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**JAIN**  
DEEMED-TO-BE UNIVERSITY

CENTER FOR  
MANAGEMENT  
STUDIES

NATIONAL CONFERENCE  
ON  
EMERGING TRENDS IN BUSINESS AND FINANCE

ORGANIZED BY  
CENTER FOR MANAGEMENT STUDIES  
BANGALORE

8<sup>TH</sup> MARCH 2019

IN ASSOCIATION WITH



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JAIN (Deemed-to-be-University) is a comprehensive and student-focused university that works towards excellence in quality education, research, and entrepreneurial development. Having been awarded the Graded Autonomy status by University Grants Commission (UGC) and 'A' Grade by the National Assessment and Accreditation Council (NAAC). JAIN (Deemed-to-be-University) has earned national and international acclaim for its holistic education

The academic programs offered at the University are distinctive and contemporary both in curriculum and in pedagogy. It challenges the students to be enterprising by stimulating their intellectual capacity to think independently. More than 200 programs are offered at Jain in the various disciplines of Science, Humanities & Arts, Commerce, Engineering & Technology, Management, Law and Research at UG, PG and research levels

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Indian Academicians and Researchers Association ( IARA ) is an educational and scientific research organization of Academicians, Research Scholars and practitioners responsible for sharing information about research activities, projects, conferences to its members. IARA offers an excellent opportunity for networking with other members and exchange knowledge. It also takes immense pride in its services offerings to undergraduate and graduate students. Students are provided opportunities to develop and clarify their research interests and skills as part of their preparation to become faculty members and researcher. Visit our website [www.iaaedu.com](http://www.iaaedu.com) for more details.



## Message by the President

A conference is a place where a true meeting of minds happens. Researchers, who would have done a good deal of thinking about their idea, will come forward and share their thoughts with fellow researchers. The National Conference on **Emerging Trends in Business and Finance** provides a platform for researchers to get networked and exchange their ideas for further progress in research and development. I congratulate Center for Management Studies - Jain (Deemed-to-be University) for taking this initiative.

Our learning, understanding and knowledge are developed in participation with others. Social learning occurs through conversations about the content and through grounded interactions and engagement with others. Often when we discuss a concept or issue with someone, we are internalizing and integrating it into our own personal framework. It is through social learning that we seek practical knowledge to solve our professional problems.

I am sure that this initiative will promote knowledge and awareness about the emerging trends in business and finance among the participants participating from all over India and different fields including Corporate and Industrial Sector.

I wish the conference all the very best and urge all participants to brainstorm on the various thrust areas of the conference.

I also wish all of you a pleasant experience on our campus and look forward to your participation.

**Dr. Chenraj Roychand**  
President  
Jain (Deemed-to-Be University)



## Message by Vice-Chancellor

Conferences are a brilliant opportunity to learn more about your sector and tap into the knowledge of industry experts. From learning new topics, to practical and strategic solutions to take away with you, conferences deliver a vast array of useful information in a short space of time. Conferences provide the perfect platform to meet people face-to-face in your field, exchange details about how you might work together in the future. Conferences are of great value when it comes to stimulating new ideas. As well as identifying new market opportunities, you can learn how other businesses operate and tackle industry-specific challenges. Conferences are also great for generating new ideas or finding fresh perspectives on old ways of working.

This National Conference organized by Center for Management Studies - Jain (Deemed-to-be University) provides a forum to all researchers to exchange their information on Business and Finance, and to enhance the quality of research. I appreciate the endeavour of the organizing committee for organizing the National Conference on **Emerging Trends in Business and Finance**.

Financial technology or fin-tech is the buzzword. The financial world is passing through a revolutionary period and it is evident in our daily lives. This conference aims to bring together leading academicians, researchers, management experts, regulators and administrators to brainstorm their ideas and to share their experiences related to the various aspects of Business and Finance such as Marketing, Human Resources, Accounts, Strategy, Operations, Information Technology and Humanities.

I congratulate all the participants, members of the managing committee and organizers for conducting the National Conference.

I wish the conference a grand success.

**Dr. N. Sundararajan**  
Vice-Chancellor  
Jain (Deemed-to-Be University)



## Message by Director

It is my pleasure to welcome all the attendees for the National Conference on **Emerging Trends in Business and Finance**, held at Center for Management Studies - Jain (Deemed-to-be University) on 8<sup>th</sup> March 2019. The marvels of the human mind perennially persuade the gathering and growth of human knowledge. The financial and business landscapes are changing and need to discover new ways of facing challenges in time to come. I am pleased to see that the theme of business and finance has been given priority in this forum of discussion, which may come out with some concrete and viable solutions in terms of sustainable development across the world.

I am hopeful that this kind of national event of knowledge sharing will provide new dimensions for innovative and skilful technological advancements towards business and finance in our country, and some keen areas like resource management, waste utilization, rural and women empowerment etc. will be highlighted in this scientific event.

It is my humble wish that the professional dialogue among the researchers, scientists, engineers, students and educators continues beyond the event and that the friendships and collaborations forged will linger and prosper for many years to come.

These types of conferences with an interdisciplinary approach will enlighten our human mind and society. I would like to extend my warm wishes and support to the organizing team of Center for Management Studies -Jain (Deemed-to-be University).

Wish you all a great conference and enjoy the city of Bengaluru.

**Dr. Dinesh Nilkant**  
Director  
Center for Management Studies  
Jain (Deemed-to-Be University)

## **Message by the Organizing Committee**

Philosopher and novelist, George Santayana, once said, “Those who don’t study the past are doomed to repeat it.” This is true in business and finance just as much as it is in history. Those who study the past can profit and predict what is to come. With the New Year starting, it’s time to look at **The Emerging Trends in Business and Finance**.

This One day National Conference is planned to provide a platform for discussion and to showcase relevant research on practices and challenges in Business and Finance by Academicians, Research Scholars, Corporate Professionals, Entrepreneurs, Policy Makers and PG Students of Commerce and Management.

We hope after participating in this National Conference, participants will get an opportunity to rethink strategy and challenge expectations as customer behaviors shifts to complete control, personalized products, and simplified journeys across channels.

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**INNOVATIONS IN SUSTAINABLE PACKAGING AND A STUDY ON CONSUMERS PERCEPTION AND ATTITUDES TOWARDS GREEN PACKAGING IN TAMILNADU**

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**Kanimozhi. V<sup>1</sup> and Abhisheik. K<sup>2</sup>**Assistant Professor<sup>1</sup> and Student<sup>2</sup>, Department of Management Sciences, Hindusthan College of Engineering and Technology, Coimbatore

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**ABSTRACT**

*Sustainability dominates all spheres of business and one such trend in going green sphere is green packaging. Due to issues like global warming and various environmental pollutions, Green packaging has now emerged in developed and developing nations. Recently, with a mission to save environment, Tamilnadu government has announced plastic ban scheme in which 14 items made of plastics were included. The important question here is, whether the consumers in developing nations really care about green packaging. Hence this study was conducted to identify the consumer's attitude and perception towards green packaging in the state of Tamilnadu. Further the innovations in sustainable packaging which has been initiated by corporates in developed nations and that could be adopted in India are discussed. Descriptive research was carried out and data were collected from 339 samples through convenient sampling. The findings of the study revealed that consumers have concern for environment and their perception and attitude towards green packaging is positive. Hence products in green packaging will be preferred by consumers in Tamilnadu.*

*Keywords: Sustainable packaging, green packaging, consumer behaviour.*

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**1. INTRODUCTION**

An integral part of global economy is plastic and plastic packaging as it provides various benefits but however their value chain creates drawbacks which are becoming evident nowadays. Rapid economic growth and worldwide consumer consumption pattern has lead to environment deterioration. In current business scenario, the projected growth in plastic production will lead to oceans containing more plastics than fish by 2050 and the total oil consumption by plastic industry will be 20 percent of its production and 15 percent of annual carbon budget. Due to continual worsening of environment, it has become a persistent concern in developed nations and it has awakened developing nations to green movement recently. The concept of sustainability was introduced by many companies in order to reduce cost with minimum effort. Various green policies like reducing waste, reusing, recycling, using recycled materials and green packaging will enable companies to increase their profits (Priti & Vanitha, 2016).

Important Part of any product is packaging as it protects the product and aids in shipping. Packaging plays a major role in promoting the product and helps consumers use the product. Packaging should also facilitate recycling and decrease environmental damage. Eco-packaging is considered to have various benefits to consumers like safe and healthy for the individuals and community throughout its life cycle, market efficient and cost efficient, using green production technologies, effectively recovered and reused in numerous production cycles etc (Gheorghe, Anca, Cristina, & Raluca-Giorgiana, 2018).

Green packaging also called as Pollution free packaging or sustainable packaging or environmentally friendly packaging as it uses environmentally sensitive methods that include energy efficient, recyclable and biodegradable materials, reusability and much more (Jiapeng, 2017). As agreed by international community green packaging should be consistent with 4R 1 D Reduce, Reuse, Recycle, Refill, Degradable and other requirements. 5R's of sustainability which should be looked in green packaging are reduce, reuse, recycle, remove and renew. In developed nations, Consumers demand for eco-friendly and sustainable packaging is on rise and hence various manufacturing and distribution houses are looking for materials that can be recycled. Many companies started focusing on green packaging. Green packaging must protect the surroundings and renewable resources. The improvements in green packaging include light weight packaging, re-use biodegradable substances, and prevent usage of non-ecological substances. (A, M, & O, 2018).

Sustainable packaging includes the following criteria: (i) Is beneficial, safe & healthy for individuals and communities throughout its life cycle (ii) Meets market criteria for performance and cost (iii) Is sourced, manufactured, transported, and recycled using renewable energy (iv) Optimizes the use of renewable or recycled source materials (v) Is manufactured using clean production technologies and best practices (vi) Is made from materials healthy throughout the life cycle (vii) Is physically designed to optimize materials and energy (viii) Is effectively recovered and utilized in biological and/or industrial closed loop cycles (GreenBlue, 2011)

**1.1. NEED FOR THE STUDY**

Sustainability dominates all spheres of business and one such trend in going green sphere is green packaging. Due to issues like global warming and various environmental pollutions, Green packaging has now emerged in developed and developing nations. The demand for sustainable packaging is expected to grow about 5.1 percent annually by 2025, according to a report by researchandmarkets.com. Decrease in carbon footprint, ease of disposal, cost benefits and brand image are some benefits of green packaging. Many states in India have announced plastic ban but many reports reveal that these ban were not implemented effectively. Recently, with a mission to save environment, Tamilnadu government has announced plastic ban scheme in which 14 items made of plastics were included. The important question here is, whether the consumers in developing nations really care about green packaging. In order to answer this question, this study was conducted.

**1.2. OBJECTIVES OF THE STUDY**

This paper aims to analyze the consumer’s attitude and perception towards green packaging in the state of Tamilnadu. Further the innovations in sustainable packaging like paper packaging materials, recyclable packaging materials, degradable materials, edible packaging materials, eco-friendly packaging etc which has been initiated by corporates in developed nations and that could be adopted in India are discussed.

**2. RESEARCH METHODOLOGY**

Descriptive research was undertaken and using structured Questionnaire, primary data for the study was collected. Questionnaire is an effective marketing tool which provides insight into a consumer’s opinion for business market research (Wang & Feng, 2012). Likert Scale Questionnaire was designed using Google forms and distributed through e-mail and social media platforms for data collection. Questionnaire items were adopted from existing literature in order to enhance the content validity of the research. The reliability of the questionnaire was validated through Reliability Analysis - Chronbach’s Alpha which was 0.844 which indicates that the instrument is reliable. Internet users in Tamilnadu constituted the sample for this study and the sample size was 339. Data for the study was collected within 10 days from 1<sup>st</sup> February 2019 to 10<sup>th</sup> February 2019. Convenient Sampling method was adopted for data collection and duly filled questionnaire was used for further analysis which was performed in SPSS. Secondary data for the study was collected from various journal articles and internet sources.

**3. ANALYSIS AND INTERPRETATION:**

**Table-3.1: Demographic profile**

<b>Demographics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
Female	145	42.8
Male	194	57.2
<b>Age (in Years)</b>		
Less than 20 years	53	15.6
20 to 30 years	260	76.7
31 to 40 years	7	2.1
41 to 50 years	12	3.5
Above 50 years	7	2.1
<b>Educational Qualification</b>		
Diploma / SSLC/ HSC	27	8.0
Undergraduate	172	50.7
Postgraduate	125	36.9
Doctorate	9	2.7
Others	6	1.8
<b>Occupation</b>		
Student	198	58.4
Employee	31	9.1
Professional	68	20.1
Business	19	5.6
Others	23	6.8

Family Income Per month (in INR)		
Below 20000	113	33.3
20000 to 30000	90	26.5
30001 to 40000	34	10.0
40001 to 50000	38	11.2
Above 50000	64	18.9

Source: Primary Data

The demographics of the respondents (from table 3.1) reveal that majority (57.2%) are male. Majority (76.7%) of the respondents are aged between 20 to 30 years. Under graduation is most (50.7%) of the respondents educational qualifications followed by (36.9%) are postgraduates. Students constitute Majority (58.4%) of the respondents. Majority (59.8%) of the respondents’ monthly family income is below INR 30000.

**Table-3.2: Perception towards Green Packaging**

Perception about Green Packaging	Strongly Agree (%)	Agree (%)	Neither Agree nor Disagree (%)	Disagree (%)	Strongly Disagree (%)
Costly	13.6	46	29.5	9.4	1.5
More Attractive	21.2	54.3	20.1	2.7	1.8
Easy to use	22.1	52.5	19.8	4.1	1.5
Good for environment	55.5	29.2	11.5	1.5	2.4
Protects product quality	30.1	40.4	24.5	2.9	2.1
Necessary in India	48.1	37.8	10.6	1.8	1.8

Source: Primary Data

From Table 3.2 it is inferred that majority (59.6%) and (75.5%) of the respondents perceive that green packaging would be costly and more attractive respectively compared to other forms of packaging. Regarding using the product with green packaging, majority (74.6%) and (70.5%) of the respondents perceive that it will be easy to use the product and the product quality will be protected respectively in green packaging. Majority (84.7%) agree that green packaging is good for the environment and majority (85.9%) agree that green packaging is necessary in India. The results reveal that consumer particularly the young generation consumers have concern for the environment and their perception towards green packaging is good.

**Table-3.3: Attitude towards Green Packaging**

Attitude towards Green Packaging	Strongly Agree (%)	Agree (%)	Neither Agree nor Disagree (%)	Disagree (%)	Strongly Disagree (%)
Prefer Green packaging compared to other packaging	34.2	45.1	17.1	2.1	1.5
Will pay more for green packaging	32.4	41.6	18.9	4.1	2.9
Green packaging is Good	35.4	46.0	14.5	2.4	1.8
Like Green Packaging	41	40.4	15.6	1.5	1.5
<b>Will buy products in green packaging</b>	<b>Yes : 90.6%</b> <b>No : 9.4%</b>				

Source: Primary Data

From table 3.3 it can be inferred that majority (79.3%) of the respondents prefer green packaging compared the other packaging and majority (74%) are willing to pay more for green packaging. Majority (84.1%) of the respondents agree that green packaging is good and majority (81.4%) like green packaging.

Attitude towards green packaging is positive among respondents as 90.6% respondents are willing to buy products in green packaging. From the analysis it is evident that consumers have concern for environment and their perception and attitude towards green packaging is positive. Hence products in green packaging will be preferred by consumers in Tamilnadu.

**4. INNOVATION IN SUSTAINABLE PACKAGING**

**Various innovations in sustainable packaging are as follows**

100 X 100 brand which is dedicated to organic food has created Milk containers made entirely out of cardboard. Seeds of different herbs are added in the cardboard during manufacturing process. When the container is no

longer useful, it can be planted and through this recycling process a new life is generated from waste. It was designed by Adrián Froufe, Italy (Jessica bowler, 2018).

An environmental friendly solution for plastic water bottles is 360 paper bottle. It is made up of recyclable paper container made from 100% renewable resources which is food-safe and fully recyclable. This packaging decreases energy consumption throughout its product life cycle without compromising functionalities. This paper packaging is suitable for all liquid categories. As many researches reveal that to produce bottled water compared to tap water 2000 times more energy is consumed. 360 paper bottle is a single-serve water bottle made of paper or sustainable sheet stock such as bamboo or palm leaves. The 360 Bottle was designed by New York designer and inventor, Jim Warner (sonny M. Day, 2017). As plastic bottle takes between 450 – 1000 years to decompose, these sustainable packaging can be adopted in India for liquids.

Fragile packaging may make food susceptible to the elements including contamination and damage. If packaging is too costly, manufacturers will not prefer. Foodboard was introduced by an Austrian Packaging company Mayr-Melnhof Karton in 2011. Foodboard is a barrier cardboard made from recovered fibers which protect food from contamination and mineral oil migration (Packaging innovations, 2016).

HP has introduced straw based packaging which in its production consumes 40% less energy, 90% less water and emits 25% less carbon dioxide. It is also lighter compared to conventional wood-based molded pulp hence the shipping costs becomes cheaper. HP straw based packaging has become a sustainable source of livelihood for Chinese farmers. HP has a deal with YFY Jupiter, a global packaging firm who works with Chinese farms to utilise leftover straw from cereal crop harvests which was earlier burnt to clear fields. These straws are used to create materials such as corrugated cardboard and molded pulp packaging (Maxine Perella, 2014).

Puma has launched Clever Little Bags which uses fewer raw materials and resources for production which could also be reused. Puma estimate these bags save more than 60% of water, energy and diesel compared to traditional bag manufacturing processes. It was designed by Puma in collaboration with Fuseproject. Clever little bag contains 65% less cardboard by using a bag made of recycled plastic as the outer layer that holds the inner cardboard structure. Puma has also eliminated all plastic bags and tissue that typically come in shoeboxes. Due to using fewer materials - 8,500 fewer tons of paper, to be specific - and the new packaging's lighter weight, Puma expects to cut carbon dioxide emissions by 10,000 tons per year and water, energy and diesel use by 60 percent. That works out to 1 million liters of water, 20 million megajoules of electricity, 1 million liters of fuel oil and 500,000 liters of diesel (Jessica bowler, 2018).

## 5. CONCLUSION

In India, 80% of total plastic consumption is discarded as waste and official statistics say the country generates 25, 940 tonnes of plastic waste daily in which at least 40% of this waste is uncollected. Around the world, 1 million plastic drinking bottles are purchased every minute (Goswami, June). Single use plastics such as bags, candy wrappers, tobacco and pan masala sachets, soap wrappers and shampoo sachets are either too difficult or not lucrative enough to collect. These plastic items then find their way into landfills, unauthorized garbage dumps, or simply remain uncollected on roads (Goswami, June). In order to overcome this sustainable packaging can be adopted by various companies. This paper examined few innovations in sustainable packaging adopted in developed nations. All these can be adopted in India in order to have cleaner and safer nation.

Consumers' perception and attitude towards green packaging is positive which is a good sign for companies to initiate green packaging for their products. Due to time constraint, to study consumer perception and attitude towards green packaging, convenient sampling was adopted and data were collected only from online users. Consumers aged between 20 to 30 years who are students responded to the questionnaire in large as they account for majority on online users. Hence this study cannot be generalised and further study can be conducted by administering probability sampling technique constituting better samples for the study.

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**EMERGING TRENDS IN MARKETING****A.P. Shivanyshre and N. S. Abhirami**Student, Department of Management Sciences, Hindusthan College of Engineering and Technology,  
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**ABSTRACT**

*Sport marketing is one of the concepts of marketing and special technique which includes promotion of the products and services through sports and events. Marketing includes 7 P's product, price, place, promotion, packaging, positioning, and people. Whereas, sports marketing includes 4 P's namely Planning, Packaging, Positioning and Perception. Sports' Marketing in India is still in its nascent stages and there is a huge scope for improvement in most of the sports. One of the basic needs in implementing sports' marketing is to understand the spectators and other players involved in sports as consumers. Cricket in India is the only sport that has been able to mature sports' marketing to suit its needs. IPL, the biggest Twenty 20 tournament in the world is the right example for sports' organizations to follow, in terms of creating brand value and sports' marketing. The Indian Marketing Scenario (IMS) is one of the biggest consumer markets which are precisely the reason why India has attracted several MNCs. These large MNCs have realized that to succeed in the Indian market-place they need to hire Indian representative who are much more aware of the Indian economic, political, legal and social realities. The two major reasons for these changes in the IMS are changes in globalization and technology. There are multiple opportunities in sports marketing in terms of sponsorship sales, sponsorship activation, ticketing, corporate hospitality, ceremonies, athlete management, advertising and communications, and new media. The future of sport marketing in India looks bright, with the highest levels of professionalism, it is holding out on its own as a distinct field with myriad opportunities. This paper aims to explore the origin of sports marketing in India, the current challenges and opportunities in sports marketing as well as the future trends of sports marketing in India.*

*Keywords: Sports marketing, 4 P's, athlete, events, Sports.*

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**1 INTRODUCTION**

In order to be a market leader in today's competitive and global market, it is important for any business to compile marketing research to choose marketing techniques to promote their business. It has become a massive advantage to the industries. Sport marketing is one of the concepts of marketing and special technique which includes promotion of the sports, products and services through sports and events by brand ambassadors related to sports, film stars. Endorsements & sponsorships will be handled on line. Athletes have a powerful fan flowing & hence endorsing a product is easy with a sports star endorsing a product. (Mahesh garla, 2013)

Sports marketing can be done through, Direct sources and indirect sources. Direct sources are the one which tells about the product & service, events, sport directly to the audience. It includes some of the media channels like, Television programmes, Newspapers, Advertisements and Internet. Indirect sources are the one which promotes about the product/service, events, sport indirectly to the audience. It includes some of the media channels like, Events and Social activities. (Mahesh garla, 2013)

It acts as the best tool for promoting the sports and non-sports accessories as it is done by the reputed players who have global recognition in every nook & corner of the world. It may be classified into,

- Promotion of the sports & games.
- Promotion of the products & services through various sports players & sports teams.
- Promotion of sports & events in the public places to increase the participation. (Mahesh garla, 2013)

These types of activities are preferred by many companies because the players have the reputation & recognition all over the world which can be done through different modes of channels such as Bill boards in the public, Electronic media, Promotional vehicles, Social Events and Print Media. (Mahesh garla, 2013)

Secondary sources of data were used in this study. The data were collected from various journal articles and internet sources.

