people not on the social media. 83.6% respondents use social media everyday which clearly indicates that the generation Y is purely on social media and they want to share their experiences and seek information almost every day of the week. Almost each of the respondents spends a significant time on using social media every day.

It was clearly identified that generation Y members have a good frequency of travel and they always have social media around them which impacts their decision making of travelling.

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As far as frequency of their travel is concerned, it is clearly evident that most of the generation Y members are frequent visitors to places and they want to go on short vacation trips. The data clearly indicates that their preferences for travelling and undertaking holiday is changing and more and more people of this generation want to explore new cultures and visit natural and adventure sites.

Although, it has been widely discussed that this generation has a disposable income to spend upon their luxuries and travel but majority of the respondents clearly state that they look after the cost while deciding about their holiday destination. At the same time it is also very encouraging to note that this generation looks after the environmental factors and sustainability of the destination which is a good sign and a clear indication that future destination have to look after the sustainability and responsible behavior at the destination.

A good number of respondents clearly indicate that tourism industry works on word to mouth promotion and destinations have to have their image that way so that they can attract more and more tourist with referral programs.

Nowadays all tourists want to read reviews before they finalize any destination for their future travel and this generation is not away from such reviews. This generation wants to review and find out the reviews of other tourist as well who have previously travelled to destinations. The review sites have to work a lot in providing a trustworthy content to the visitors on their site. This can further be studied that how these review sites can make a significant space into the future decisions by the travelers.

Social media has become a great place to promote tourism related products by the marketeers since it is clearly visible. A lot of work is to be done to promote tourism related products through social media and where 99% population of young people are available on social media platforms, the power of this kind of media can never be overlooked by the marketeers.

It is also noteworthy to see that most of the advertisement created by company or travel agencies is not liked by the Millennials as most of them believe on referrals.

V. DISCUSSIONS

There is no doubt that social media has a great impact on the lifestyle and decision making of generation Y. They take decisions very quickly and they are technologically so advanced that they have options to seek more information on a particular issue. Travel decision making is a complex process and comprises of many levels of emotional and dynamic processes. With shifting behaviours of millennials, it has become more complex and marketers find it very difficult to understand this complex behaviour of millennials and further making their marketing and promotional strategies difficult to design. Tourists search for information related to their travel decisions prior to their departures but millennials are a little different on this aspect and they continue searching for different information even after reaching at the the choice of their destination. Most of the time their source of information are local residents of a destination and the advice given by the local residents influence their decision making. Numerous researchers have analysed consumer's information search prior to arrival at a destination but this shifting source of information of millennials have created a new area of debate in the research. A more comprehensive description can be found in the study conducted by (DiPietro, Wang, Rompf, & Severt, 2007) who have attempted to continue to fill a research gap focusing on travelers' information search behaviour for services not only before the trip but in transit to the destination and once at a destination. Increasing use of technology not only by the millennials but also by the service providers have greatly expanded the resources available to make travel decisions. Today, travel decisions are much influenced by information gathered electronically prior to departure, in transit and while at a destination.

In this study, it is clearly indicated that social media cannot be now taken away from the generation Y and generation Z (Fuciu & Dumirescu, 2014; Pate & Adams, 2013; Sethi & Bhargava, 2015) as it has created an online culture that encourages its users to share their experiences and has changed the way they think and behave in their day to day life. Most of the members of this generation have taken and are taking enough time to consider whether their personal experiences should go online and their likes and dislikes should also be discussed in public domain (Brown, 2008; Sheeran & Cummings, 2018). With this instant information available, they take their decisions very fast and in terms of their travels also their decision making is so prompt that they want to go to a destination just after looking at a post on social media from their friends or from the promotional companies. This signifies that social media has a great impact on the decision making of this generation and marketeers have to have their presence online to attract this great segment of potential

customers (Constantinides, 2014; Rayat, Rayat, & Rayat, 2017; Saravanakumar & SuganthaLakshmi, 2012; SI, 2015). They have to design marketing strategies to attract this segment.

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VI. SCOPE FOR FURTHER RESEARCH

Since the study was conducted among the members of generation y, it can also further be conducted among the members of generation Z. Also the study can further be extended pan India as it was conducted only in Delhi NCR. Decision related to food habits during the holidays can also be discussed further as there has been a very little or no research done on this aspect of millennials. As there was no question asking on how they are not comfortable on social media, the study proposes a future research to discuss about this question that what is taking some people out of social media and what are the disadvantages of using social media. The present study shows the relationship of social media usage and the decision making process of young generation and paves the way for the future researchers to explore the level of marketing efforts to attract this segment.