**1.1 About Sports Industry**

Sport industry is one of the largest industry in the world market. It has experienced has an explosive growth in the recent years. Sports industry is a market in which people, activities, organization, business, involving in marketing of sports. It is the industry which promotes the ideas, products, services, people, and place through

sports marketing. This industry has become one of the leading businesses in the present global market with a tough competition. Many companies are promoting the products & services through different innovative techniques to create awareness about the products and services. (Mahesh garla, 2013)

### **1.2 Segments of Sports Industry**

The sports industry has been segmented in to many forms. They are Sports tourism, Sports goods, Sports apparel, Professional sports and Sports information. (.N, April-June, 2015)

### **1.3 Elements of Sports Marketing**

“Fans, the media and sponsors create a high-pressure environment, within which owners must make business decisions.” (.N, April-June, 2015)

- **Planning:** Sports Marketing planning requires that the marketing objectives strategies for a specific product market configuration be in full correlation with the directions and the resources allocated at the corporate level or at the strategic business unit one through sports ambassadors.. Such a correlation is more than necessary under the current market conditions, when the economic crisis affects both consumer behavior and corporate decisions.
- **Packaging:** Packaging in Sports Marketing is the science, art and technology of enclosing or protecting products for distribution, storage, sale and use. Sports Marketing enrolls the process of packaging which refers to the process of designing, evaluating, and producing packages. It can be described as a coordinated system of preparing goods for transport, warehousing, logistics, sale and end use. Packaging contains protects, preserves, transports, informs, and sells. In many countries it is fully integrated into government, business, institutional, industrial and personal use.
- **Positioning:** Usually four type of typologies are used for positioning in Sports Marketing. They are great quality equipment, equipment for professionals, innovation and tradition. Each brand’s positions in consumers’ minds were distinctly portrayed in the congruence between intended and perceived positions. It is implied in a way such that it was established in a high position congruity and providing evidence of positioning effectiveness.
- **Perception:** Perceived value is the worth or merits a customer which describes to a product or service. Usually, customers are unaware of the factors involved in pricing a product or service, such as the actual or estimated costs of production. Customers rely on the emotional appeal of the product or service and their evaluation of the benefits they believe they will receive.

## **2 EMERGENCE OF SPORTS MARKETING**

Marketing was one of the first topics to attract sport academics’ attention, based on its close relationship with revenue generating activities, for example ticket and merchandise sales, and television coverage. As such sport marketing was originally viewed as a tool to increase sales and assist in the commercial activities of sport organizations and individuals. Sport marketing was no longer presented as a commercial tool, but instead as a wider umbrella of promotional elements that encapsulates aspects such as commercial sponsorship, advertising and publicity. Recent developments in technology, such as the creation and adoption of new and social media have also attracted sport marketing’s attention, with ample literature exploring this new hybrid element of the marketing communication mix. (Manoli, 2018)

Soon after social media were created and even before they were widely accepted within the sport industry, academics implications, opportunities and challenges they bear for sports marketing. Sport sponsorship, fan engagement and sport brands, to name a few, were all examined through this new lens of social media use and its potential, indicating that we had yet to scratch the surface of truly appreciating sport marketing in its entirety. With new technological advances introduced and adopted by the sport industry almost unceasingly, the progress and study of sport marketing is not expected to decelerate in the near future. (Manoli, 2018)

Regrettably, the rapid development and growth of the sport industry did not come without its dark side, with a number of wrongdoing and corruption scandals in sport emerging around the world. From individual athletes’ misbehavior to organizations’ intentional or unintentional wrong doing, corruption is believed to be a growing threat for the sport industry, and one that is challenging to control, contain or conquer. The effects of this corruption in sport marketing have therefore started to attract academics attention, with Clinton and colleagues joining the growing conversation in this issue. It can be expected that until corruption in sport is battled and its implications on sports marketing are examined, this discussion will not cease. (Manoli, 2018)

Expanding from a simple commercial tool to a broader and rapidly advancing discipline with unique characteristics, covering areas ranging from branding and corporate social responsibility, to service quality and fan engagement, the remarkable progress of sport marketing research is hard to ignore. (Manoli, 2018)

### **3 PRESENT TRENDS: SPORTS MARKETING**

Sports marketing: employing sports and the environments, fans, participants and affinities they produce as a means of profiling and targeting consumers. The vast size and reach of the sports marketing arena shouldn't surprise anyone. But as with every industry in today's quickly changing technological landscape, sports marketing is experiencing foundational shifts in how it operates, the way it is structured, and the methods it employs to reach its target audiences. (N Kumutha, 2010)

As expectations and paradigms shift regarding how sports should be consumed, the sports marketing world must cater to those changes. Agencies, leagues, bureaus, media outlets, teams and athletes alike all vie for the customer's attention and race to develop the next technique that will give them an edge. Here are a few of the biggest trends you can expect to see develop in the sports marketing arena. (N Kumutha, 2010)

- **Social media and the "Follower Phenomenon"**

Companies interested in signing athletes to sponsor and promote their products no longer limit their prospects to top tier professional athletes boasting TV contracts and significant news coverage. Because of the niche-centric nature of consumers today and the new scope of interaction that social media has made possible, marketers are quickly learning the value of the well groomed fan base-something any athlete with strong social media presences could provide. (N Kumutha, 2010)

- **Targeting Female Audiences**

The sports marketing world is only beginning to recognize the female sports fan as a viable, targetable demographic. Women are not only athletes themselves, but are sports buffs that cheer on favorite teams just as loudly as males. They also represent a growing consumer share and significant purchasing power. The sports world has begun to tune in and evidence of female targeted campaigns is becoming easier to find. However, the field is still largely untapped and presents a huge opportunity for savvy sports marketers. (N Kumutha, 2010)

- **Globalization of Sports Fan Bases**

Technology has trampled the border-limited pre-suppositions of the average sports company's marketing division. Sales that are now possible across the globe attract the attention of franchises and sports companies who are exploring strategies for making their brands more relevant to international markets. The NBA's Sacramento Kings are successfully building a presence in India. These efforts will only increase as other members of the United States sports community realize the potential located around the globe in the form of vast untouched markets. (N Kumutha, 2010)

- **Smart Arenas**

As sports venues strive to preserve the prevalence of attending sporting events in the midst of an increasingly mobile and virtual world, the in-person sports experience is emerging as a grail for venue owners and franchises. Attendees want to be engaged and entertained and technology will prove a huge catalyst in making this possible. Experiments with near-field communication technology and mobile apps that would allow amenities like parking assistance, real-time bathroom line and concession insights, cashless commerce, coupons, seat upgrades, game highlights and footage, and more are underway across the nation. Integrating the user's mobile phone is becoming an expected necessity. (N Kumutha, 2010)

### **4 FUTURE TRENDS: SPORTS MARKETING**

Although, it should be mentioned, this special issue by no means exhausts the topic of contemporary issues in sport marketing; the contributions address the subject from different perspectives, add to the conceptual diversity and offer numerous interesting insights. Their work is influenced by the current pressures the sport industry is facing, such as sport corruption and scandals, while taking into consideration the potential opportunities that lie ahead. New practices and trends are taken into account when social media use and the augmentation of events are examined, allowing for a closer look at the ever-evolving discipline of sport marketing. At the same time, and true to the discipline's roots, the examination of its core elements, sport consumption and relationship, brand and sponsorship management, does not cease to uncover previously unknown facets of sport marketing's theory and practice. (Yang Hongtao, 2014)

The contributors to this special issue are careful enough and, directly or indirectly, point to the fact that their work probably raises more questions than it answers. In fact, all contributors extend an invitation for more research to be conducted in sport marketing in order for these questions to be answered and even more

questions to be asked. It is hoped that this special issue will act as a platform for further discussion and further research on this multifaceted, ever developing and fascinating discipline of sport marketing. (Yang Hongtao, 2014)

## **5 OPPORTUNITIES IN SPORTS INDUSTRY**

As opportunities are available in each and every industry, sports industry also has plenty of opportunities where the people can survive. Some of the opportunities available in this sports industry are as follows, Event suppliers, Event managers & Marketing. Sports media, Sports sponsorship, Athlete service, Sports commissions, Sports lawyers, Manufacturers & Distributors, Facilities & facility suppliers, Teams, Leagues, College athletics and Finance. (Mahesh garla, 2013)

Some of the sports industries that are promoting the products & services globally are.

Nike, Adidas, Reebok, Fila, Puma, Converse, New balance, Asics, Umbros and K.Swiss.. (Mahesh garla, 2013)

## **6 SCOPE OF SPORTS MARKETING IN INDIA**

In India, sports marketing is relatively new and is yet to be recognized as an economic sector. This is because there has been very little comprehensive study done on the industry's size and the potential opportunities that are available. The sports sector includes various disciplines such as sports tourism, sports law, sports finance, facilities and event management, sports medicine and sponsorships. (.N, April-June, 2015)

Also, there is a lack of sporting culture in our country despite the huge awareness and interest in various sports, apart from cricket. Hence, many corporate investors spend their investments to only non-profit corporate social responsibility activities and initiatives. However, the scope for exploring profit-related activities under the sports sector is still yet to be uncovered. (.N, April-June, 2015)

In the recent years, India has transformed from a cricket crazy nation to a multi-sport country. After the establishment of the Indian Premier League (IPL) in 2008, various sports have followed suit. Sporting leagues like Hockey India League, Pro Kabaddi League and Indian Super League (Football) have changed the face of Indian sports. With the emergence of these sporting leagues, the sports industry has grown from INR 43.7 billion in 2013 to INR 48 billion. With a rapid growth in economy, a middle class with disposable income and time for recreational activities, there is high potential for growth in Indian sports sector. (.N, April-June, 2015)

For India to be a superpower in the world of sports, the Government of India must come into the picture and take necessary initiatives to make this a success. And, this dream cannot be realized without having professional sports managers. Having incorporate the sports managers with their years of expertise in this field will lay the foundation to the Indian sports industry. (.N, April-June, 2015)

In the field of media and broadcasting large sporting events conducted in India have been aired on television besides the gentleman's game, that has grabbed many eyeballs and introduced them to the world of sports. Leagues like Pro Kabaddi League and Indian Super League have gained so much traction with the TV audiences. With this huge response, it has provided ample business opportunities and huge revenue for companies to capitalize on it. (.N, April-June, 2015)

In multi-sport nations like United States of America, Australia, China, United Kingdom and many others, sports marketing is already developed and that's the reason why they produce world-class athletes. In India, there is a lot of activity going around the sports arena. It creates a kind of zeal and determination among sportsmen which attracts more people to the sports, which is a positive development. (Manoli, 2018)

All in all, the time is ripe for the sports industry in India to blossom as it has tremendous potential to succeed in generating good business in the field of marketing, management, sponsorships, sports goods, sports broadcasting, sports medicine and tourism. India has a great chance to excel in this sector which could ideally add to the growth of India's economy. (Manoli, 2018)

## **7 ISSUES OF SPORTS MARKETING IN INDIA**

### **• Corruption & Mismanagement of Sports authorities:**

Corruption has become synonymous with sports administration in India. Whether it is the most popular cricket or hockey or weightlifting, most of the sports authorities in India have come under attack due to corruption charges. Besides, the involvement of politicians in the administration of sports bodies for a very long period and controversies, surrounding 2010 Commonwealth Games dented the image of sports administrators in India. (Yang Hongtao, 2014)

**• Social & Economic inequalities**

Social and economic inequalities have a negative impact on the Indian sport. Denial of access to sports infrastructure due to poverty, concentration of stadiums and other sports avenues only in cities, lack of encouragement to girls to participate in sports, etc, have impaired the development of a positive sports culture in the country. (Yang Hongtao, 2014)

**• Lack of Infrastructure**

This is one of the most important factors for the apathy of the sport in India. Since infrastructure is necessary for training and organizing games, its non-availability and its access to only a few sections of the society have adversely impacted the sport participation and the quality of sports persons. (Yang Hongtao, 2014)

**• Policy Lacunae**

For the development of any sector, formulation and execution of an effective policy is a sine qua non. This is true for sports also. Till date, the sports policy planning and implementation is centralized in the country due to the paucity of resources and the expertise by the State and Local governments. Moreover, the absence of a separate ministry of sports at the union level reflects the apathy towards sports. (Yang Hongtao, 2014)

**• Meager allocation of resources**

Compared to other developed and developing countries, allocation of financial resources is meager in India. (Yang Hongtao, 2014)

**8 CONCLUSION**

This paper clearly explains how products and services are promoted through sports and events. It elaborates the segments and elements of sports marketing. Its opportunities and scope plays a major role in this paper. The past, present and future trends of sports marketing are majorly concentrated in this paper. (Mahesh garla, 2013)

The marketing technique involved in sports is growing by leaps & bounds. The parameters of marketing have suddenly changed from a traditional way to a corporate way. Since the sport is being focused through media & mass communication with liberalization of economy this has gained greater research options. Sports have thus become the most commercial & profitable event Sport marketing has acquired immense attention of countries across the globe. Governments all over are coming out with projects towards Public private partnerships in marketing sports events. The concept of sports marketing should relate to sports ethics & consider affirmative & negative impact on sports before marketing a product. (Mahesh garla, 2013)

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**EXCELLENCE THROUGH ELEARNING PORTALS: A NEW PARADIGM SHIFT IN THE EDUCATION**

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**ABSTRACT**

*eLearning is not a new concept but its impact on society and students is still new. eLearning influences education in both colleges and schools. Now many colleges are adapting to it as it facilitates the students. eLearning also makes the students to think out of box because of which it is better than the textbooks. eLearning is learning with electronic gadgets. It is the use of new technology for educational purposes related to teaching and learning. This includes the use of computers, webcams, smart phones, iWB(interactive white boards), data projectors, internet or virtual learning environment. These are used for the communication between the students and the teachers or between the student communities. The individual learning plans are already planned and they are a deadline for every work assigned. There are many courses present in our country which uses the eLearning facility namely NPTEL, digital unlocked with Google, coursesera, udemy are simple yet known examples for us. Now the reach of eLearning is high and many are aware about this. It is useful for the teaching faculties because they need not go to educational institutions to teach students and at the same time they can teach millions and millions of students. The biggest merit of eLearning is that they are open for everyone and they are cost efficient. This is called as Massive Open Online Courses (MOOCs). It provides an affordable way of learning new skills. It also helps to advance our career and deliver quality education output. Now many universities recommend students to take these online certification courses to add credit points to their resume.*

*Keywords: eLearning, NPTEL benefits, MOOCs, virtual learning environment.*

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**WHAT IS E-LEARNING?**

E-learning is understanding educational courses through online portals. They are mostly referred as courses, program or a degree. They don't follow the traditional classroom method. The courses are mostly delivered via online through internet which can also be of long distance learning. They do not include the CD or DVD materials, they are just lessons delivered through internet. Unlike classroom it does not have any limitations in the number of students per portal; any number of students could get in the portal and access the course. A student can also interact with the teacher by electronically raising the hand even if the course is live. The increasing number of smart phone users in the world has driven the online courses to next level. The grading can also be done through this. Artificial intelligence does the major job here.

**E-LEARNING IN ORGANIZATIONS**

Apart from students learning through online, there are many organizations which make use of this opportunity to train and command their employees. By doing this, the organization can save its money which they give on employees just for the training programs. One can give efficient performance by learning digitally. It also supports the organization goals. E learning also has increased productivity. E learning is not bounded by any geographical location or time, so one can attend the classes from anywhere on the earth. If the subject is doubtful one can learn it again and again by just clicking the portal. It is also environment conscious. E learning reduces the need for materials which may consume some amount. Materials are provided as PDFs or some other formats. Today many companies are adapting to e learning as it is money saving and time efficient. The employer can judge the employee precisely. Thanks to the assignments dates or deadlines. The employee is now dealing with a vast resource. So there is no concept of syllables, everything is in front of the employee. This will increase the knowledge of the employee.

Another important advantage of e learning is timely feedback. It says about every work done by an employee in a field such as finance, logical reasoning, language etc. There is no manual evaluation of coursework. There is no concept called grace mark or bonus mark. Every inch becomes a controlled action and they are completely taken care by systems. The learning management system can automate the grading system. The usage of videos, interactive quizzes builds the curiosity to learn. This will fetch good results at the end.

Every individual does not learn the same way. There might be certain amount of difference which will lead to huge impact on results. Many of this is because of personalized way of learning. Every individual have their own way of learning, so respecting their way of learning, e learning can change itself which might help the employee to attain the target called as information. Gone were the days tedious seminars ruled the organizations and colleges, e learning is the new trend.

**BENEFITS IN E LEARNING**

1. One is able to link various resources in several varying formats.
2. It is also an efficient way of learning new lessons combined as a course online.
3. E learning is more flexible than any other method of learning. Thanks to the eye blinking internet speed.
4. Web-based learning promotes individual learning.
5. It has got no holidays. Every day is a working day and all days it is interactive.
6. No differential teaching method for different persons or students.
7. No geographical boundaries.
8. Reduced cost materials.
9. More eco-friendly than any other means of studying a course.

**NEED FOR E LEARNING****One size fits all**

Over the years, internet has grown a mountain and it has impact on every human being in this world. This might be constructive for the educational purpose. The massively open online courses have seen rapid growth over the past one decade. Emerging trend of mobile phones has also led to increasing number of participants in e learning. No one misses out a good session. All sessions are handled by experts. E learning has no age barrier. It does not allow any type of dispute between students based on stereotypes as it does not have a place to study the courses or the students do not come together to study under one roof.

Traditional courses are met with many limitations. The traditional approach has to win time constraints to attain the pre-decided portions. This approach spoils the whole theme of learning and leads to pressure on the lecturer. The students are dumped with information which is not lively to the students. Now this looks like business. Book is now the target. Exams are now the turnover and marks are the profit earned by the student. Partners get the profit sharing ratio and results are thus obtained finally. The projects are the discounts offered by the company. Incentives are the jobs.

**Affordability and Applicability**

For the year 2015, approximately 8% of students got dropped from high school due to the lump sum tuition fee demanded by universities. Online courses are for such people who are unwilling to invest huge amount in tuition fee and are more likely to study. Potentially life changing courses need only one thing, it is the internet. Internet is the heart and brain of online courses. They can change the life of all students. The potential thinkers are often found in middle class; rejecting them would not change anything in this world and the whole concept of learning would go in vain. The average student loan debt is around Rs.2,10,000. This would be a devastating amount for the middle class students. In order to avoid this situation online courses might help them in greater way. As discussed earlier, this would be the most applicable method for one to study outside the classroom.

**The reward of the competition**

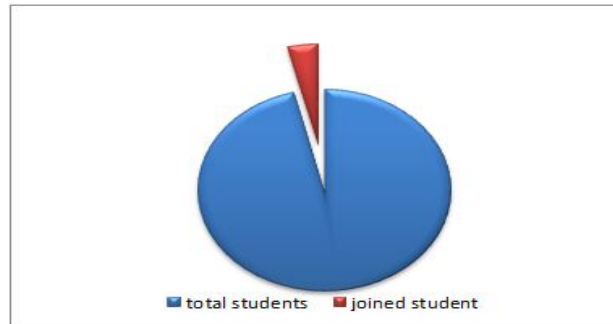
Exams are the competition which tends to make the students pressurized and agitated. Marks are not the goal for education. Knowledge is the goal of education. The rewards are also important but it should not be marks. It does not matter who crossed the line first; it is about the journey which made them to cross it. There are no bridges in the traditional method between students. But there is always a bridge between peers in e learning. Healthy competition is good. So there are also challenges in which two friends can challenge each other and complete the course. This might be both healthy and constructive relationship.

**Awareness of e learning**

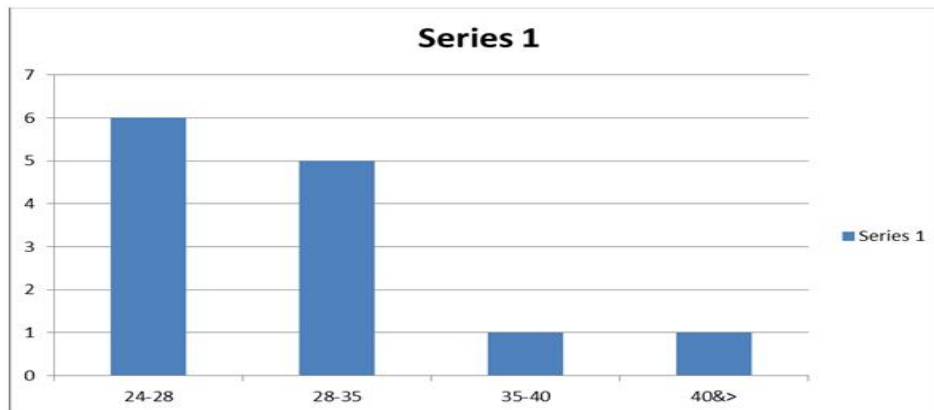
E learning has been implemented long back in 1999 but it is known to us in the near present. There are many courses which offer high value in the placement for a job. Mostly it is used only in urban areas and these are unknown things in the rural areas which say it has very less number of participation in the rural areas. Meanwhile, the urban population just knows the word "massive open online courses (MOOC)". NPTEL is a nationwide e learning course which has got some recognition from the students and faculties. There are also many other portals such as udemy, courses era, google digitally unlocked, which do offer free courses too.

*Out of 50 students asked about e learning, only two have joined the online courses and the rest others have simply heard the term or have not joined the course.*





Out of 50 employees asked randomly



The digitally effective generation is the younger generation. The elder generation is not affected by this e learning. They are totally unaware of the courses available online. This might be a drawback for the MOOCs. The need for e learning is high for the younger generation but not for the elder generation, they have less care about learning.

**Out of 10 company owners asked about e learning**

9 out off 10 likely to employ the employee who has a online course certificate from a reputed institute.

8 of them hire employees who have more certificates than the degree holders.

Almost 10 of them like to hire an employee with foreign university certificates.

Considering all these we could come to a conclusion that awarness about e learning is quiet good among youger generation and company owners.

**CONCLUSION**

The younger generation is becoming more technologically advanced. So the concept called MOOC can lead to better participation in the near future. Time immemorial education has been a part of human civilisation. Changes related to education are always given priority over evrything whicg is a part of human survival. Internet is becoming wide spread around the globe, so this might lead to stable utilisation such online courses. The half population of the world is filled with middle class people thus MOOCs may get a bigger opprtunity because of their cost efficient certificates. On the bitter side of reality, internet leads to many death of birds, they are bad for eyes, they have their own demerits such as websites which does not suite the age bar, they don't have any restriction. Neglecting the demerits we could say MOOCs is a futuristic idea and a beneficial one too.

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**A CONCEPTUAL STUDY ON SOCIAL MEDIA IN INTERNATIONAL BUSINESS “INFLUENCE IS NOT POPULARITY”**

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**ABSTRACT**

*Social media is a great tool for developing our business and getting deeper into what we are doing. Social media helps us to enlarge our business circle and lets us meet new customers with different needs. As speaking of international business, social media platforms let us reach more customers internationally on day to day basis. Social media is a platform where we play our role with the help software in an efficient way. Global business refers to cross-fringe trade and different business exchanges between governments or organizations. In addition to other things, participating in global business requires a comprehension of the lawful pre-requirements, business and exchange controls of the nation in which you are working together. Cross border trading has lots of complications in terms of legal requirements, but social media platforms do that very easily. Utilization of social media platforms for international business is less in India comparing to other countries. The definition of social media itself says that its sole purpose is sharing ideas, career interests and other forms for getting to know more about other interests.*

*Keywords: Social media, international business, social media platforms.*

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**WHAT IS MEANT BY SOCIAL MEDIA BUSINESS?**

In the present world, if an entrepreneur is been recognized internationally, then it is possible only by the influence of social media. Social media is not only for marketing, but it is also for the recognition of the owner that he/she is present digitally. As a yardstick to measure its popularity, whether it may be a profitable or non-profitable organization, its digital presence is at most mandatory in at least more than three different social media platforms. If a company is thinking that “Content is fire, then social media is the fuel for it”.

Social media helps us to focus more on creating awareness of the product, targeting new customers, helping the customer to reach us, turning the customer as a consumer and makes them excited/satisfied. These are the primary aspect of social media, and bring us a high return on investments and profits.

How It All Started – People, in the beginning, didn't realize the importance of social media for improving their business, when it came to the limelight that those big shots were raised to the present level because of immense social media's presence and they have conquered that position. Many still don't know how to make a business profile or how to create a webpage for their business, and that is where social media came with a huge impact in the hearts of entrepreneurs that you can increase your presence and expected a profit by social media also.

What Is Social Media - Social media is all about making a virtual presence not in the customer's heart but in the mind. Social media is the name of user-friendly and it helps you better than your consignor who tells you that I can sell this product for huge profit.

A recent survey reveals that people remember 80% of they see as opposed to what they read or hear.

**LITERATURE REVIEW BY AUTHORS**

“The use of social media among Fortune more than 500 companies surged in the year of 2017. According to a study conducted by the University of Massachusetts Dartmouth, as many as 73 percents of these companies now have an official corporate account in Twitter, while 66 percent have a corporate Facebook page - Shintaro Okazaki”

As researchers give us valuable information's about social media advertising for international business we have to know that, this research is also published and promoted for advertising on social media platforms and by advertising on social media only they got this much amount of readers for their research.

To date, social media business has not been a heavily researched topic in international advertising and, as a result, there have been only a very limited number of cross-national or cross-cultural businesses. – Taylor C.R

People nowadays don't know the value of social media advertisement and they don't know that they can make customers internally too. If owners think that personalizing their webpage gives profit then that does not answer because customers expect attractiveness and innovations to buy that product. If companies like Walmart, Flipkart, Amazon, myntra stayed offline and selling their products only in their region then the companies could've been a huge failure. By going digital and selling their products overseas they made this much amount

of customer traffic and as I mentioned above the term big shots now we could've known how they became like this - Pittard N.

94% of all businesses with a marketing department uses social media as part of their marketing platform to attract new customers. Digitalized work platform plays a very important role in business and organizational communications, and by digitalizing and advertising through social media platforms the organization (or) company could've gained more relevant and valuable customers. Companies not only thinking about advertising their product, but they also advertise to get good employees who make a healthy environment in their company - Winkler T.

### **FEATURES IN SOCIAL MEDIA FOR INTERNATIONAL BUSINESSES**

First, let us see how social media influences people to buy the product and how it makes the companies go into it.

As I mentioned above social media is all about turning the customers as consumers, and by making them buy the product the companies also wired to go on social media. There are many platforms available on social media not just to advertise also to connect with the customers and interact with them. Some examples of social media platforms are mentioned below:-

1. Facebook
2. Instagram
3. Pinterest
4. YouTube
5. Google my business
6. Whatsapp business
7. Linked in
8. Google analytics

Nowadays we humans are putting machine learning into the hands of each and every advertiser and making them decide what is relevant and what is irrelevant. Artificial intelligence has paved its way to achieving our goals and we humans make mistakes but AI doesn't do mistakes. Getting AI into the business makes more sense than getting irrelevant employees to work without knowing that this job is for them or not. AI is a onetime investment and hiring employees for separate jobs is a permanent and continuous investment. No entrepreneur will make his/her company goes into a loss everybody will be linked to make a profit.

Let's talk about how these above mentioned social Media help us to chase profit and not letting us chase a loss.

#### **1. Facebook business**

On an average day, 1.32 billion active users use Facebook on a daily basis, which is global. People nowadays can live without water or food for hours but they can't be living without any of the social media for even 30 minutes. Facebook helps the person to create separate profiles which are, business profile and personal blog. If the customer reaches the business profile of the company then they could interact with the pre-installed automated software which helps the customer to get what they want, and by mentioning automated this where artificial intelligence comes to the play.

In a personal blog, customers can directly interact even with the owner of the company and this personal blog is mainly used for customer reviews and reports.

The facebook business is popularly used for brand awareness, website traffic, lead generations or online conversions. Targeting customers made easy by Facebook and Facebook analytics helps the owner to know how much people are visiting my business profile and personal blog and how much people are going to my webpage (or) website by clicking the link on my profile.

#### **2. Instagram Business**

Like Facebook, Instagram is also owned by Facebook and both are linked with each other, the primary part is Facebook and the second part is Instagram. In Instagram, there are 500 million daily active users. Facebook bought Instagram for 1 billion and in just after the release of 18 months. One of the huge positive sides of Instagram is that it has organic benefits, organic benefits are nothing but making a huge amount of profit with fewer investments. 24 hours can make a person to buy that product. Now let us take an example of Cristiano

Ronaldo, he has the highest followers on Instagram and by just posting a single picture of the product and using hashtags (which is keywords) and tagging the person who is selling that particular product he can make the customer reach the seller and the customer will also turn into consumer . Thus the time taken to sell that product is less than the time taken to advertise the product on any other platform rest than social media.

### **3. Pinterest**

Pinterest is also similar to Facebook business and Instagram business, but it is not that popular like them. Pinterest has 175 million daily active users and mostly 81% are women in the usage of pinterest. Pinterest was developed for the startups which were started by women. Pinterest is a platform for recognition of women entrepreneurs in the social media platform. In Pinterest, 93% of active pinners said they use Pinterest to plan for purchases. And 87% say that they've purchased something because of Pinterest.

So let us dive in and see what is present in Pinterest:-

- Food recipes
- Lifestyle how to articles
- DIY
- Wedding inspirations
- Outfit ideas etc.

Pinterest is not advanced as like Facebook and Instagram still Pinterest is in the development stage. On Pinterest keywords determine your reach of customers and keywords helps you to strategically plan to increase your sales value and reduce your marketing budget on paid advertising.

### **4. YouTube Advertisements**

YouTube advertisement is very much different from all the other platforms because youtube is completely based on photos and videos; here you can't know how much your customer is satisfied and who your customer is.

YouTube has 1.57 billion daily active users. YouTube is likely used for advertising and not for customer interaction. YouTube is similar to Facebook, Instagram, Pinterest and snap chat. The main advantage of youtube is that it is owned by Google and they have the world's best customer satisfaction researchers. Google's advertising platform helps us to know more about what we are advertising and the ads are played either at the beginning of the video or at the end of the video. Here also keywords are the wow factor which plays an important role in finding our advertisements.

YouTube gives you two options which advertising your products on another person's video or by giving your product for review purposes.

### **5. Google My Business**

Google business is so user-friendly that you can do marvelous things in the matter of eye blinking. Google my business is divided into five major steps and let's see what it is.

- Create a free website in minutes: ( website )

It's a simple process to create a website with Google my business. Your website auto-generates with information from your Business Profile and you can customize it with text, photos, and design themes which is called personalizing for customer needs.

- Bring in customers by sharing helpful information: ( customize)

It counts every time when someone finds you on Search and Maps. It's a simple process to keep your business profile updated with new posts and photos, custom open-hours, and a free website.

- Keep them coming back with regular updates: (share)

Give customers discounts to drop by – it helps us to share our latest news, specials offers so they know what's happening and when.

- Engage online, and build customer loyalty: (connect)

Building strong relationships with the customers through online chats helps us always.

- Discover how people find your business: (optimize)

Know how customers are interacting with your business profile through Google my business. How did people find you? Where are they coming from? With Google My Business, the work load has been reduced.

**6. Whatsapp Business**

- Whatsapp business is basically an android app which is developed for small scale and large scale industries and the core purpose is to get more customers and make the customer happy even better.
- Whatsapp business gives you some tools which are pre-installed and those are pretty awesome for both the owner and the customer.
- And those tools are nothing but automate, sort, and quickly respond to messages.
- Let’s get in further and see what’s inside the business tool which is a trending factor around the globe.
- So in WhatsApp, it gives you some cool factors which are unavoidable.

➤ **Stay Organized**

**Labels**

- We can easily organize our contacts or chats with labels, so we can find them easily again.

➤ **Be seen**

**Business profile**

- Create your own business profile with information about your company and what are all the things you offer, website link, your address, email for contacting you personally.
- These are the things the WhatsApp business provides.

➤ **Get insights Messaging statistics**

- Access important information’s like how many of your messages were successfully sent, delivered, and read by them.

Pros and Cons of Social Media In International Businesses

PRO’S	CON’S
<p><b>Reduced marketing cost</b> Social media helps us to concentrate more on creating awareness of the product and also attracts customers to buy the product.</p>	<p><b>Efficient usage</b> Social media helps us only if used efficiently, if we are unprepared and don't have a perfect plan for executing then it will be a major loss. Without a clear marketing strategy, we cannot enter it.</p>
<p><b>Increased sales</b> Social media in international business helps us to increase our return on investments and profits. The sales will be happening globally and there are no restrictions here.</p>	<p><b>Social media for overseas business is time intensive</b> Maintain an interactive social media presence is a painstaking and time-consuming process, so it is not highly recommended for lazy peoples. A great social media presence requires 11 hours of attention to it on a daily basis</p>
<p><b>Increased traffic</b> So increased traffic is nothing but there will be more and more potential customers visiting your social media page and through that customers go to your website to buy products and the term more and more refers to increased traffic. This helps owners to concentrate more on customer satisfaction and customer reviews.</p>	<p><b>Social media accounts don’t have security</b> There are people on the internet who will do anything to gain access to all your things which has monetary benefits. Hackers can gain access to your valuable information's like customer purchase information and even get access to your server with just your mail ID.</p>
<p><b>Greater access to international markets</b> On social media business, there are high chances of getting other entrepreneurs who are interested in our product and that helps us to get more international access and focus on international customers.</p>	<p><b>The ROI is hard to measure</b> The latest report from social media researchers revealed that it is hard to measure the ROI and only 41% of marketers know how to calculate them. As helpful as it is that we have to know that no marketing channel is built perfectly. So it shows how irrelevant for a person who doesn't know anything about the social media business.</p>

**USAGE OF SOCIAL MEDIA FOR INTERNATIONAL BUSINESSES**

The pie chart shows information about how many users are there in different regions and how they are utilizing the different social media platforms for international business

- On utilizing social media platforms Asia stands at the top and rest are below of it, it is only because of the high-speed internet which is available at affordable cost. And thanks to that. Asia stands in the first because of the awareness in the people’s mind that we have to be present digitally or else we will no longer be in the game. Asian countries export many things so in Asia there is no limit.
- The next is the United States of America; we all know that the United States of America is the birthplace of huge giants like Amazon, Walmart etc.
- The third-place has been occupied by European nations and they are famous for their leather goods and wooden handicrafts. And that is why their contribution to international business through social is low compared to the others.
- And the last but not the least African nations, that is because the African countries are still in under developing stage so most the people don't even know that what is meant by the internet. And only some of those are manufacturing and selling products and from them, only a few are exporting and making international business, so the rate of usage of social media for international business is very low compared to all the others. And the noted point here is that most of them are not educated and there are still tribes in Africa who doesn't have even met a civilized man/woman.



**DISCUSSION**

- There were times when India's sole concentration was in importing technologies for a huge amount of money and if we have concentrated in developing our own technology then we could've been a cut above on comparing with other countries.
- That is what China is been doing and China is our neighboring country whose wealth was really low compared to us in the beginning stage. India's corporate spent 2.5 times more in paying for technological know-how than in developing their own.
- A great example for development in the social media business is Microsoft and they have been planning since their company had come to know that there is a country with a lot of manpower and that is India and MNC's like these companies are eyeing India as a hub for R&D activities. Microsoft has its research center in Bangalore with lots of Indians working for fulltime and those are Ph.D.'s from top universities in India.

- Like great technologies social media development also a great tool to utilize for industries. Companies like Tata and reliance are concentrating more on social media platforms to bring up their business globally, after keen research on social media platforms they finally brought up their campaigns and that was revolutionary. Olden or traditional business won't work in this modern world and companies have to adopt a lot to bring up their products in the market and that is where social media platforms come to play.
- Still, many entrepreneurs are not utilizing this chance to bring up their company for international trade. Wal-Mart is a great example of success in international business by social media platforms. When Wal-Mart entered India by late 2008 they have a lot of strategies and plans to implement, so they tied up with Bharti. Wal-Mart's main focus was based on how far it will succeed in India. In the meanwhile, it is the aggressive marketing strategies followed by Wal-Mart that have made the real giant as what it is today. Same can be achieved by present start-ups with social media platforms.
- By using paid promotions and free promotion social media is allowing us to advertise and analyze our business. It also suggests us how to reach more in terms of reaching new customers. As reliance and Tata is the biggest retailer in the Indian market, international business and expansion is the key to continued growth.

#### **SUGGESTIONS FOR UPCOMING ENTREPRENEURS TO SHINE ON INTERNATIONAL BUSINESS**

- Social media platforms help us to concentrate more on customer satisfaction and service, it helps us to create an awareness of our product with minimal input and giving us maximum outputs.
- Social media platforms help us to make our reach beyond limits and it attracts customers in an effective way.
- Utilization of social media platforms should be in a proper way and cross-checking for references must be there, and that is for understanding the customers need.
- Speaking of customer needs, social media helps us to know more about the customer through online chats and making video calls to make the order.
- Manufacturers are now selling their products directly to the customer through social media platforms, which is a great option, opted by them to attract more and more customers.
- By selling products on online the business persons will get a chance to make the customers eager to visit their store. So using social media for international business is a great option.

#### **CONCLUSION**

The utilization of social media in international business is a mandatory process to compete with other companies in the world. As speaking of international business social media gives us a wide coverage of customers to interact and buy products. Social media platforms which are mentioned above are user-friendly and we can take full control of what we are doing. This conceptual study clearly shows how important is social media for international business.

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**A STUDY ON FINANCIAL ALTERNATIVE SERVICES CROWD FUNDING VERSUS OTHER ALTERNATIVES RELATING TO INDIA CONTEXT**

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**ABSTRACT**

*Finance is the Life Engine and Energy to any business it may be small to large companies. Enterpreneurs can't start the activities of business without sufficient funds arrangement it can't be successful for short run but not for long Run. First the Entrepreneurs should know how to raise a sources of funds from many alternatives services like traditional and modern methods. Which is suitable based on the many factors like Internal and External. It is a challenging Job were many business fails in identify it and unsuccessful. Attempt is made to know Crowd Funding and other alternatives like venture capital, Bank Loan and Angel Investment available for new Starts ups or project or product and services. Based on the secondary data relating to Indian Point of view.*

*Keywords: Crowd Funding, Entrepreneurs, Venture Capital, Starts Ups, Alternative sources.*

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**INTRODUCTION**

Entrepreneurs starts Businesses or companies exist for the purpose of making profits or wealth maximization of shareholders by selling a product or a service or sometimes even both. For this very reason, every company needs funds in order to make products/ service from production to its available to final ultimate end-users that's customer. They need funds at every stage of the company, from the purchasing raw materials, producing a product, developing a service, marketing the product, making it available in different cities etc. Without funds, it is hard for these enterprises to exist. For this very reason, companies fund themselves through various methods. It can either be traditional method or modern method. There many financial services or alternative funds for raising capital for initial starts up to growth stage for new entrepreneurs. Some of them are listed – Bootstrapping (self-funding), incubators and accelerators, crowd funding, angel investment , venture capital, raising funds by winning contents , raising money through bank loans, Government programs, get business loans from microfinance providers or NBFC's etc.... getting a Funding itself is one of the challenging. Selecting the best alternative which suits the starts up is the major challenges every entrepreneurs will face in the initial stage to final stages of products and services.

As coming to India is the sixth largest economy in the world with 1.3 billion people. It has a high growth percentage in terms of the middle-income segment. It also enjoys a rising capital formation percentage. The economy is considered as the next upcoming leader in the world with various companies and MNCs setting up shop in India. For development of the country new starts it may small to large plays a vital role.

**LITERATURE REVIEW**

- 1. The role of Crowd funding in Entrepreneurial Finance** - Delhi Business Review X Vol. 13, No. 2 (July - December 2012)- Devashis Mitra- in this article the author have examine the relatively trend among the financial alternative crowd Funding. The study as started with the basic introduction, types, benefits and costs exemptions highlighted and very important JOBS Act 2012 in United States highlights. Lastly Canada scenario towards the concept. As conclusion the author suggest it can be one of alternative for the new starts up globally.
- 2. A Study on Crowd Funding and its Implications in India-** PARIPEX - INDIAN JOURNAL OF RESEARCH- 2016- In this article the author Prinsha K has explained few basic points about crowd funding. Mainly used theoretical approaches like benefits, risk associated and SEBI'S proposal of crowd funding as main points. Even though crowd funding have risk crowd funding have more advantages and it is rapidly growing financial services for new business startups.
- 3. J. Wallmeroth:** Entrepreneurial finance is very difficult to identify the sources and analysis relating which sources to option is tedious and challenging job. As two major contributions are mentioned it is better understanding the players and to provide the economic financial mechanisms relating to entrepreneurial innovation. To choose the financial sources cognition behaviour, knowledge of the funds, skills and other human and social capital resources etc. Plays an important role. All three concepts are studied on theoretical frame work its suits for different stages.