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Microstructural Analysis of Recycled Aggregate Concrete using MicroSilica

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ABSTRACT

Many researchers have attempted to prepare concrete mixes with partial replacement of virgin aggregates with recycled ones. This research paper proposes the after-effects of using Microsilica (MS) to improve the microstructural properties of recycled aggregate concrete (RAC). Portland pozzolona cement (PPC) was replaced with 15% of Microsilica (MS) by weight. Cube specimens were prepared by replacing virgin aggregates with recycled ones in percentages of 25%, 50%, 75% and 100% with constant water cement ratio of 0.55. Microstructural properties were studied using Scanning Electron Microscopic (SEM) images. Consistent improvement in Interfacial transition Zone (ITZ) width was observed at 25% replacement of virgin aggregates with recycled ones along with Microsilica. Repacement proportion of virgin aggregates with recycled ones upto 25% is proposed as the optimum percentage.

Keywords: Recycled aggregates, Recycled aggregate concrete, Microsilica, Scanning electron microscope, Virgin aggregates, Interfacial transition zone.

I. INTRODUCTION

Waste obtained from demolition sites is increasing day by day due to rapid urbanization .It's management and dumping requires lot of space and money. Mostly construction and demolition waste (CDW) is utilized through landfills and road construction for disposal. In India, codes of practice to reuse waste obtained from construction and demolition sites has not been developed yet. In future, recycling will have to be encouraged in India as it may prove to be the best substitute to reduce the consumption of natural resources thereby preventing negative impact on environment. Recycled aggregate concrete may prove to be useful for sustainable development of civil infrastructure. Recycled aggregate concrete (RAC) can be used in construction of major structural components. Researchers have studied mostly the mechanical properties and strength parameters of recycled aggregate concrete (RAC). Many research papers have highlighted that the use of admixtures and super plasticizers has improved the performance of RAC. Scope of this research paper is to investigate the Interfacial Transition Zone (ITZ) width using microsilica (15%) with various replacement ratios of 0%, 25%, 50%, 75% and 100%. Ten concrete mixtures with concrete grade M-20 with 3 cubes in each mixture were produced for the study. Results projects that replacement of virgin aggregates with recycled ones using Microsilica is giving better performance in RAC at lower percentages.

II. RESULTS AND DISCUSSION

Research was carried out with replacement of virgin aggregates with recycled ones in the percentages 0%,25%,50%,75% and 100% using chemical admixture Microsilica (15% by weight of cement). Concrete cubes of grade M20 (15cmx15cmx15cm) in the proportion 1:2.36:3.2:0.55 were casted and tested after 28 days of

curing at room temperature. Water cement ratio of 0.55 was maintained throughout to obtain workable mix. Mixes are abbrevated as - NCRA0:Normal grade with 0% replacement by recycled concrete aggregates.NCRA10:Normal grade concrete with 15% replacement by recycled aggregates. NCRA0MS15: Normal grade concrete with 0% replacement by aggregates and 15% replacement by recycled Microsilica.NCRA10MS15: Normal grade concrete with 10% replacement by recycled aggregates and 15% replacement by Microsilica. Maintaining same percentage of replacement ratio of virgin aggregates by recycled ones 3 cubes for each group were casted and one powder sample was extracted for scanning electron microscopic study. Interfacial transition zone (ITZ) of each powder sample is studied and graph is plotted with ITZ Vs. percentage replacement of virgin aggregates with recycled ones .Scanned images showing interfacial transition zone (ITZ) width and microstructure are shown below. Intertransition zone width (ITZ) is clearly shown in the images. Lesser the ITZ width more is the denseness or compactness of the concrete structure.

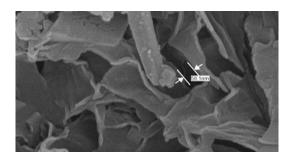


Figure 1. Scanned electron microscopic (SEM) image of Normal grade Concrete and 0% Recycled Aggregates

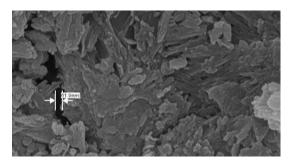


Figure 2 . Scanned electron microscopic (SEM) image of Normal grade Concrete and 25% Recycled Aggregates

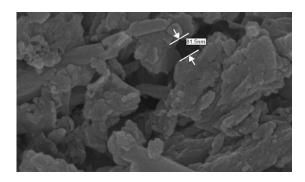


Figure 3 . Scanned electron microscopic (SEM) image of Normal grade Concrete and 50% Recycled Aggregates

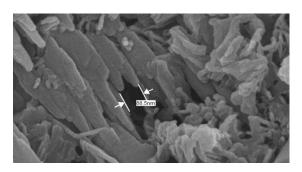


Figure 4 . Scanned electron microscopic (SEM) image of Normal grade Concrete and 75% Recycled Aggregates

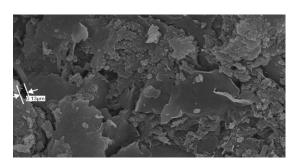


Figure 5 . Scanned electron microscopic (SEM) image of Normal grade Concrete and 100% Recycled Aggregates