**NEED OF STUDY**

As India is developing country going for digitalized and many manufacturing, Technological, innovative sector is establishing, for new starts ups funds is required to know. It is a changeling job for Entrepreneurs to convert their dream into reality. It’s similar like mother giving birth to child. They want consider how to raise, how much, when and from which sources the funds can be raised from different alternatives is very necessary. As risk bearing capacity, cost, investment they need consider all Internal and External Factors.

**OBJECTIVES**

1. A study on difference between varies financial alternatives.
2. Various alternatives available for Enterpeurneurs as a sources of funds at different stages

**METHODOLOGY**

**Type of Data:** Secondary Data from the Websites, Articles, Journals, Newspaper and Magazines are collected for the study.

**Statement of the problem:** Even though many different financial alternatives and financial services providers are there to provide the funds for the new ventures raising the funds is not so easy. But attracting the Investors and convincing the creative ideas is not easy. Many Challenges will be there and to know the present scenario of financial alternatives which is available in India for the different stages.

**DATA ANALYSIS AND INTERPRETATION**

- a. A study on difference between varies financial alternatives

Sl. No	Basics	Bank Loan	Angel Investors	Venture Capitalist	Crowd Funding
1	Meaning	Traditional Sources of Capital For Small Business	A wealthy Individuals or Small groups of Individuals Providing Capital In exchange of Partial Ownership	Investors invest in early stage of starts up of the companies which is highly potential and highly risk in exchange for own equity	Raising funds from large number of public using social media.
2	Collateral	Required	Required	Not Required	Not Required
3	Time Requirement	Long Period	Long Period	Long Period	Fast ( Average 3 Months )
4	Relationship	It is Former Bank relationship	It Need Right Networking	It Need Right Networking	It Can gain large public support
5	Management Control	No control over	Partial control Yes	Partial Control Yes	No Control Over
6	Charges	Nominal charges	Shares and commission charges	Shares and Commission charges	It depends on types nominal charges

Based on the review only few basic difference as been listed above the table. Enterpeurneurs should know the capacity of the business how much it may take a risk whether capital is for which stage, risk bearing, cost, repayment of the capacity both external and Internal factors should be analysed before going to the alternative financial services selection.

- b. Various alternatives available for Enterpeurneurs as a sources of funds at different stages:

Seed Capital Stage	Early Stage	Growth Stage	Exit Stage
<b>Personal</b> Savings Credit cards Second Mortgage Friends/ Family <b>Equity Capital</b>	<b>Equity Capital</b> Angel Capital Venture Capital <b>Loans</b> Bank loans Microloans	<b>Equity Capital</b> Venture Capital Corporate Venture <b>Loans</b> Bank loans Government Loans	<b>Cash out strategy</b> Management Buy Back ESOP IPO Valuation partner

Angel Capital Venture Capital <b>Loans</b> Micro Loans Bridge loans <b>Grants</b> <b>Crowd Funding</b>	<b>Grants</b> <b>Crowd funding</b>	<b>Mezzanine Funding</b>	
		<b>Declining Stage</b>	
		<b>Cash flow Relief</b> Suppliers Customers Owners Valuation partner	

In the above table, it shows the different alternatives available as a fund for the finance services for the entrepreneurs from initial start-ups of product and services. Start-ups to exit stages. Entrepreneurs who are analysed not only present funds and always foresighted about future arrangement of funds to.

**FINDINGS AND SUGGESTIONS**

- Conduct awareness programs relating to financial alternative available for the Entrepreneurs.
- Conduct awareness programs relating to financial alternatives Investment strategy to Present and Upcoming Investors.
- Venture capital and Angel Finance is already in growth stage. When coming crowd funding it is initial Stage.
- Entrepreneurs should know risk associated with alternative financial services. (Low risk, medium risk or High risk).
- Entrepreneurs should know the cost associated with raising the funds. Commission charges or Shares taken or ownership of the management.
- Starts up are more unemployment can be reduced.
- Instead of importuning the products and services. Best products can be produced and experts may increase.

As India is a developing country starts up plays a very important role when it is successful then country growth rate will be more soon India can be in the list of developed country. Starts up may be big or small contribution towards economic development is important. Even though many persons have innovative ideas they will be ideal and fear to know their project or services is successful. More awareness of investment relating schemes and services training should be provided for potential interested entrepreneurs so richer getting richer to smarter getting richer can be achieved. The attitude of people will change from savings to investment point of view. So dreams can be converted into reality.

**LIMITATION OF THE STUDY**

An article is based on the information relating to secondary data and few reviews of literature based on that study as well as research paper as concluded.

**FURTHER SCOPE OF STUDY**

Even to check the ground reality primary research can be done. As secondary data is on published and unpublished information has taken. Even further scope is there for study to know how the funds can be raised from different alternatives. Which can be suitable for different kinds of sectors.

As India is in initial stage and small investment in the good financial services can make India with more number of new projects and Starts up, which leads to decrease inflow of funds and depending on other countries for investment may be avoided.

**CONCLUSION**

Even though there are many sources of capital such as angel investors, venture capital, and private equity, hedge funds, microfinance, project finance, and more. But three major sources are Venture capital, angel financing and recently crowd funding. It has evolved and matured in the entrepreneurial finance market in many developed countries for their projects and Starts ups. It can contribute more number of projects and services in India also so that country can be developed where ideas can be converted into reality.

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**AN EMPIRICAL INVESTIGATION OF CO-INTEGRATION BETWEEN SENSEX AND THE  
SELECTED WORLD STOCK MARKETS**

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**ABSTRACT**

*This study investigates the stock market integration amongst important global stock markets, namely, China, Japan, India, European Union, UK and USA for the period of 5 years between April 2013 and May 2018. The main objective for the present study is to test the co-integration of the major foreign stock markets and to find out the causal relationship among major selected stock markets and to assess the Interdependence of foreign stock markets and their impact on Indian stock exchange. Descriptive statistics reveals that BSE-Sensex is the quite uncertain market with high level of market return amongst all the developed stock markets as their standard deviation is higher. From the study it is found that there is a long run influence of world stock market on Indian stock market. Granger causality reveals that Indian stock market does not granger cause other stock exchanges and vice-versa.*

*Keywords: SENSEX, Multiple regressions, JB Test, Granger causality.*

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**I. INTRODUCTION**

The stock exchanges where the stocks are listed and traded are the entities specialized in the business of bringing buyers and sellers of stocks and securities together. The buyers and sellers of stocks are none other than the participants of the stock market. The world's key stock exchanges share a common threat and opportunity: globalization, Free-flowing capital, Businesses without borders and new Economic Growth Centers create an environment of intensified global competition among the world's stock exchanges. Financial markets, and especially stock markets, have grown considerably in developed and developing countries over the last few decades. Better fundamentals, structural, and specific policy changes have aided in their growth. Global equity markets posted another positive year of returns in 2017-18 poised for a downturn. Indian capital market continued to rise in 2017-18 on the back of government initiatives, ratings upgrades and optimism in global markets.

**II. REVIEW OF LITERATURE**

A group of studies prevalent, which emphasized that integration between Indian economy and other major Global economies, has increased with the passage of time.

Swetadri Samadder & Amalendu Bhunia (2018) examines investigate the short-term and long-term connexion amid the Indian stock market and the established stock markets namely, Australia, Canada, France, Germany, India, UK and USA. It shows that there is Low correlation between Indian and France stock market that indicates the possible gains from international diversifications. Granger causality test results based on VECM show that both Indian stock market and USA stock market are associated in the long-run and Indian stock market is associated with France, Germany and USA stock markets in the short-run<sup>1</sup>. Yaman and Bhunia (2017) investigated whether there is any causal relationship between Asian stock markets and US stock market based on daily stock price indices between January 1991 and March 2016 using unit root test, VECM and co-integration analysis. They confirmed that there is a positive association between the latter and most of the Asian stock markets in our sample. An exception is the Vietnamese stock market, which has a negative correlation with the US market, indicating opportunities for diversification by investors<sup>2</sup>. Prof. Patel (2017) has examined the Co-movement of the 14 selected stock markets and have also tried to exploring the short and long-term relationship between 14 stock exchanges viz, BSE Sensex, HangSeng, MXX, FTSE-100, Nikkei, NASDAQ, JKSE, BVSP, KSE, KSE- Korea stock exchange, RTS, SSE, SSMI and TSEC. Result of Granger Causality Test indicates that the return of BSE is depending on BVSP, FTSE-100 & MXX only. BVSP depends only on BSE, FTSE-100, Hang Seng and KSE only. The analysis of dependency can help in taking the investment in a better way<sup>3</sup>. Dr. Nisha Jindal, Prof. Ravinder Vinayek & Dr. Ravi Kumar Gupta (2016) have investigated how the emerging economies and developed economies are integrated with each other. In this study they have stated that the stock markets of developed economies of Australia, Hong Kong, Germany, USA, Japan and Singapore have a causal relationship with Indian stock market but Indian stock market does not have much influence on the stock markets of any developed economy. Although they also infer that there is no stable lead-lag relationship of Indian stock market with the stock markets of developed and emerging economies<sup>4</sup>. Dr. Neetu Jain, (2016) analysed the linkages among the BRICS stock markets – Brazil, Russia, India, China and South Africa. The

results show that there is no long run association between Nifty and rest of the Stock exchanges; further, the Indian Stock market is not caused by the BRICS market. The results and the outcomes can be used to make analysis for better investment and speculative purposes<sup>5</sup>.

**III. RESEARCH METHODOLOGY**

- **Type of Research:** Descriptive research used for the study, with the characteristics of prices or index value of selected foreign and Indian indices.
- **Method of sampling:** Sampling technique followed is Convenience Sampling. Sample units chosen are Indian Stock Market and 5 major global stock markets.
- **Sample Size:** The study covers 5 major foreign stock market and for a period of 5 years i.e., from April 2013 to March 2018.

**Table-1: Ranks of global indices based on their market capitalization**

Ranking	Stock Exchanges	Market Capitalization	Country
1	New York Stock Exchange (NYSE)	US\$19.6 trillion	US
2	NASDAQ	\$8.13 trillion	US
3	London Stock Exchange Group	\$3.61 trillion	UK & Italy
4	Japan Exchange Group Inc.	\$5.12 trillion	Japan
5	Shanghai Stock Exchange	\$4.27 trillion	China
6	Hong Kong Stock Exchange	\$3.37 trillion	China
7	Euronext	\$3.49 trillion	European Union
8	Shenzhen Stock Exchange	\$3.24 trillion	China
11	Bombay Stock Exchange	\$1.66 trillion	India

Source: Stocks\_To\_Trade/Wiki\_Stock\_exchanges

- **Research Technique:** The following econometrics tools were used for analyzing the Co-integration between Indian Stock Market and Major Foreign Stock markets.

**Table-2: Different research techniques used for the study**

Sl. No	Statistic/Econometric Tools	Purpose
1	<b>Descriptive Statistics</b>	To describe the nature of data set.
2	<b>Jarque-Bera test</b>	To test whether stock indices of the various countries individually follow the normal probability distribution and Goodness of fit. (Normality Test)
3	<b>Unit Root Test: Augmented Dickey Fuller Test</b>	The selected data will be tested for the stationary.
4	<b>Multiple-Regression Analysis</b>	When there is more than single independent variable, the regression is termed as <b>multiple regression scrutiny</b> , used to check inter-dependency.
5	<b>Granger Causality Test</b>	To establish whether in the long run the variables under study would move in the same direction or not.
6	<b>Co-Integration:</b>	This test is to be done to check whether there is a long term relationship exists, caused by BSE Sensex & selected global equity markets.
7	<b>Vector Error Correction Model (VECM)</b>	To integrate the multivariate time series data

**IV. OBJECTIVES**

- To find whether the major foreign stock markets and Indian Stock Market are integrated.
- To find out the causal relationship among major selected equity markets.
- To assess the Interdependence of foreign stock markets and their impact on Indian stock exchange.

**V. SCOPE OF THE STUDY**

The present study will help us to analyze the interdependence that exists between the 5 major foreign stock markets with special reference to India on the basis of 5 years Monthly prices of these indices. The dependency of each market to other markets can be studied which will help in taking the investment in a better way.

**VI. EMPIRICAL RESULTS**

**Table-3: Descriptive Statistics**

	SENSEX	ENX	LSE	NASDAQ	NIKKEI	SHANGHAI
Mean	26978.10	902.2632	2611.476	5120.428	17842.96	2925.179
Median	27005.52	882.9800	2547.000	4944.740	17489.07	3090.480
Maximum	35965.02	1068.230	4477.000	7442.120	23098.29	4611.740
Minimum	18619.72	703.8400	1231.600	3328.790	13388.86	1979.210
Std. Dev.	4423.665	94.59269	854.0140	1058.452	2670.673	624.6906
Skewness	-0.045885	0.001239	0.306967	0.564623	0.167059	0.218351
Kurtosis	2.458236	2.093301	2.242516	2.591724	2.071411	2.884237
Jarque-Bera	0.779985	2.123783	2.455966	3.724871	2.515941	0.527281
Probability	0.677062	0.345801	0.292883	0.155294	0.284230	0.768250
Observations	62	62	62	62	62	62

Source: Author’s Calculation by using Eviews

The computed p-value of all the 6 indices is greater than 0.05 or 5% and thus here null hypothesis is accepted. Hence it can be said that the residual follows normal distribution and can be used for further study. Here, it was also found that Skewness of distribution is a greater than 0.00. It is also clear that Stock index of India (Sensex) is negatively skewed, while all indices of US (NASDAQ), UK (LSE), Japan (Nikkei), China (Shanghai) and Europe (ENX) are positively skewed. Kurtosis is a measure of peakness and the fat tail that associate with less density in the middle; a normal distribution has kurtosis equals to 3.0 or excess. Therefore Sensex, NASDAQ, Shanghai, Nikkei, LSE and ENX indices follow platykurtic distribution.

Average of Major One Month Rises and fall of Selected Stock Markets: The Shanghai has uppermost average rise of 20.57% and average fall of 22.65%. The next one is LSE with a rise and fall of 17.72% and -9.84%, respectively. The positive difference in rise & fall is found in SENSEX (2.66%), Nikkei (0.12%), and NASDAQ (1.52%) and ENX (0.85). The negative difference in rise & fall is found in Shanghai (-2.08%).

**UNIT ROOT TEST**

$H_0$  = Data has Unit Root (Non-Stationary).

$H_1$  = Data does not have Unit Root (Stationary).

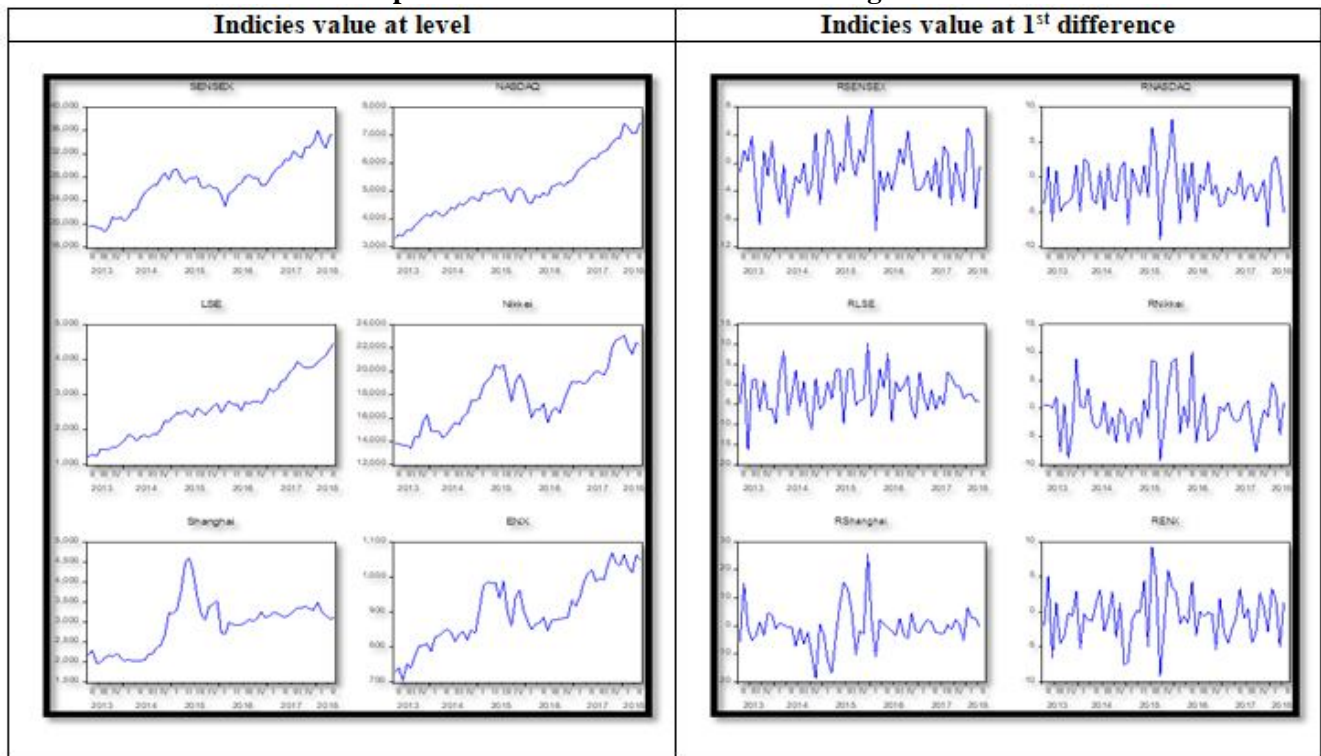
**Table-4: ADF Test results for all selected Stock Exchanges at Level and at 1<sup>st</sup> Difference**

Sl. No	Stock Exchanges	Level			First Difference		
		ADF T-Statistic	P-Value	Hypothesis	ADF T-Statistic	P-Value	Hypothesis
1	BSE - SENSEX	0.71353	0.8352	Rejected $H_0$	8.234457	0.000	Accepted $H_0$
2	NASDAQ	0.147296	0.9668	Rejected $H_0$	8.834113	0.000	Accepted $H_0$
3	LSE	0.467764	0.9842	Rejected $H_0$	9.199742	0.000	Accepted $H_0$
4	NIKKEI	1.064281	0.7244	Rejected $H_0$	7.189711	0.000	Accepted $H_0$
5	SHANGHAI	2.092536	0.2484	Rejected $H_0$	5.556536	0.000	Accepted $H_0$
6	ENX	1.567058	0.4931	Rejected $H_0$	8.585373	0.000	Accepted $H_0$

Source: Author’s Calculation by using Eviews, ADF Test

All the selected stock index of the world has a unit root (applied ADF test). As the p-values of all the selected stock exchanges is greater than 5% we accept Null Hypothesis and conclude that the data are non-stationary at Level. The graph 2 shows the at level indices value and at 1<sup>st</sup> difference the indices value, that also help to differentiate the Non-Stationary and Stationary data set.

Graph-1: Indices value at Level and at Log Return



**MULTIPLE REGRESSION ANALYSIS**

$H_0$  = There is no significant impact between Global Stock Exchanges to Indian Stock Market  $H_1$  = There is a significant impact between Global Stock Exchanges to Indian Stock Market **Table 5: Multiple Regression Analysis**

Dependent Variable: RSENSEX				
Method: Least Squares				
Date: 01/10/19 Time: 15:53				
Sample (adjusted): 2013M04 2018M04				
Included observations: 61 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.286086	0.464675	-0.615668	0.5407
RENX	0.167010	0.165692	1.007955	0.3179
RLSE	-0.061974	0.103098	-0.601110	0.5502
RNASDAQ	0.510207	0.197295	2.586016	0.0124
RNIKKEI	0.105110	0.135494	0.775755	0.4412
RSHANGHAI	-0.062912	0.068876	-0.913413	0.3650
R-squared	0.328372	Mean dependent var.		-0.973587
Adjusted R-squared	0.267314	S.D. dependent var.		3.817357
S.E. of regression	3.267545	Akaike info criterion		5.299136
Sum squared resid	587.2268	Schwarz criterion		5.506763
Log likelihood	-155.6236	Hannan-Quinn criter.		5.380507
F-statistic	5.378104	Durbin-Watson stat		2.112173
Prob(F-statistic)	0.000427			

Source: Author’s Calculation by using Eviews

The coefficient is negative and Durbin Watson stat value is more than 2 which indicates the model fitness. All the stock market indices except for NASDAQ accept the null hypothesis. In case of NASDAQ the t-Statics result is significant which indicates that there is a possibility of NASDAQ stock market will influence the Indian stock market. And also it can be seen that, the Durbin Watson statistic is 2.11 which is above 2 it means that there is no serial correlation in the model.

**GRANGER CAUSALITY TEST**

**Table-6: Selection of VAR Lag Order**

VAR Lag Order Selection Criteria						
Endogenous variables: SENSEX ENX LSE NASDAQ NIKKEI SHANGHAI						
Exogenous variables: C						
Date: 01/14/19 Time: 10:04						
Sample: 2013M04 2018M05						
Included observations: 57						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-2499.626	NA	6.12e+30	87.91669	88.13175	88.00027
1	-2241.748	452.4164	2.56e+27	80.13152	81.63693*	80.71658*
2	-2201.072	62.79936*	2.27e+27*	79.96742*	82.76318	81.05395
3	-2179.923	28.19765	4.26e+27	80.48854	84.57464	82.07654
4	-2141.295	43.37208	4.86e+27	80.39632	85.77277	82.48579
5	-2096.833	40.56205	5.43e+27	80.09940	86.76620	82.69034
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

Source: Author’s Calculation by using Eviews

**Table-7: Summary result of Granger Causality between selected global stock exchanges**

VEC Granger Causality/Block Exogeneity Wald Tests			
Date: 02/14/19 Time: 10:09			
Sample: 2013M04 2018M05			
Included observations: 59			
Dependent variable: D(SENSEX)			
Excluded	Chi-sq	df	Prob.
D(ENX)	0.259105	2	0.8785
D(LSE)	1.396526	2	0.4974
D(NASDAQ)	1.305562	2	0.5206
D(NIKKEI)	0.288011	2	0.8659
D(SHANGHAI)	5.212167	2	0.0738
All	7.984905	10	0.6303

Source: Author’s Calculation by using Eviews

Summary of the VEC Granger Causality or Block Exogeneity Wald Test results helps us to understand the condition of each stock exchange individually. It is performed among all pairsof selected stock markets to determine direction of causality, result of null hypotheses which are accepted at 5% level of significancefor Indian market are reported in table 6.

Overall, this study has found no unidirectional and all bi-directional Granger causality effect in between the selected stock markets.

**COINTEGRATION TEST**

**Table-7: Results of Co-Integration Test**

Date: 01/13/19 Time: 16:18			
Sample (adjusted): 2013M06 2018M05			
Included observations: 60 after adjustments			
Trend assumption: Linear deterministic trend			
Series: SENSEX ENX LSE NASDAQ NIKKEI SHANGHAI			
Lags interval (in first differences): 1 to 1			
Unrestricted Cointegration Rank Test (Trace)			
Hypothesized		Trace	0.05



No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.453712	97.77299	95.75366	0.0360
At most 1	0.297493	61.49644	69.81889	0.1923
At most 2	0.292210	40.31042	47.85613	0.2116
At most 3	0.148030	19.57399	29.79707	0.4522
At most 4	0.136429	9.961774	15.49471	0.2837
At most 5	0.019164	1.161027	3.841466	0.2813
Trace test indicates 1 cointegratingeqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
<b>Unrestricted Cointegration Rank Test (Maximum Eigenvalue)</b>				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.453712	36.27656	40.07757	0.1261
At most 1	0.297493	21.18602	33.87687	0.6701
At most 2	0.292210	20.73643	27.58434	0.2925
At most 3	0.148030	9.612215	21.13162	0.7802
At most 4	0.136429	8.800747	14.26460	0.3031
At most 5	0.019164	1.161027	3.841466	0.2813
Max-eigenvalue test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Author’s Calculation by using Eviews

Johansen Test of cointegration presents the Trace and Maximum Eigenvalue performed to determine the order of integration, in this trace indicates that should reject null hypothesis that of none and accept null for Trace and Maximum Eigenvalue for both at most one cointegrating or error since p-value is greater than 0.05 which indicates that, selected six variables are have long run relationship. Since the entire variable is cointegrated the further VECM can be run.

**VECTOR ERROR CORRECTION MODEL (VECM)**

**Table-7: Results of VECTOR ERROR CORRECTION ESTIMATES**

Vector Error Correction Estimates				
Date: 01/14/19 Time: 16:34				
Sample (adjusted): 2013M07 2018M05				
Included observations: 59 after adjustments				
Standard errors in ( ) & t-statistics in [ ]				
CointegratingEq:	CointEq1			
SENSEX(-1)	1.000000			
ENX(-1)	35.19541			
	(10.0886)			
	[ 3.48865]			
LSE(-1)	3.170676			
	(1.43326)			
	[ 2.21220]			
NASDAQ(-1)	-7.619295			
	(1.54547)			
	[-4.93009]			
NIKKEI(-1)	-0.178707			
	(0.41243)			
	[-0.43330]			
SHANGHAI(-1)	-4.391319			
	(0.94372)			
	[-4.65319]			
C	-11983.95			

Error Correction:	D(SENSEX)	D(ENX)	D(LSE)	D(NASDAQ)
CointEq1	-0.054439	-0.003805	0.000383	-0.002948
	(0.11503)	(0.00333)	(0.01357)	(0.01840)
	[-0.47326]	[-1.14390]	[ 0.02821]	[-0.16023]
D(SENSEX(-1))	0.159285	0.003549	-0.003567	0.064361
	(0.22345)	(0.00646)	(0.02637)	(0.03574)
	[ 0.71285]	[ 0.54915]	[-0.13530]	[ 1.80101]
D(SENSEX(-2))	0.029165	0.009331	0.007062	0.000400
	(0.23988)	(0.00694)	(0.02830)	(0.03836)
	[ 0.12158]	[ 1.34503]	[ 0.24950]	[ 0.01042]
D(ENX(-1))	-0.616834	0.194551	0.911134	0.960214
	(7.34995)	(0.21256)	(0.86726)	(1.17548)
	[-0.08392]	[ 0.91525]	[ 1.05059]	[ 0.81687]
D(ENX(-2))	3.293499	-0.134984	-1.117798	-0.502095
	(6.61169)	(0.19121)	(0.78015)	(1.05741)
	[ 0.49813]	[-0.70593]	[-1.43281]	[-0.47484]
D(LSE(-1))	-0.620448	-0.024964	-0.157598	-0.219514
	(1.44642)	(0.04183)	(0.17067)	(0.23133)
	[-0.42895]	[-0.59678]	[-0.92340]	[-0.94894]
D(LSE(-2))	-1.640570	0.009016	-0.133716	-0.414938
	(1.42008)	(0.04107)	(0.16756)	(0.22711)
	[-1.15526]	[ 0.21952]	[-0.79801]	[-1.82701]
D(NASDAQ(-1))	-2.238394	-0.076253	-0.144403	-0.618037
	(1.97323)	(0.05707)	(0.23283)	(0.31558)
	[-1.13438]	[-1.33619]	[-0.62020]	[-1.95842]
D(NASDAQ(-2))	-0.570098	-0.059236	0.003051	0.015268
	(1.68220)	(0.04865)	(0.19849)	(0.26903)
	[-0.33890]	[-1.21760]	[ 0.01537]	[ 0.05675]
D(NIKKEI(-1))	-0.050532	-0.012698	-0.013163	0.003295
	(0.27521)	(0.00796)	(0.03247)	(0.04401)
	[-0.18361]	[-1.59534]	[-0.40536]	[ 0.07487]
D(NIKKEI(-2))	-0.138874	-0.002809	0.047643	0.020129
	(0.27471)	(0.00794)	(0.03241)	(0.04393)
	[-0.50554]	[-0.35357]	[ 1.46983]	[ 0.45816]
D(SHANGHAI(-1))	1.802048	0.068257	-0.007966	0.267304
	(0.78947)	(0.02283)	(0.09315)	(0.12626)
	[ 2.28259]	[ 2.98953]	[-0.08552]	[ 2.11709]
D(SHANGHAI(-2))	-0.582780	0.009329	-0.020673	-0.182692
	(0.86442)	(0.02500)	(0.10200)	(0.13825)
	[-0.67418]	[ 0.37316]	[-0.20268]	[-1.32149]
C	505.4524	12.80004	74.22232	113.5512
	(179.321)	(5.18606)	(21.1590)	(28.6787)
	[ 2.81871]	[ 2.46816]	[ 3.50784]	[ 3.95943]
R-squared	0.175232	0.296425	0.167446	0.258091
Adj. R-squared	-0.063035	0.093170	-0.073070	0.043761
Sum sq. resids	51899916	43409.14	722594.8	1327473.
S.E. equation	1073.933	31.05878	126.7188	171.7539
F-statistic	0.735444	1.458389	0.696195	1.204178
Log likelihood	-487.4924	-278.4436	-361.4028	-379.3443
Akaike AIC	16.99974	9.913341	12.72552	13.33370
Schwarz SC	17.49272	10.40632	13.21849	13.82668
Mean dependent	269.9419	5.851186	55.00678	68.45542
S.D. dependent	1041.606	32.61530	122.3284	175.6400
Determinant resid covariance (dof adj.)		9.87E+26		
Determinant resid covariance		1.94E+26		

Log likelihood	-2287.979		
Akaike information criterion	80.60947		
Schwarz criterion	83.77859		

Source: Author’s Calculation by using Eviews

**Table-7: Results of VECM**

Dependent Variable: D(SENSEX)				
Method: Least Squares (Gauss-Newton / Marquardt steps)				
Date: 02/13/19 Time: 16:46				
Sample (adjusted): 2013M07 2018M05				
Included observations: 59 after adjustments				
D(SENSEX) = C(1)*(SENSEX(-1) + 35.195411403*ENX(-1) + 3.17067557691*LSE(-1) - 7.61929502798*NASDAQ(-1) - 0.178707411981*NIKKEI(-1) - 4.39131929731*SHANGHAI(-1) - 11983.9538319) + C(2)*D(SENSEX(-1)) + C(3)*D(SENSEX(-2)) + C(4)*D(ENX(-1)) + C(5)*D(ENX(-2)) + C(6)*D(LSE(-1)) + C(7)*D(LSE(-2)) + C(8)*D(NASDAQ(-1)) + C(9)*D(NASDAQ(-2)) + C(10)*D(NIKKEI(-1)) + C(11)*D(NIKKEI(-2)) + C(12)*D(SHANGHAI(-1)) + C(13)*D(SHANGHAI(-2)) + C(14)				
	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
C(1)	-0.054439	0.115028	-0.473263	0.6383
C(2)	0.159285	0.223448	0.712848	0.4796
C(3)	0.029165	0.239879	0.121581	0.9038
C(4)	-0.616834	7.349948	-0.083924	0.9335
C(5)	3.293499	6.611688	0.498133	0.6208
C(6)	-0.620448	1.446417	-0.428955	0.6700
C(7)	-1.640570	1.420085	-1.155262	0.2541
C(8)	-2.238394	1.973234	-1.134379	0.2626
C(9)	-0.570098	1.682196	-0.338901	0.7363
C(10)	-0.050532	0.275211	-0.183610	0.8551
C(11)	-0.138874	0.274706	-0.505536	0.6156
C(12)	1.802048	0.789474	2.282593	0.0272
C(13)	-0.582780	0.864423	-0.674184	0.5036
C(14)	505.4524	179.3205	2.818709	0.0071
R-squared	0.175232	Mean dependent var	269.9419	
Adjusted R-squared	-0.063035	S.D. dependent var	1041.606	
S.E. of regression	1073.933	Akaike info criterion	16.99974	
Sum squared resid	51899916	Schwarz criterion	17.49272	
Log likelihood	-487.4924	Hannan-Quinn criter.	17.19218	
F-statistic	0.735444	Durbin-Watson stat	1.966988	
Prob(F-statistic)	0.719417			

Source: Author’s Calculation by using Eviews

The C(1) is coefficient of long run cointegrated model with Sensex as the dependent variable while C(2) to C(13) are short run coefficients. Among all C(12) is speed of adjustment towards long run equilibrium which is significant and C(14) is constant value. This indicates that world stock market has long run influence on Indian stock market.

**CONCLUSION**

This study has tried to investigate the interrelationship, Interdependencies and causal relationships among Indian stock market and the selected major stock exchanges of the world. The Jarque-Bera test has pointed out normality if indices data series. Thus the ADF test conducted points out that all the data sets are stationary at first difference. Descriptive statistics reveals that BSE-Sensex is the quite uncertain market with high level of market return amongst all the developed stock markets as their standard deviation is higher. It is identified that there is long run relationship among six stock exchanges. There exists long-run relationship among the variables with -0.05444 as the speed of adjustment towards equilibrium. Selected six variables are all are trend and non-stationary but are co-integrated with at-most one co-integrating equation. Bidirectional or Unidirectional causality are not exists among the variables.

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**A STUDY ON UNDERSTANDING THE RELATIONSHIP WITH CHANNEL MEMBERS TRUST WITH SPECIAL REFERENCE THE DISTRIBUTING COMPANIES IN CONSUMER LIGHTING INDUSTRY IN BANGALORE**

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**ABSTRACT**

*On the exposure to the new economic policy and more complex nature economic activity impel the all sectors to more competitive in optimizing available resources in meeting the business objectives. Thereby firm want to reach the target customer, in this process the manufacturer or organisations pursue different channel to reach target customer by various channel viz., traditional / classic channel of distribution, dealer network and contemporarily virtual channels. These business channels may not be function effectively without the presence of interpersonal and mutual trust and relationship commitment among channel members. Therefore its apparent that firms needs to pay more attention to develop maintain the trust and relationship commitment among the channel members. These result of above, may lead to better management of channel, stability in channel network and compound by growth of market share by optimising the available resources.*

*Keywords: channel members, trust, relationship commitment, consumer lighting industry*

**INTRODUCTION**

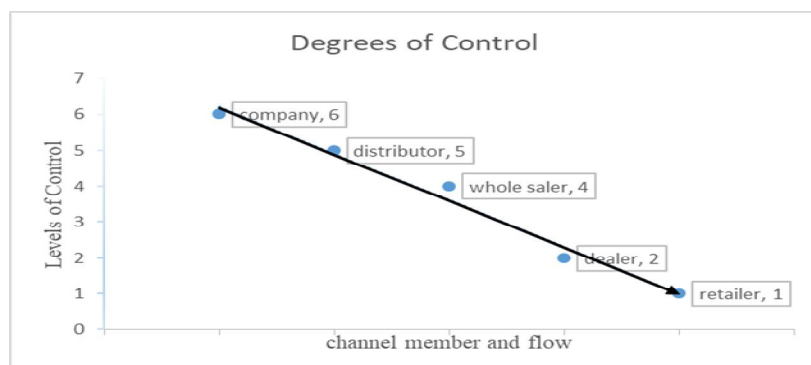
On the exposure to the new economic policy and more complex nature economic activity impel the all sectors to more competitive in optimizing available resources in meeting the business objectives. Thereby firm want to reach the target customer, in this process the manufacturer or organisations pursue different channel to reach target customer by various channel viz., traditional / classic channel of distribution, dealer network and contemporarily virtual channels. These business channels may not be function effectively without the presence of interpersonal and mutual trust and relationship commitment among channel members. Therefore its apparent that firms needs to pay more attention to develop maintain the trust and relationship commitment among the channel members. These result of above, may lead to better management of channel, stability in channel network and compound by growth of market share by optimising the available resources.

The basic component of business objective is to wealth maximization. But how?, by “meeting needs profitably”, hence as defined by Philip Kotler, its **marketing**, if we further excavated we can find

<sup>1</sup> Philip Kotler Kevin L Keller, *Marketing Management Pearson 15<sup>th</sup> ed, Pearson 2016*

“Marketing as a total system of business activities designed to plan, price promote and distribute want – satisfying products to target markets in order to achieve organisational objective”. This marketing activities trigger for marketing mix, Jerome McCarthy (1960) classified these activities as marketing – mix tools of four broad kinds, which he called the four Ps of marketing: product, price, place, and promotion. Going further, it was articulated by Philip Kotler in 2016 “Marketing Mix is the set of controllable variables that the firm can use to influence the buyer’s response”.

Here in this article we emphasis on marketing mix the third P i.e., Place or also called “Channel of Distribution” via which company reach goods and services to its target customers. So, in this channel of distribution the finished goods moves from manufacturer/producers/company to whole-seller/distributor to dealer/retailers and finally offered to customer. As enumerated earlier ‘mix of controllable variables’ nevertheless, the typical P or channel varies on degree of control exercised by company as guardian of channel of distribution, pictorially



Since the above figure give ad-hoc depicts the flow of goods and services from company to retailer at the same time, the levels of control also diminishes. The above is taken from representative scale of 5 for measuring degree of control exercised by company in the channel of distribution.

It implies more impetus the channel member's trust is more important in sustaining the channel structure and this will ultimately lead to better channel coordination and more channel profit. Very specifically here, we study on variables of company which impact the perception of the distributor, wholesaler's dealers and retailer trust and commitment towards the functioning of company. There are various aspects which influence the dealer and retailers, (the members of the channel of distribution), which are below

1. Supplier performance
  - a. Supplier reputation
  - b. Supplier firm size
  - c. Supplier ability to customised services
  - d. Supplier communication
  - e. Longevity of relationship with dealer
2. Purchase experience with vendor also includes market variables
3. Purchase choice
  - a. Delivery
  - b. Relative cost/price
  - c. Relative product
  - d. Service performance

One of the foremost neglected area in the swiftly growing industry is lighting industry, it is the industry which comprises producers, manufactures, importers dealers and retailers who fulfil the day to day requirement of end consumer house hold electric light products e.g., compact florescent lamp, General lighting systems, Light emitting diodes fixtures etc. This consumer lighting industry in India is growing at 37% from 2016 to 2017 annually and expected to reach to INR 514 billion as per trend recorded by statista and ELCOMA 2018

#### **AIM OF THE STUDY**

The primary aim is to know the impact of channel members trust based on distribution organisation size and its reputation. Since the market is such volatile and observe the fluctuations which could impact on the functioning of the channel of distribution. We curtail our study to understand the impact of size of the organisation and reputation on the trust perception among channel members.

#### **IMPORTANCE OF THE STUDY**

This study is a continuous and perusal understanding of channel of distribution intermediaries in the lighting industry in Bangalore. It's the trust of intermediaries which makes success or failure of the marketing activity in the critical marketing P. Such that every distribution organisation will have to devise such mechanism which and germinate the trust on the people in the channel of distribution, so the success of the marketing activity can be banked.

<https://www.statista.com/statistics/857542/india-consumer-lighting-industry-market-size/#0>

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#### **STATEMENT OF THE PROBLEM**

At the out-set, its imperative to know pulse of channel of distribution to be in competitive fray. But this can be achieved by distribution organisation by making sure it builds the confidence of the other channel members. This study is based on the two parameters which is being utilized are – size of the distribution organisation, and reputation of the distribution organisation. This makes the most component of the trust factors, hence we use the above parameters to understand the perception of the channel members with respect to the lighting industry channel of distribution in Bangalore.

#### **SCOPE OF THE RESEARCH WORK**

The research paper study conducted in Bangalore city LED consumer lighting industry and focused on primary members of channel of distribution only viz., distributor, dealer and retailers. Here the study not includes the perceptions secondary members of the channel and end consumers.

The research frame work includes the LED consumer lighting industry channel members Distributor, retailer and dealer who are serviced by company at large. Validation of study subsists mainly on the practical applications and also relay on theoretical concepts.

**THE OBJECTIVE OF THE STUDY**

We try to know ‘*how the variable are perceived by channel members towards company*’, hence we may condense objectives for this study as below which can be further validated by using appropriate statistical tools.

1. To know whether the trust of channel member is influenced by the size of the distributing organisation
2. To know whether the trust of channel member is influenced by the reputation of the distributing organisation
3. To know how the trust impacting the over-all
4. To know sway connexion between the channel trust leading to financial and operational benefit to channel members.

**HYPOTHESES OF THE STUDY**

In this study we take below hypotheses, the first comes from the characters of the distribution organisation viz., size and reputation of the distribution organisation.

H<sub>0</sub>: Channel member trust is not influenced by the size of the distribution organisation the channel of distribution

H<sub>a</sub>: Channel member trust is influenced by the size of the distribution organisation the channel of distribution

The other hypothesis is framed based on character of ‘reputation’.

H<sub>0</sub>: There is no influence of ‘reputation of distribution organisation’ on the trust of channel members in the channel of distribution

H<sub>a</sub>: There is influence of ‘reputation of distribution organisation’ on the trust of channel members in the channel of distribution

Secondly the resultant of trust to the channel of distribution is studied by hypothesis, which comprises financial and operational benefit derived to channel members. And alternative goes like

**METHODOLOGY ADOPTED**

This research paper is conducted study in Electrical consumer lighting retailers in Bengaluru, Karnataka. It is conducted using both analytical and descriptive study. The study primarily depends on the primary and secondary data. The primary data is collected by survey method, through structured instruments and also utilized Likert 5 scale questionnaires. The secondary data is collected from journals, magazines, publications reports, books dailies periodicals articles, research paper and online sources. The duration of the study is 2 months. The respondent are randomly administered with well formulated and structured questionnaires irrespective of demographics and economic backgrounds. A sample consists of size of 30, which includes Distributor, retailer and dealer from Consumer lighting LED Industry in Bangalore. Non Probability Stratified Simple Random sampling technique is followed. Data was analysed by Microsoft excel, and appropriate statistical tests.