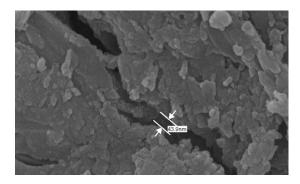


Figure 6 . Scanned electron microscopic (SEM) image of Normal grade Concrete and 0% Recycled Aggregates with 15% MicroSilica

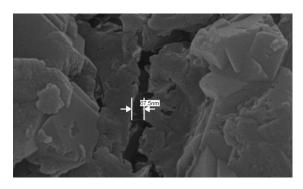


Figure 7 . Scanned electron microscopic (SEM) image of Normal grade Concrete and 25% Recycled Aggregates with 15% MicroSilica

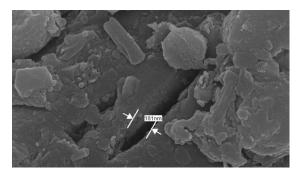


Figure 8 . Scanned electron microscopic (SEM) image of Normal grade Concrete and 50% Recycled Aggregates with 15% MicroSilica

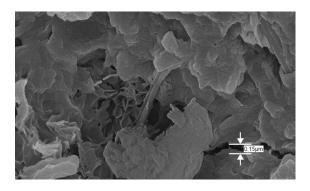


Figure 9. Scanned electron microscopic (SEM) image of Normal grade Concrete and 75% Recycled Aggregates with 15% MicroSilica

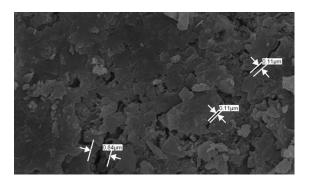


Figure 10 . Scanned electron microscopic (SEM) image of Normal grade Concrete and 100% Recycled Aggregates with 15% MicroSilica

Results showing variation in ITZ at different replacement ratios alongwith admixture microsilica is tabulated below.

Table 1. Results of Interfacial transition width (ITZ) at various replacement ratios of powder samples

Sr.	Mix	Interfacial
No.	Nomenclature	transition zone
		width (ITZ)
01	NCRA0	58.1 nm
02	NCRA25	61.9 nm
03	NCRA50	81.5 nm
04	NCRA75	88.5 nm
05	NCRA100	0.13 μm
06	NCRA0MS15	43.9 nm
07	NCRA25MS15	67.5 nm
80	NCRA50MS15	181 nm
09	NSRA75MS15	0.15 μm
10	NCRA100MS15	0.84 μm

It is obvious that ITZ width increases with the increase in replacement ratio as it transit from nano scale to micro scale. Addition of microsilica has shown better results in minimizing ITZ width and compactness is exceeding even as compared to normal grade concrete with zero percent replacement ratio. This compactness or denseness of concrete microstructure has been increased due to the CSH gel formation within the concrete body due to the addition of microsilica. Graph showing variation in ITZ at different replacement ratios is plotted below.

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More the formation of CSH gel more will the tendency to have bond of new mortar with the old one thereby decreasing the ITZ width which is good for the concrete in terms of strength and durability throughout its service period. Utilization of recycled aggregate concrete in structures should not be based upon strength criterion only but microstructure also needs to be examined carefully especially ITZ width. ITZ width clearly gives the picture of the microstructure within the concrete body and it can be easily examined through Scanning electron microscopic images.

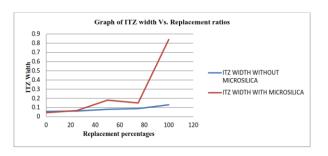


Figure 11. Graph of Interfacial transition zone (ITZ) width Vs. various replacement ratios of recycled aggregates

Graph clearly highlights that the ITZ width is increasing with the increase in percentage ratio of recycled aggregates which is the sign of poor microstructure of concrete body. Replacement ratio in range of 20% to 25% can be recommended from the graph using 15% microsilica as admixture.

III. CONCLUSION

Based on the outcome of the results, recycled aggregates with ratio of 25% with microsilica is giving improved Inter facial transition (ITZ)width as compared to normal M20 grade concrete with zero percent recycled aggregates (NCRA0). Based on microstructural analysis, recycled aggregate concrete is gving better ITZ width as compared to normal grade concrete with zero percent recycled aggregates(NCRA0) with percentage difference of 16%. This improvement of ITZ is due to CSH gel formation due to addition of microsilica. Normal concrete with zero percent recycled aggregates and 15% microsilica (NCRA0MS15) has shown improvement in ITZ width as compared to normal grade concrete with zero percent recycled aggregates (NCRA0) with an increase of 24.44%. At higher

percentages of replacement, ITZ width is found to be $0.13\mu m$ to $0.84~\mu m$ indicating poor microstructure. Results obtained strongly suggest the use of recycled aggregates in construction sector with proper microstructural analysis only.

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