**STATISTICAL TESTING OF HYPOTHESIS**

The random sample size 30 is drawn from the selected sample frame which include primary members of the LED consumer lighting distribution channel intermediaries i.e., electrical dealer, distributor and retailers. Initially the samples so drawn are tested for internal consistency using Cronbach alpha and to check the normality of distribution is meeting or not. We also used Rank correlation to test the normality of the samples. The following are the outcome, by using the Cronbach alpha we arrived 0.609924, which indeed better to indicate the normality of distribution. However the K-S test shown the sample so collected is not from the normal distribution. Adding to this the Likert scale is instrument used to collect the data, therefore we conclude and continue in doing non-parametric distribution.

Q1	30	53	1.766667	1.702299
Q2	30	54	1.8	1.82069
Q3	30	49	1.633333	1.412644
Q4	30	45	1.5	1.362069
Q5	30	49	1.633333	1.412644

Below are the rank correlation, which accepts, that the sample is from normal distribution.

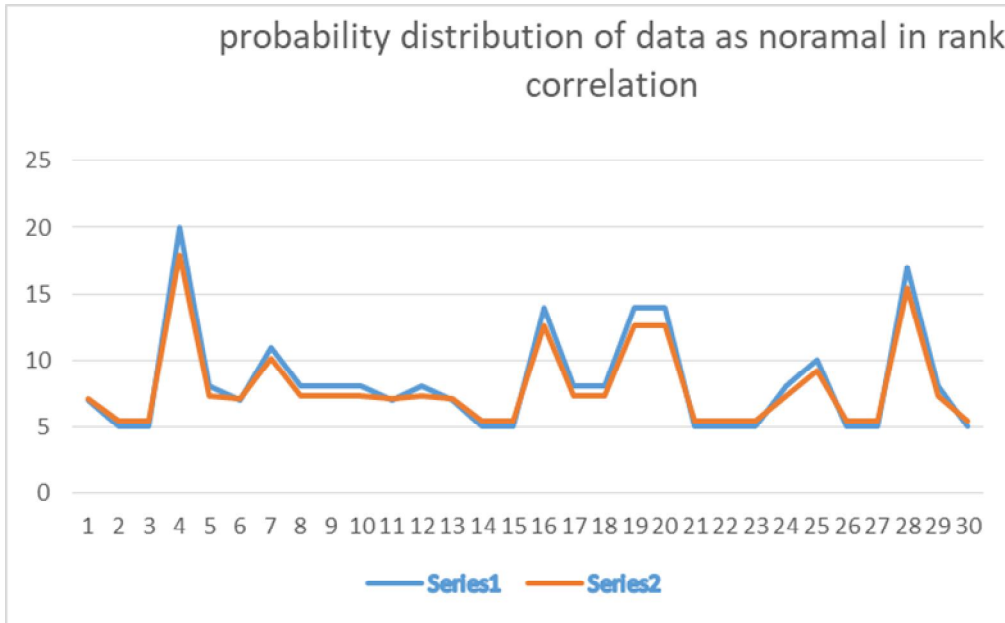
Respondent	Q1	Q2	Q3	Q4	Q5	Z	Rank	Index	Z Scores
1	1	1	1	1	3	7	17	0.54958678	0.124617
2	1	1	1	1	1	5	21	0.68181818	0.472789
3	1	1	1	1	1	5	21	0.68181818	0.472789
4	3	4	4	5	4	20	1	0.02066116	-2.04028
5	1	1	4	1	1	8	8	0.25206612	-0.668
6	1	1	1	1	3	7	17	0.54958678	0.124617
7	4	4	1	1	1	11	6	0.18595041	-0.89292
8	4	1	1	1	1	8	8	0.25206612	-0.668
9	1	4	1	1	1	8	8	0.25206612	-0.668
10	4	1	1	1	1	8	8	0.25206612	-0.668
11	1	1	3	1	1	7	17	0.54958678	0.124617
12	1	4	1	1	1	8	8	0.25206612	-0.668
13	1	1	1	3	1	7	17	0.54958678	0.124617
14	1	1	1	1	1	5	21	0.68181818	0.472789
15	1	1	1	1	1	5	21	0.68181818	0.472789
16	4	4	1	1	4	14	3	0.08677686	-1.36087
17	1	1	4	1	1	8	8	0.25206612	-0.668
18	4	1	1	1	1	8	8	0.25206612	-0.668
19	1	4	4	4	1	14	3	0.08677686	-1.36087
20	4	1	1	4	4	14	3	0.08677686	-1.36087
21	1	1	1	1	1	5	21	0.68181818	0.472789
22	1	1	1	1	1	5	21	0.68181818	0.472789
23	1	1	1	1	1	5	21	0.68181818	0.472789
24	1	1	1	1	4	8	8	0.25206612	-0.668
25	4	1	3	1	1	10	7	0.21900826	-0.77555
26	1	1	1	1	1	5	21	0.68181818	0.472789
27	1	1	1	1	1	5	21	0.68181818	0.472789
28	1	4	4	4	4	17	2	0.05371901	-1.60982
29	1	4	1	1	1	8	8	0.25206612	-0.668
30	1	1	1	1	1	5	21	0.68181818	0.472789
	53	54	49	45	49				

Below is two way anova, to check the internal consistency of the instrument

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Rows	87.33333	29	3.011494	2.563601	0.000208	1.565322
Columns	1.733333	4	0.433333	0.368885	0.830389	2.44988
Error	136.2667	116	1.174713			
Total	225.3333	149				

First, the above rank correlation analysis it become imperative to go with sign test, nevertheless the correlation 'r' shown Likert scale is ordinal data in nature analysis. Secondly, the large sample prompts to go for hypothetical normal distribution, so sign test is stronger for ascertain the statistical significance of the sample data. Thirdly, the correlation given value i.e.,





correlation	0.983691855
-------------	-------------

Though, we got good Correlation value is 0.98; between  $Z_i$  value and sample  $n_i$  but, we still carried Sign test which equal to Student T Test. It is one of the most widely used non parametric test.

Also conducted Kolmogorov-Smirnov Test of Normality, as below; which found to be sample data is not from normal distribution (refer annexures)

Count	30
Mean	8.333333
Sd	3.880396
Maximum	0.898679
critical value at 5%	0.2417

The above value is which less than p value is, hence we accept  $H_0$  ( as it not normal distribution )

Therefore we use the ‘Sign test’ which uses Median as measurement of central tendency, i.e., ‘ $\eta$ ’

The following are the t test so calculated –

First  $H_1$  testing

$H_0$ : Channel member trust is not influenced by the size of the distribution organisation the channel of distribution

$H_a$ : Channel member trust is influenced by the size of the distribution organisation the channel of distribution

Calculation of test statistic for testing of hypothesis

As we decided to go on sign-test,

Score	sign
22	1
0	-1
1	0
7	1
0	-1

Median	1
no. of positive signs	2
no. of negative signs	2
count equal to median	2
Count	4
smaller value	2
p value	0.99951875
Inter-plotted median	$=M+(ng-nl)/(2ne)$
calculated median	1

Where,

$$\text{Inter-plotted median} = M + (ng-nl)/(2ne)$$

if  $ne = 0$ , then  $IM = M$

where,

$M = \text{Median}$

$ng = \text{responses less than } M$

$nl = \text{responses more than } M$

$ne = \text{responses equal to } M$

As the test stat is less than the p value (critical value) in Sign test, we accept the null hypothesis, and there is sufficient evidence to suggest that there is no relationship between the variables. In other words we accept the null hypothesis as ‘Channel member trust is not influenced by the size of the distribution organisation the channel of distribution’.

**Hypothesis 2**

$H_0$ : There is no influence of ‘reputation of distribution organisation’ on the trust of channel members in the channel of distribution

$H_a$ : There is influence of ‘reputation of distribution organisation’ on the trust of channel members in the channel of distribution

By populating the data into the Sign test we found below result

Score	sign	Inter-plotted median	-0.33
22	1	calculated median	0
0	1	no. of positive signs	5
0	1	no. of negative signs	0
8	1	count equal to median	0
0	1	Count	5
		smaller value	0
		p value	0.77378094
		Inter-plotted median	
		= $M+(ng-nl)/(2ne)$	-0.3333333

Since the two tailed test shows the value of t stat is higher than critical value we conclude that the null hypothesis is accepted. Hence we reject the alternative Hypothesis – which is ‘reputation of the distribution organisation influence trust on channel members’

**INTERPRETATION AND DISCUSSION OF FINDING**

The foremost premises of any financial activity depends on the fact of trust. This trust factor is very vital for principal in channel of distribution apart from finance and other terms of trade. Ever since the trust build among channel members along with distribution organisation, it results in better co-ordination and optimization of channel.

In this paper, we restricted the influence of trust based on supplier organisation size and repo in the market. By making rigorous statistical application we found the data so collected was unable to establish the relationship among variables.

The first objective was to check whether the size of the organisation was influencing the trust of the dealer and retailer or to the extent of wholesaler. Nonetheless, we could not ascertain the statistically.

In second objective, we wanted to know the whether the ‘reputation ‘in prompting the trust or not, however, the sample so collected we could not establish the stand to claim this parameters statistically.

In the ancillary objective we tried to understand the over-all impact of trust on the retailer/dealer, by our descriptive finding, we could say the sample so collected implied for more than 80% favoured for ‘trust’ is very vital for the distribution organisation.

Finally we tried to with notion of financial and operational aspects which may impel for win-win situation for the all the parties (more than 72%). We can summarized by understanding that all factors are pivotal for the building trust and thriving more benefit to the all channel members.

**DIRECTIONS FOR FUTURE RESEARCH AND SCOPE**

The strengths of this research include its extensive statistical analysis. This design is very much distinctive as it is to examine the effect of distribution organisation size and reputation on impacting the channel members. Nevertheless, this research has some limitations. First, when talking about the effectiveness of each marketing strategy, we did not consider the competitive reaction of other companies. One direction for further research is to include the influence of competitive reactions on marketing outcomes. Second, while the research sample comprises of 30 channel members in the lighting industry of Bangalore city. Further the researchers could expand new horizons of the validity of general viability of above mentioned research paper objectives.

**CONCLUSIONS**

Overall objective of the paper to throw the light on con-current managerial implication with respect to the ‘trust’ factor in the channel of distribution. Given the sample and statistical calculation it found to be the sample so replicated in researcher point is not able to prove to establish any relationship viz., trust factor in respect to distribution organisation size and reputation.

However, it is natural that all trust factors are based on the presumed parameters such as size of the organisation, reputation of organisation and these could somehow influence the functioning of effective channel of distribution.

This paper used both descriptive and inferential statistics for understanding overall trust factor, notwithstanding, we could not establish the relationship. And obviously it given new height to the study.

References. Hence we can conclude by prima-face that the trust should be built at bottom of the period ( C.K Prahalad ), so the result will be always better, that could be for better functioning of the channel of distribution.

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**ANNEXURES**

- 1) Questionnaires.
- 2) Stat – calculation for K-S test

**1) Questionnaires**

1. Name and address of the retailer / dealer / distributor
2. Age and education criteria
3. Product your dealing with Philips / Havells / Wipro / CG / Bajaj / others
4. The control and influence the channel member by distributing company **Yes / No**
5. If you agree there is control and influence by distribution company, then rate scale from more to less, 1-5

Company	Distributor	Wholesaler	Dealer	Retailer

6. The trust is influenced due to the size of distribution company

Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree

7. Our trust is influenced by the 'reputation of the distribution company

Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree

8 The trust factor impact the over-all functioning of the channel of distribution in consumer LED lighting industry.

Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree

9 The trust with distribution company will increase the operation benefit to us

Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree

10 The trust will improve the profitability my business.

Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree

Respondent	Q1	Q2	Q3	Q4	Q5	Total	Cumulative	Expected	(Rank-1)/N	Norm.S.Inv	Actual	Difference
1	1	1	1	1	3	7	1	0.033333	0	-1.83391464	0.365570718	0.365571
2	1	1	1	1	1	5	2	0.066667	0.0333333	-1.50108595	0.195165042	0.161832
3	1	1	1	1	1	5	3	0.1	0.0666667	-1.28155157	0.195165042	0.128498
4	3	4	4	5	4	20	4	0.133333	0.1	-1.11077162	0.998678917	0.898679
5	1	1	4	1	1	8	5	0.166667	0.1333333	-0.96742157	0.465772204	0.332439
6	1	1	1	1	3	7	6	0.2	0.1666667	-0.84162123	0.365570718	0.198904
7	4	4	1	1	1	11	7	0.233333	0.2	-0.72791329	0.754026413	0.554026
8	4	1	1	1	1	8	8	0.266667	0.2333333	-0.62292572	0.465772204	0.232439
9	1	4	1	1	1	8	9	0.3	0.2666667	-0.52440051	0.465772204	0.199106
10	4	1	1	1	1	8	10	0.333333	0.3	-0.4307273	0.465772204	0.165772
11	1	1	3	1	1	7	11	0.366667	0.3333333	-0.34069483	0.365570718	0.032237
12	1	4	1	1	1	8	12	0.4	0.3666667	-0.2533471	0.465772204	0.099106
13	1	1	1	3	1	7	13	0.433333	0.4	-0.167894	0.365570718	0.034429
14	1	1	1	1	1	5	14	0.466667	0.4333333	-0.08365173	0.195165042	0.238168
15	1	1	1	1	1	5	15	0.5	0.4666667	0	0.195165042	0.271502
16	4	4	1	1	4	14	16	0.533333	0.5	0.083651734	0.927900594	0.427901
17	1	1	4	1	1	8	17	0.566667	0.5333333	0.167894005	0.465772204	0.067561
18	4	1	1	1	1	8	18	0.6	0.5666667	0.253347103	0.465772204	0.100894
19	1	4	4	4	1	14	19	0.633333	0.6	0.340694827	0.927900594	0.327901
20	4	1	1	4	4	14	20	0.666667	0.6333333	0.430727299	0.927900594	0.294567
21	1	1	1	1	1	5	21	0.7	0.6666667	0.524400513	0.195165042	0.471502
22	1	1	1	1	1	5	22	0.733333	0.7	0.622925723	0.195165042	0.504835
23	1	1	1	1	1	5	23	0.766667	0.7333333	0.727913291	0.195165042	0.538168
24	1	1	1	1	4	8	24	0.8	0.7666667	0.841621234	0.465772204	0.300894
25	4	1	3	1	1	10	25	0.833333	0.8	0.967421566	0.666223743	0.133776
26	1	1	1	1	1	5	26	0.866667	0.8333333	1.110771617	0.195165042	0.638168
27	1	1	1	1	1	5	27	0.9	0.8666667	1.281551566	0.195165042	0.671502
28	1	4	4	4	4	17	28	0.933333	0.9	1.501085946	0.98724033	0.08724
29	1	4	1	1	1	8	29	0.966667	0.9333333	1.833914636	0.465772204	0.467561
30	1	1	1	1	1	5	30	1	0.9666667		0.195165042	0.771502

Kolmogorov-Smirnov Test of Normality

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**PRE AND POST DEMONETIZATION IMPLICATION AND INVESTORS PERCEPTION OF INDIAN SHARE MARKET PERFORMANCE**

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**ABSTRACT**

*Demonetization is the act of stripping a currency unit of its status as legal tender. On 8 November 2016, the government of India announced the demonetization of all Rs.500 and Rs. 1000 bank notes of the MahathmaGhandhi series, which resulted in removal of 87% of the total currency circulation in the country. The sudden nature of the announcement and prolonged cash shortages in the weeks that followed created significant disruption throughout the economy, threatening economic output. Demonetization played a significant role even in share market performance and resulted in huge fluctuation. Success in the share market investment requires patience and a willingness to see past fluctuations to large picture. One should frame investment strategy by considering all possible potential ups and downs at its broad perspective.*

*In this research article author tried to compare the performance of Indian Share Market pre & post demonetization and to evaluate the investors perception. 50 demate account holders selected through convenience sampling followed with survey by distributing systematic questionnaires. Also to evaluate the long run impact of demonetization Nifty 50 companies selected and share market price for all individual companies collected on the basis of 3 months end for 8 months each before and after the demonetization (Totally 16 months). Final interpretation drawn by framing systematic hypothesis and by evaluating them through various statistical techniques like one way and two way ANOVA, T-test, Chi-square Test, tables and charts. Final results try to show the direction of investors' perception & behavior towards long-run impact of sudden incidents through empirical evidence for share market price fluctuations.*

*Keywords: Demonetization, DemateAccount Holders, Investors Perception & Behavior, Nifty 50 Companies, Share Market Fluctuations.*

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**1.0 INTRODUCTION**

On 8<sup>th</sup> November 2016, Indian prime minster Mr. NarendraModi has announced demonetization of Rs.500 & Rs.1000 rupees notes. Finance minister ArunJaitley, strongly defended demonization against accusations that it hadn't met its objective as evidenced by the numbers in the Reserve Bank of India's annual report, saying the impact of the note cancellation had been "extremely positive" in the multiple area. "The real objects of demonetization were formalization (of the economy), attack on black money, less-cash economy, bigger tax base, digitization, and a blow to terrorism". Demonetization was first national level effort for fighting against circulation of black money in the economy. Demonetization resulted in both positive as well as negative impact on the economy. During the initial stage of introduction of demonetization, all most all segments of the economy faced huge problem by affecting day-to-day life general public. But, the government agenda was certain in case of implementing demonetization to start new generation in Indian economy by standing bold. Along with all other industries, even Indian share market also experienced evils of demonetization which resulted historical fluctuations in the price movement.

Thus demonetization has drastically affected the stock market. There was big price fluctuations in the stock market paring the demonetization, the financial performances of the company was interpreted in such that is it has affected the sale & profit level of each companies in the country. Still demonetization that, there was much fluctuation in the stock price even foreign portfolio investment has also become negative after the demonetization of notes. Most of the research studies on impact of demonetization on Indian share market identified that, there was an immediate impact found by having drastic changes in share prices, but finally concluded that demonetization had very positive impact on shares which kept for long term.

It is well known fact that most of the share holders just get into the flood by fallowing others to take their investment decisions, this will end up the investors with bad experience in the share market investment. All the important studies suggest for improving level of patience, knowledge and experience for developing investment as part time career with hansom returns. Authors tried to evaluate the empirical evidence for demat account holders perception and attitude towards sudden incidents in the share market with long run perspective.

**Indian Share Market; NIFTY50 as an indicator of National Stock Exchange**

Nifty is the benchmark of NSE, which is well diversified index, which includes top 50 companies in terms of free float market. Nifty index was launched 22 April 1996. It represents the weighted average coverage of 50 Indian company stocks in 14 different sectors. Weighted average price and volume movement of these 50 companies' shares will represent market direction. There was a historical change in price during the demonetization but highly recovered with laps of time. During 2008-12, Nifty 50, stock index of NSE market capitalization fell from 65% to 29% due to the rise of sectoral indices, such as nifty bank, nifty IT, nifty pharmacy, nifty service sector, nifty next 50 etc.

Different Industries Involved NIFTY50 Index		
Cigarettes	Financial services	Construction
Pharmaceuticals	Metals	Media and Entertainment
Information Technology	Energy	Shipping
Cements	Telecom	Agrochemicals
Automobile	Consumer Goods	

**1.1 REVIEW OF LITERATURE**

**Swati Chauhan (2017);** Analyzed that stock market prices are not much affected by the demonetization. The effect of demonetization on stock price market is last only for short period and it will recover soon from it.

**Dr. P. Chllasamy , Anu.K.M (2017);** Reported that the average return on most of the sectors has shown the negative effect because of demonetization. At the same there is huge rise in returns of different sectors like banking segment, pharma, energy and IT. Finally authors concluded with mixed results of demonetization on different sectors shares.

**Sunil T & Smitha V S (2017);** Reports that demonetization has not affected stock market so much as expected by the investors because the stock market is temporary that is the stock prices was fluctuating in the weeks of the demonetization.

**Angelin Kiruba and S. Vasantha (2017);** Reports that the impact of stock market is temporary that is the prices of stocks were fluctuating in the weeks of announcement of demonetization.

**Anagha V Mukundan (2017);** Reports that the impact of demonetization varies from one sector to another. It showed a difference in average price and total trade after demonetization.

**Swetha Ragi & K. Neeraja (2018);** Concluded that stock market was adversely affected by the demonetization. The returns of many stocks were decreased and only few of the stocks returns were remained constant.

**Narain and Asha Rani (2017);** The study was conducted to investigate the impact on recent move of the demonetization on India share market. It was revealed from the study that impact of demonetization I affected by stock market only for short duration and it does not affected for the long run.

**Madhu Iyengar, Nirmal Iyengar & Chandni Aswini (2017);** Demonetization by the government had some impact on the capital through stock price movements and also black market transaction has also reduced to great extent.

**1.2 RESEARCH GAP**

There are no major studies done combining following three issues together.

- Providing empirical evidence on demomat account holders perception and reaction towards long run impact of sudden incidents in the economy on the performance of share market.
- Empirical evaluation of long run impact of demonetization on share market (NIFTY50) performance by comparing data before and after the demonetization.
- Evaluation of long run impact of demonetization on performance of individual shares by comparing data before and after the demonetization.

**2.1 OBJECTIVES**

- To understand the investors' knowledge, perception and reaction towards impact of demonetization on their investments.
- To compare the short and long run performance of share market before and after the demonetization.

- c. To evaluate impact of demonetization on individual stocks.
- d. To suggests investor for formulating effective strategy in share market investment.

## 2.2 HYPOTHESIS

### Hypothesis 1

$H_0$  = Demat account holder's years of experience in the share market investment is independent of average amount of investment in share market.

### Hypothesis 2

$H_0$  = There is no significance difference in reactions of different kinds of investor during sudden incidents in the share market.

### Hypothesis 3

$H_1$  = There is no evidence for sudden (very short term) impact of demonetization on share market price movement.

$H_2$  = There is no evidence for long run impact of demonetization on share market price movement.

### Hypothesis 4

$H_0$  = There is no significance difference in the price movement of the different industries during the day of demonetization.

### Hypothesis 5

$H_0$  = There is no significance difference in the individual companies average returns before and after the demonetization.

### Hypothesis 6

$H_0$  = There is no significance difference in the average return of the different industries before and after the demonetization.

## 2.3 LIMITATIONS

The research has been conducted on the basis of primary as well as secondary data. However, the primary data has been collected through a basic and generalized questionnaire. Thus, the findings do not show outcomes in specific and absolute terms. The respondents to the questionnaire include only 50 Demat holders; this may result in lack of advantages of large samples. Performance evaluation done for all individual stocks keeping three months interval but share market exhibits daily fluctuations which may bias in final interpretation.

## 3.0 METHODOLOGY

**3.1 Sources of Data:** This research includes both primary and secondary data for a comprehensive investigation.

**a. Primary Data:** To know the demat account holders perception and reaction towards sudden incidents in the share market, structured unbiased questionnaire asked to randomly selected 50 Demat account holders.

**b. Secondary Data:** 'NIFTY 50' companies were selected as a base for market indicator for the evaluation and comparison of long run performance of share market resulted after the sudden economic incidents. NIFTY 50 companies share market price collected on the basis of every quarter end, for 8 quarters each before and after demonetization, and with the help of collected price average returns calculated for evaluation and comparison of market and individual company's performance. Further, secondary data was collected from the books, existing researches and reports, newspaper, articles, internet and magazines available online.

**3.2 Tools of Analysis:** This research is done to verify the empirical evidence on respondents' reaction for sudden incidents in the share market and also to evaluate the long term impact of demonetization on share market performance as a whole and on individual scrips. Well defined questionnaires are evaluated systematically by drawing required hypothesis in first part. Average returns of NIFTY 50 companies' shares done in second part along with drawn hypothesis. For the evaluation standard financial methods like average return, standard deviation and statistical tools such as charts, tables, ANOVA one way and two way, Chi-square, t-test are applied. Final interpretations are drawn on the basis of results of hypothesis testing and empirical evidence.

**3.3 Scope of Study:** This research study is under taken in two perspectives. Firstly, Investors' perception & reactions for the sudden incidents by considering 50 Demat account holders in Dhakshina Kannada district. Secondly, actual comparison of share market performance by considering prices of NIFTY 50 companies', pre and post demonetization.

**3.4 Social Relevance:** Huge fluctuations would be seen very frequently in the share market due to several reasons. Most of the investors react immediately by clearing their valuable holding under loss during the incidents which create negative rumors in the market, without waiting for next best exit point. There is a need of empirical study to provide evidence for long run nature of market and thereby to create awareness for framing the successful investment strategy among the investors community.

**4.0 DATA INTERPRETATION**

**4.1 Gender and age wise classification of respondents**

	Below 25		25-40		Above 40		Total	
	No.	%	No.	%	No.	%	No.	%
<b>Male</b>	08	16	10	20	20	40	<b>38</b>	<b>76</b>
<b>Female</b>	02	04	05	10	05	10	<b>12</b>	<b>24</b>
<b>Total</b>	10	20	15	30	25	50	<b>50</b>	<b>100</b>

Source: Primary Data

From the above table it can be seen that 76% of total respondents are male, whereas 24% are female. It's also noticed that 50% of total respondents' are with age group of 40 above.

**4.2 Educational Qualification of respondents':**

Particular	Respondent	%
<b>SSLC or below</b>	00	00
<b>PUC</b>	05	10
<b>Degree</b>	10	20
<b>Post graduation</b>	35	70
<b>Total</b>	50	100

Source: Primary Data

Classification of respondents on the basis of educational qualification depicted that 70% of the respondents are found to be having educational qualification of post graduation or double degree.

**4.3 Occupation of respondents**

Particular	Respondent	%
<b>Govt. employee</b>	15	30
<b>Private employee</b>	25	50
<b>Self employee</b>	10	20
<b>Total</b>	50	100

Source: Primary Data

Table 4.3 represents classification of respondents' on the basis of their occupation showed, half of them are from the group of private employees, whereas 30% are found to be having employment from government organization.

**4.4 Table showing income reserved for all kinds of investment**

Particular	Respondent	%
<b>Below 25%</b>	20	40
<b>25% - 50%</b>	30	60
<b>50% or above</b>	00	00
<b>Total</b>	50	100

Source: Primary Data

Table 4.4 shows total income reserved for all kinds of investments. On an average, 60% of the total respondents' reserving 25% to 50% of their total earnings for investment. No investor invested more than 50% of their total income.

**4.5 Table showing amount allocated for share market investment:**

Particular	Respondent	%
<b>Below 25%</b>	35	70
<b>25% - 50%</b>	15	30



<b>50% - 75%</b>	00	00
<b>75% or above</b>	00	00
<b>Total</b>	50	100

Source: Primary Data

In the above table, 70% of the investor included equity investments to the extent of 25% of their total portfolio, whereas 30% of investor included equities to the extent of nearly 50%.

**4.6 Table showing investment tenure:**

<b>Particular</b>	<b>Respondent</b>	<b>%</b>
<b>Below 1 year</b>	10	20
<b>1 to 3 year</b>	25	50
<b>More than 3 year</b>	15	30
<b>Total</b>	50	100

Source: Primary Data

Half of the investors found to be holding securities more than one year, up to 3 years. 30% investors are very long while having investments in share market. Only 20% of the investors are holding securities lesser than 1 year.

**4.7 Table showing source of investment decision:**

<b>Particulars</b>	<b>Respondent</b>	<b>%</b>
Through share advisor	30	60
Own decision after systematic study and comparison	20	40
Own decision but no such kind of any study or comparison	00	00
<b>Total</b>	50	100

Source: Primary Data

In the table 4.7, verification of sources of investment decisions depicted more dependence on investment advisers, to the extent of 60%. 40% will have their own analysis and comparison to formulate systematic investment strategy.

**4.8 Table showing sources of getting share market updates:**

<b>Particulars</b>	<b>Respondent</b>	<b>%</b>
<b>Through share brokers</b>	10	20
<b>Through news paper or television</b>	35	70
<b>Through friends</b>	05	10
<b>Not getting any updates</b>	00	00
<b>Total</b>	50	100

Source: Primary Data

Table 4.8 shows, sources of share market updates depicted that 70% investor avail either through news papers or television. Only 20% from share brokers, whereas no respondents found in the group of unaware.

**4.9 Respondents immediate reaction for sudden incident in the share market:**

<b>Particulars</b>	<b>Respondent</b>	<b>%</b>
<b>Immediately trying to clear holdings</b>	00	00
<b>Will wait for next selling opportunity</b>	25	50
<b>Will not react suddenly</b>	25	50
<b>Total</b>	50	100

Source: Primary Data

It is clear from the above table that no investor reacts immediately for any sudden incidents in share market. 50% each of the respondents either wait for next best selling opportunity or will not react suddenly.

**4.10 Table showing respondents' strategy for diversifying of risk:**

<b>Particulars</b>	<b>Respondents</b>	<b>%</b>
Through investing in different stocks from same industry	10	20
Through investing in different stocks from different industry	40	80

Randomly investing without any pre plan	00	00
Total	50	100

Source: Primary Data

From the above table it is clear that 80% of the respondents diversify their investment risk by investing in different stocks from different industry. 20% investors are found having investment in different stocks of same industry.

**4.11 Table showing opinion on sudden impact of demonetization on share market:**

Particulars	Respondent	%
Positive	30	60
Negative	15	30
No impact	5	10
Can't say	00	00
Total	50	100

Source: Primary Data

60% of the respondents feel that sudden impact of demonetization is positive, while 30% agreed that impact was negative. 10% of the respondents felt that demonetization didn't affect share market at any angle suddenly.

**4.12 Table showing opinion on impact of demonetization on share market in long run**

Particulars	Respondent	%
Positive	50	100
Negative	00	00
No impact	00	00
Can't say	00	00
Total	50	100

Source: Primary Data

Table 4.12 shows investors' perception on impact of demonetization in long run. All the investor felt very positive impact of demonetization.

**5. Testing Hypothesis**

**Hypothesis 1**

$H_0$  = Demat account holders years of experience in the share market investment is independent of average annual amount of investment in share market. **(Chi-square Test)**

Years of experience		Average Annual Investment		
		Below Rs.50,000	Rs.50,000 – Rs.1,0,000	Rs 1,00,000 or above
less than 1 year	less than 1 year	4	3	3
	1-3 years	2	15	8
	More than 3 years	1	10	4

Source: Primary Data

$H_0$  = Demat account holders years of experience in the share market investment is independent of average amount of investment in share market. **(Chi-square Test)**

**Calculation**

**Applying chi-square test**

Observed	Expected	(O-E) <sup>2</sup>	[(O-E) <sup>2</sup> /E]
4	1.4	6.76	0.000
3	5.6	6.76	1.207
3	3	0	0.000
2	3.5	2.25	0.000
15	14	1	0.071
8	7.5	0.25	0.033
1	2.1	1.21	0.000
10	8.4	2.56	0.305

4	4.5	0.25	0.056
$\sum [(O-E)^2/E]$			<b>1.672</b>

Source: Primary data

Chi-square calculated value = 1.672

$$V = (r-1)*(c-1), (3-1)*((3-1))$$

For V= 4,  $X^2_{0.05} = 9.49$

**Interpretation**

From the above testing of hypothesis yielded calculated value of 1.672, whereas standard reference table value for V= 4,  $X^2_{0.05}$  is 9.49. Calculated value is (1.672) is lower than standard reference table value (9.49). **There is no evidence found to reject null hypothesis.** Finally it can be concluded that share holders’ years of experience in share market investment is independent of average annual amount of investment.

**Hypothesis 2**

$H_0$  = There is no significance difference in reactions of different kinds of investor during sudden incidents in the share market. (ANOVA – One way)

	Short Term	Medium Term	Long term
Immediately Clearing	0	0	0
Wait for next opportunity	7	15	10
No reaction suddenly	3	10	5

Source: Primary Data

**One way ANOVA table**

$H_0$  = There is no significance difference in reactions of different kinds of investor during sudden incidents in the share market.

**Analysis of Variance**

Source of Variance	Source of Sum	Df.	Mean Square	F value
Between the Column	38.89	2	19.45	<b>F=1.64</b>
With in	191.3	6	31.88	
Total	230.19	8		

Source: Primary Data

**Interpretation**

One way Variance Analysis provided calculated value of ‘F’ is 1.64. The table value of F at 5% significance level is 19.330 ( $V_1 = 6$  and  $V_2 = 2$ ). The calculate value is lower than the table value and hence the experiment provides no evidence against the Null Hypothesis (**Null hypothesis is accepted**). We therefore conclude that, **there is no significance difference in reactions of different kinds of investor during sudden incidents in the share market.**

**Hypothesis 3**

$H_1$  = There is no evidence for sudden (very short term) impact of demonetization on share market price movement.

$H_2$  = There is no evidence for long run impact of demonetization on share market price movement. (ANOVA – Two way)

		Sudden Impact		
		Positive	Negative	No-impact
Long Run Impact	Positive	30	15	5
	Negative	0	0	0
	No-impact	0	0	0

**Two way ANOVA table**

Source of Variance	Square of Sum	Df.	Mean of Square	F value
Variance between the column	105.55	2	52.78	$F_1 = (52.78/52.78)$ $F_1 = 1.00$
Variance between the row	555.55	2	277.78	

Residual Value	211.12	4	52.78	F <sub>2</sub> =(277.78/52.78) F <sub>2</sub> = 5.26
<b>Total</b>	872.22	8		

**Interpretation**

H<sub>1</sub> = There is no evidence for sudden (very short term) impact of demonetization on share market price movement.

For (2,4) d.f. F<sub>(0.05)</sub> = 6.94 but calculated value F<sub>1</sub> is 1.00. Since the value of calculation is lower than table value, **Null hypothesis can be accepted** and finally it can be concluded that no evidence for very short term impact of demonetization on share market price movement.

H<sub>2</sub> = There is no evidence for long run impact of demonetization on share market price movement.

For (2,4) d.f. F<sub>(0.05)</sub> = 6.94 but calculated value F<sub>2</sub> is 5.26. Since the value of calculation is lower than table value, **Null hypothesis can be accepted** and finally it can be concluded that no evidence for long run impact of demonetization on share market price movement.

**Hypothesis 4**

H<sub>0</sub> = There is no significance difference in the price movement of the different industries during the day of demonetization. (t-test, test the significance of the mean of a random sample)

**Table: % change in Industries average return on the day of demonetization**

Name of the Industry	% change in combined avg. return on the day of demonetization
Cigarettes	0.66
Pharmaceuticals	21.15
Information Technology	-0.38
Cements	-39.19
Automobile	0.08
Financial Services	0.93
Metals	11.24
Energy	1.43
Telecom	-2.2
Consumer Goods	-5.81
Construction	-2.98
Media and Entertainment	-7.6
Shipping	12.89
Agrochemicals	1.57

Source: Authors' compilation

**Calculation**

Mean of Industries average return during the demonetization = -0.59

Standard Deviation (S) = 13.53

Mean return of the NIFTY index is -1.31

T-test (test the significance of the mean of a random sample) calculated value = 0.20

Reference table value at 13 degree of freedom under t<sub>0.05</sub> confidence level is 1.771

**Interpretation**

Calculated, 't-test' value is lesser than the reference table value. There is no proof obtained for reject the null hypothesis. Finally it can be concluded that **"There is no significance difference in the price movement of the different industries during the day of demonetization"**.

**Hypothesis 5**

H<sub>0</sub> = There is no significance difference in the individual companies average returns before and after the demonetization

**Table: Individual companies’ average returns before and after the demonetization**

Company Name	% of Avg. Return Before Demonetization	% of Avg. Return After Demonetization	Company Name	% of Avg. Return Before Demonetization	% of Avg. Return After Demonetization
ITC	-4.71	4.08	Indiabulls Housing Finance	9.72	3.26
Cipla	-5.98	2.84	Coal India	-1.74	-1.83
Lupin	1.98	-5.28	Hindalco Industries	2.76	-7.26
HCL Technologies	-8.07	3.96	Tata Steel	1.07	5.47
Infosys	-5.03	-1.57	Vedanta	1.75	1.86
Tech Mahindra	-15.58	7.22	BPCL	1.81	-6.18
Wipro	-1.7	-1.26	HPCL	1.19	-6.21
Grasim Industries	5.48	2.03	GAIL(India)	-1.45	-0.3
UltraTech Cement	5.65	0.98	IOC	8.9	-5.78
Bajaj Auto	3.04	-0.39	NTPC	1.13	1.11
Hero Motocorp	1.8	-1.11	ONGC	-3.07	-4.08
Eicher Motors	8.27	0.55	Power Grid	3.84	0.87
Mahindra and Mahindra	2.14	-4.04	Reliance Industries	3.6	5.53
Maruti Suzuki	8.41	4.01	BharatiAirtel	-1.04	2.72
Tata Motors	3.32	-9.94	BharatiInfratel	2.26	-3.55
Axis Bank	1.62	3.25	Asian Paints	6.69	3.04
HDFC Bank	4.32	6.37	Hindustan Unilever	2.19	8.81
ICICI Bank	-4.51	1.42	Larsen & Toubro	0.3	55.73
Kotak Mahindra Bank	-3.46	5.25	Zee Entertainment	5.96	-1.07
State Bank of India	-2.44	1.4	Adani Ports & Special Economic Zone Ltd.	-2.37	2.29
Yes Bank	7.93	12.65	UPL Limited	10.94	0.12
Bajaj Finance	0.82	12.04			
HDFC	3.41	3.31			

Source: Authors’ compilation

Calculation: One way ANOVA Test

Source of Variance	Square of Sum	Df.	Mean of Square	F value
Between the Samples	60.53	1	60.53	<b>F =(60.53/49.85)</b>
Variance between the row	4336.98	87	49.85	<b>F = 1.21</b>
<b>Total</b>	4397.51	87		

Source: Authors’ compilation

**Interpretation**

Calculated value of one-way variance value is 1.21. Reference table value at 5% degree of confidence is ( $V_1 = 1$  and  $V_2 = 87$ ) 4.27. Calculated value is lesser than standard table value. Therefore null hypothesis is accepted. Finally it can be concluded that, there is no significance difference in the individual companies’ average returns before and after the demonetization.

**Hypothesis 6**

$H_0 =$  There is no significance difference in the average return of the different industries before and after the demonetization. (Testing Difference between Means of Two Samples, Independent Sample)

**Table: Average return of the different industries before and after the demonetization.**

Name of the Industry	% of Avg. return before Demonetization	% of Avg. return after Demonetization
Cigarettes	-4.71	4.08
Pharmaceuticals	-2	-1.22
Information Technology	-7.60	2.09
Cements	5.57	1.51
Automobile	4.50	-0.99
Financial Services	1.93	2.63
Metals	0.96	0.44
Energy	1.99	-1.88
Telecom	0.61	-0.41
Consumer Goods	4.44	5.93
Construction	0.30	55.73
Media & Entertainment	5.96	-1.07
Shipping	-2.37	2.29
Agrochemicals	10.94	0.12

Source: Authors' compilation

### Calculation

Mean of Industries average return before demonetization = 1.47,

Mean of Industries average return after demonetization = 4.95,

Standard Deviation (S) = 11.99

T-test (Testing Difference between Means of Two Samples, Independent Sample) calculated value = 0.7680,

Reference table value at 26 degree of freedom under  $t_{0.005}$  confidence level is 2.787

### Interpretation

Calculated, 't-test' value is lesser than the reference table value. There is no proof obtained for reject the null hypothesis. Finally it can be concluded that **"There is no significance difference in the average return of the different industries before and after the demonetization"**.

### 5. FINDINGS

Researchers carried this study with the intension to see the impact of demonetization on share market behavior, as well as to verify the empirical evidence for demat account holders perception and attitude towards such kinds of sudden incidents.

- Share holders' years of experience in share market investment is independent of average annual amount of investment by them. **(Hypothesis 1)**
- There is no difference in the reactions of the short term, medium term and long term share market investors during the sudden incidents in the economy, all will patiently wait till next best selling opportunity. **(Hypothesis 2)**
- There is no significance difference in the opinion of investors towards short term impact of sudden incidents on share market performance. **(Hypothesis 3, First part)**
- There is no significance difference in the opinion of investors towards long term impact of sudden incidents on share market performance. **(Hypothesis 3, Second part)**
- There is no significance difference in the price movement of the different industries during the day of demonetization. All most all the industries followed the same direction compare the market index. **(Hypothesis 4)**
- There is no significance difference in the individual companies' long term average returns before and after the demonetization. No single incident will influence for the performance of individual companies in the long run. **(Hypothesis 5)**
- There is no significance difference in the average return of the different industries before and after the demonetization. Whichever may be the industry, in long run, no one incident from outside economy will influence share market performance. **(Hypothesis 6)**

8. Ratio of male investors exceeded thrice of female investors. This shows female investors still believe only traditional avenues of investment.
9. It's also found maximum number of share market investors, either 40 or above age groups. This shows young generation will opt very frequently traditional investment avenues or unavailability of amount for investment because of other family commitments.
10. Maximum demat account holders are having post-graduation qualification. Only post graduates are highly influenced and intimated about having the successful usage of these modern investment avenues. But in India double graduation ratio is lesser than 25% and out of which not more than 5% opt for share market investment, which resulted in limited scope of coverage for share market investment.
11. It's also found that, more than half of the demat account holders are private employees. Government employees will not prefer share market investment, may be for several reasons. No one has developed investment in share market as a main/part time business.
12. 60% of the respondents reserved half of their income for investment, but out of which just 1/4<sup>th</sup> portion moves for share market investment. Highly educated investors also fear to open themselves for share market investment, which shows lack of knowledge and experience.
13. More than half of the investors are found to be long term investors. Real advantage of having long term investment is rightly experienced, but lack of utilizing many attractive securities in short term was found.
14. Half of the investor consults their share adviser to take investment decisions. 40% of the investors has developed their own strategies for successful investment and no investors found having investment blindly without any pre-analysis.
15. It's also found all share market investors get updates of share market. 70% investors source their information through magazines/newspapers or television.
16. No investors found immediately reacting for sudden incidents in the share market such as demonetization. Half of the respondents wait for next best selling opportunity but not at loss. Remaining half have their own investment strategy which doesn't get influenced by any sudden economic incidents.
17. More than 2/3<sup>rd</sup> of investors invest in different companies stock from different industries for diversifying risk.
18. In short term, 60% of the investor felt demonetization will result variation in earnings, whereas 30% have opinion that there is no impact. Finally it can be concluded that sudden incidents results variation in share market fluctuations and its leads for unexpected earnings.
19. In long term, no such kinds of any sudden incidents resulted in deviation in the expected returns. Gradually share market as got its own power to stabilize by nullifying affects of such incidents.

## 6. SUGGESTIONS

Short term volatility is not necessarily indicative of a long-term trend. A security may be highly volatile on a daily basis but show long-term patterns of growth or stability. Investment held for longer periods tend to exhibit lower volatility than those held for shorter periods. Investor should plan for having investment for long term investment which will results in multiple advantages. On the basis of findings of this study following tips would be taken for framing successful investment strategies both for Individual investors and share market dealers.

### 7.01 Tips for share market dealers

- o Ratio of earning females in all families increased compared to the olden days, but their involvement in share market have not shown same trend. Share brokers can utilize this opportunity by spreading awareness among the female category about importance of having investments in share market.
- o Share brokers can extend themselves to motivate not only people with the qualification of post-graduation. Nearly 30% of the youth have completed their degree qualification and working for different companies but unaware about share market investment, this untouched segments would be utilized.
- o Nearly 10% of total population working for different sectors of the government directly or indirectly but handful of them actively involving in share market investment. These people may be new opportunities since they have their regular earnings.
- o Highly educated also just reserve 1/4<sup>th</sup> of their investment in share market, which shows lack of confidence and knowledge. Share broking houses should work on this improve the proportion of investment reserved for share market.

- There're different kinds of securities which will suit for different situations like intraday, very short term, short term, medium term, long term and very long term, but its responsibility of share brokers to spread awareness among their group of investors.
- Many investors strongly believe and highly depend upon advices of share brokers. Its responsibility of share broking houses to appoint highly educated and talented work force to increase confidence among share holders group.
- During the sudden incidents like demonetization, GST or such kinds of any other major cases, investor should be aware of how it will impact for their holdings. Share brokers should produce material to reach their investors during special incidents.

### **7.02 Tips for share market investors**

- Female investors can think of going beyond their tradition view on investment, to optimize their earnings by spreading their proportion of investment share market.
- Investors other than, with qualification of post-graduation need to be put forward to access for share market.
- Government employees including tax savings may avail many other advantages by having long term investments in share market.
- Proportion of amount deposited for share market need to be increase at least by half of the present 25%.
- Maximum investors found sticking long for securities is good and all need to develop their own investment strategies by developing their own evaluation method along with share brokers' timely suggestions.
- No investors found reacting immediately for news/ rumors is a key strategy for success in share market. Commonsense and patience is first stepping stone for share market success.
- All kinds of investors needed to be updated on share markets news. Business journals, news paper and televisions have reserved their own section for share market investors, where continuous discussions of experts, sessions takes place.
- Investors can opt for investment diversification, industry diversification and company diversification in their investment to reduce possibility of risk.

## **7. CONCLUSION**

Share market is a place where fluctuations can be seen daily but tend to be stable for long run. Most of the researchers have identified that share market investment for long run is highly recommended if investment is done after framing highly qualified strategies to comeout from expected risk from unexpected fluctuations. In order to prove empirically "will single economic incident impact different industries and individual companies share market price in long run", the recent most discussed topic i.e., demonetization is considered. It is clear from the study that no single economic incidents will survive to decide the flow of share market price direction. There is basic requirement to spread basic awareness among the investors, to take precautions while framing their investment strategy.

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**CRUDE OIL AND GOLD COMMODITY PRODUCTS IN INDIA: AN ANALYSIS OF ITS COINTEGRATION, PRICE SHOCK AND CAUSALITY EFFECT**

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**ABSTRACT**

*Commodity markets and its research have achieved a significant position in emerging trends in financial research. Various studies have reported a general relationship between commodity and stock market. Crude oil and gold are prominent and highly traded commodity products. The inter relationship among these two commodity products identification was the need of the hour. Hence collected the crude oil and gold index close prices from MCX website and carried out econometric testing. ADF test revealed the data to be stationary at one difference and the data was found to be normal. Further cointegration, granger causality, impulse response test the long-run relationship and the price shocks effects among them.*

*Keywords: Commodity market, Crude Oil, Gold, Price Shocks, Cointegration, Impulse response, Granger Causality, Econometrics*

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**1. INTRODUCTION**

Recent developments and joint movements in crude oil and gold have induced interest in finding the relationship and linkages between these commodities. Crude oil and Gold are the most important representatives of commodity market where, Crude oil is the most traded raw material and Gold is the most traded bullion or precious metal. These two commodity products play a vital role in shaping the economy. The first linkage between these two commodity products took place during 1933 where Middle East acquired gold in exchange of crude oil.

In the year 2008 due to the global financial and economic crisis, the large commodity products both Crude oil and Gold faced a sharp price collapse. Later after 2009, both crude oil and gold experienced a price movement and recovery. Many instances support the statement that both crude oil and gold prices follow similar behaviour patterns.

This paper tries to throw light upon the crude oil and gold price long run relationship by studying the co-movement structure between these two commodities. We conduct a quantitative analysis of the variables and for this purpose various statistical and econometric tools are used. Most of the previous studies in regards to gold and oil in long-term relationship used traditional time series models, which assumed linear and symmetrical processes.

**2. LITERATURE REVIEW**

(Zhang & Wei, 2010) tried to identify the co-integration and correlation between crude oil and gold of US market to use the mechanism for price discovery. Author found consistent trend and a positive correlation between the commodity products. Both the product prices do not have a significant nonlinear Granger causality, which suggests their direct interactive mechanism. Further crude oil price looks larger than the gold price.

(Šimáková, 2001) contributed a theoretical paper on the relationship between crude oil and gold. Authors routes from the history and builds a conceptual reasons and validation for these two commodity products' relationship. Author also presents the basic characteristic and determinants of current price trends.

(Reboredo, 2013) author assesses the role of gold as a hedge or safe haven against crude oil price movements. He uses copulas based approach to analyse the dependence structure between these two markets. Empirical testing provides a positive and significant dependence between gold and crude oil and concludes his argument as gold cannot hedge against crude oil price movements.

(Dutt & Sehgal, 2018) authors found the relationship and linkage between gold spot and futures market prices. Authors used five international markets data and used statistical and econometrical models to examine the price spillover process. The paper concludes that linkage and relationship between Indian and global commodity exchanges were sever until 2013 however it is noticing inverse relationship post 2013. Author suggests a need for strong re-establishment of price and volatility linkages.

(Bhatia, et al. 2018) used hedge ratios and portfolio weights and found a dynamic conditional correlation between crude oil and gold. Authors used DCC- GARCH model to build the relationship among commodity products.

(Lee & Yuan, 2012) used the threshold co-integration test to investigate the long-run relationship and used TECM-GARCH with GED to examine the causality relationship between WTI crude oil and gold prices in the futures market found a unidirectional relationship between WTI Crude oil and Gold.

**2.1 Research Gap**

Despite the fact that the various above literatures establish a positive relationship between gold and oil prices, no study to date has analysed gold and crude oil market co-movement with reference to Indian commodity markets.

**3. OBJECTIVE**

- To determine the long run relationship between Crude Oil and Gold in India.

**4. METHODOLOGY**

**4.1 Research Design & Hypothesis**

Causal research design is used to study the extent of the relationship between iCOMDEX Gold & iCOMDEX Crude oil.

**The Hypotheses for the study are**

H<sub>0</sub>: There is no significant long run relationship between Crude Oil and Gold in India.

H<sub>1</sub>: There is a significant long run relationship between Crude Oil and Gold in India.

**4.2 Sampling design:**

The population considered for the study is the index values of commodities. Non-probability sampling design is adopted to select a sample from the population of iCOMDEX Gold and iCOMDEX Crude Oil from MCX website Jan 2012 to Jan 2019.

**4.4 Data analysis techniques**

The following Statistical and Econometric Techniques are used for data analysis

- Augmented Dickey-Fuller Unit Root Test
- Normality Test
- Cointegration Test
- Granger Causality Test.
- Impulse response Test

**4.6 Limitations**

- Relationship is determined between the indices and not on the individual commodity prices.
- Only two commodity indices are used in the study.
- Study is limited to indicators within the country.

**5. ANALYSIS AND INTERPRETATION:**

**5.1 Stationary Test**

**Table-5.1: Stationary Test of Crude Oil**

Null Hypothesis: D(CRUDE) has a unit root				
Exogenous: Constant				
Lag Length: 1 (Automatic - based on SIC, maxlag=24)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic				
Test critical values:			-28.43659	0.0000
	1% level		-3.433749	
	5% level		-2.862928	
	10% level		-2.567556	
*MacKinnon (1996) one-sided p-values.				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(CRUDE_CLOSE,2)				
Method: Least Squares				
Date: 02/13/19 Time: 15:39				
Sample (adjusted): 1/04/2012 2/01/2019				
Included observations: 1816 after adjustments				

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CRUDE(-1))	-0.955209	0.033591	-28.43659	0.0000
D(CRUDE(-1),2)	-0.073913	0.023392	-3.159779	0.0016
C	-0.379164	0.225954	-1.678058	0.0935
R-squared	0.518981	Mean dependent var		-0.007786
Adjusted R-squared	0.518451	S.D. dependent var		13.85276
S.E. of regression	9.612951	Akaike info criterion		7.365750
Sum squared resid	167537.2	Schwarz criterion		7.374843
Log likelihood	-6685.101	Hannan-Quinn criter.		7.369105
F-statistic	978.0423	Durbin-Watson stat		1.999593
Prob(F-statistic)	0.000000			

Table-5.2: Stationary Test of Gold

Null Hypothesis: D(GOLD) has a unit root				
Exogenous: Constant				
Lag Length: 0 (Automatic - based on SIC, maxlag=24)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-44.03645	0.0001
Test critical values:	1% level		-3.433747	
	5% level		-2.862927	
	10% level		-2.567555	
*MacKinnon (1996) one-sided p-values.				
Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(GOLD,2)				
Method: Least Squares				
Date: 02/13/19 Time: 15:46				
Sample (adjusted): 1/03/2012 2/01/2019				
Included observations: 1817 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GOLD(-1))	-1.033431	0.023468	-44.03645	0.0000
C	-0.007072	0.192590	-0.036723	0.9707
R-squared	0.516543	Mean dependent var		0.006379
Adjusted R-squared	0.516276	S.D. dependent var		11.80353
S.E. of regression	8.209381	Akaike info criterion		7.049532
Sum squared resid	122320.0	Schwarz criterion		7.055592
Log likelihood	-6402.500	Hannan-Quinn criter.		7.051768
F-statistic	1939.209	Durbin-Watson stat		1.997229
Prob(F-statistic)	0.000000			

The log price series relating to both crude oil and gold were non-stationary at level. Non-stationary data are usually not preferred in financial models since it provides spurious and unreliable results and it also leads to poor forecasting. Hence stationary at first difference is observed and it is found to be stationary. Thus variance, and auto covariance remain the same; they are time invariant.

5.2 Normality Test

Table-5.3: Normality Test of Crude Oil

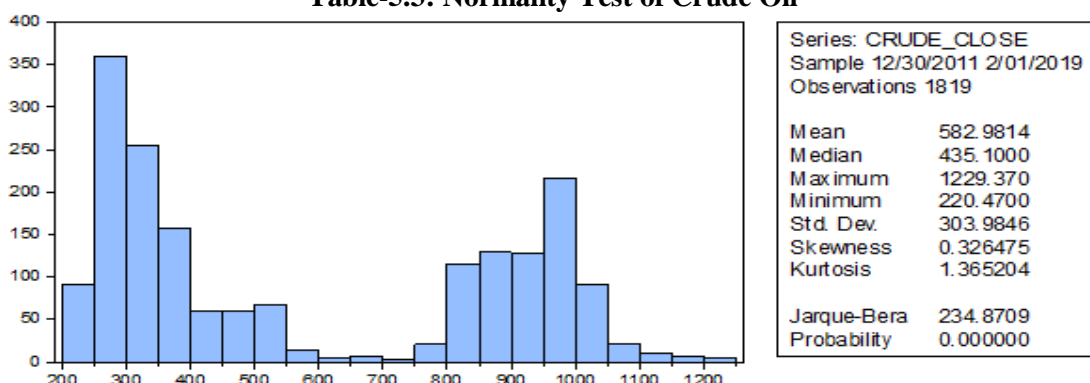
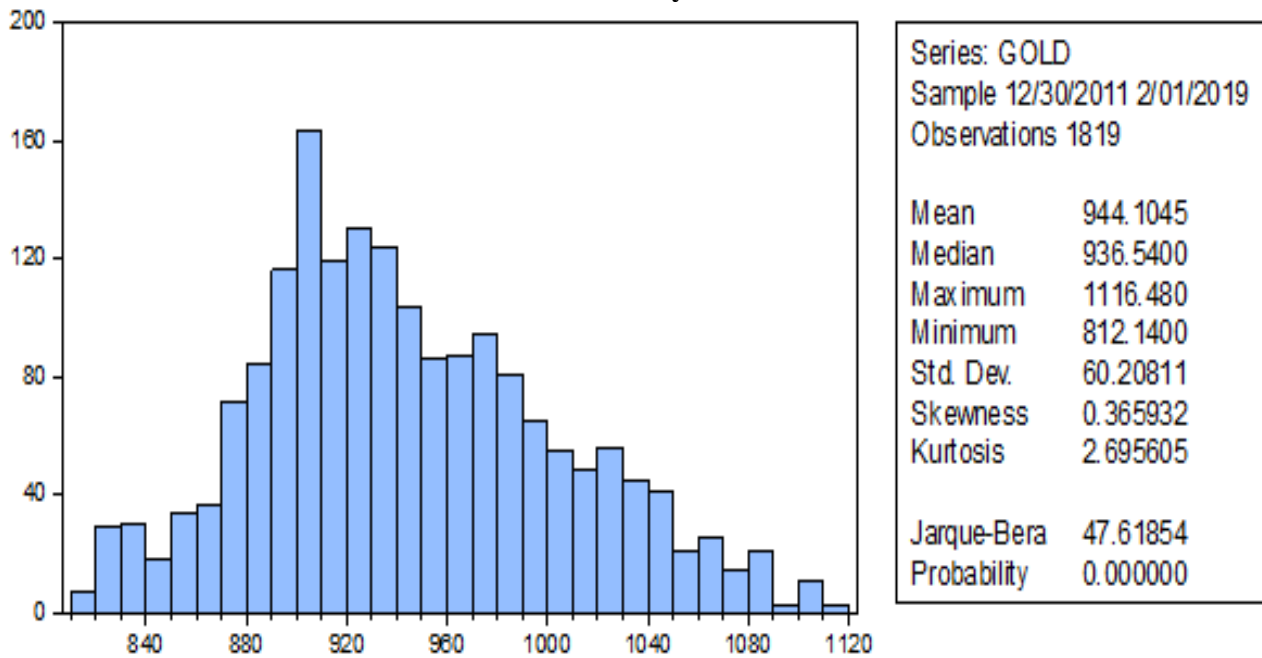


Table-5.4: Normality Test of Gold



The normality of the data is tested with the above histogram. If the data were normally distributed, then the coefficients of skewness and kurtosis should be equal to zero. Observation of the histogram for both crude oil and gold showed that it is symmetrically bell-shaped. This indicates that the data did fit into a normal bell-curve. The Jarque-Bera test value also indicates significant departures from normality for the index.

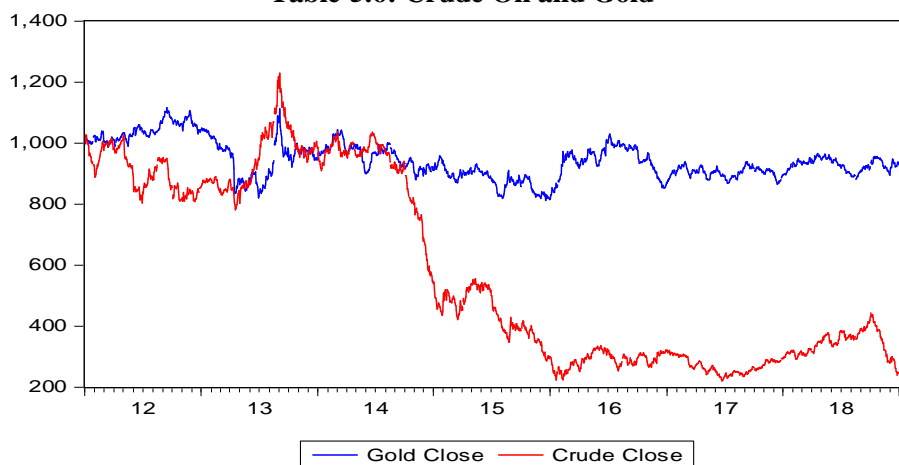
5.3 Cointegration Test

Table-5.5: Cointegration Test

Date: 02/13/19 Time: 15:52				
Sample (adjusted): 1/06/2012 2/01/2019				
Included observations: 1814 after adjustments				
Trend assumption: Linear deterministic trend				
Series: GOLD CRUDE				
Lags interval (in first differences): 1 to 4				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized				
		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.006491	13.09324	15.49471	0.1114
At most 1	0.000705	1.280177	3.841466	0.2579
Trace test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized				
		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.006491	11.81306	14.26460	0.1179
At most 1	0.000705	1.280177	3.841466	0.2579
Max-eigenvalue test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):			
GOLD	CRUDE		
0.019647	-0.001663		
-0.002339	0.003516		
Unrestricted Adjustment Coefficients (alpha):			
D(GOLD)	-0.656411	-0.021805	
D(CRUDE)	-0.090281	-0.253073	
1 Cointegrating Equation(s):		Log likelihood	-13014.81
Normalized cointegrating coefficients (standard error in parentheses)			
GOLD	CRUDE		
1.000000	-0.084664		
	(0.04884)		
Adjustment coefficients (standard error in parentheses)			
D(GOLD)	-0.012897		
	(0.00378)		
D(CRUDE)	-0.001774		
	(0.00444)		

Table-5.6: Crude Oil and Gold



Cointegration test reveals that there is no long run relationship among crude oil and gold price movements. The absence of cointegration observed in the present study could be a result of several reasons, as discussed earlier in the theoretical framework. This is an expected result as the theoretical framework explained that crude oil and gold has lost its co-movement since 2013. Hence crude oil and gold indices are not cointegrated.

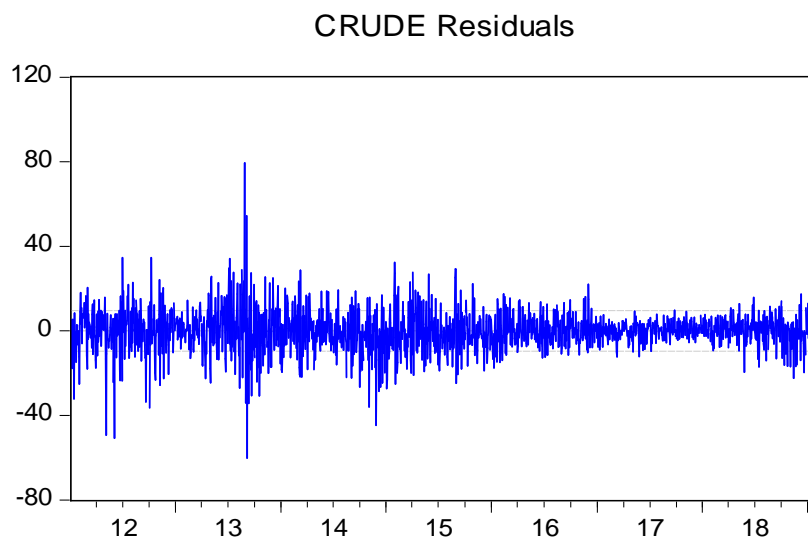
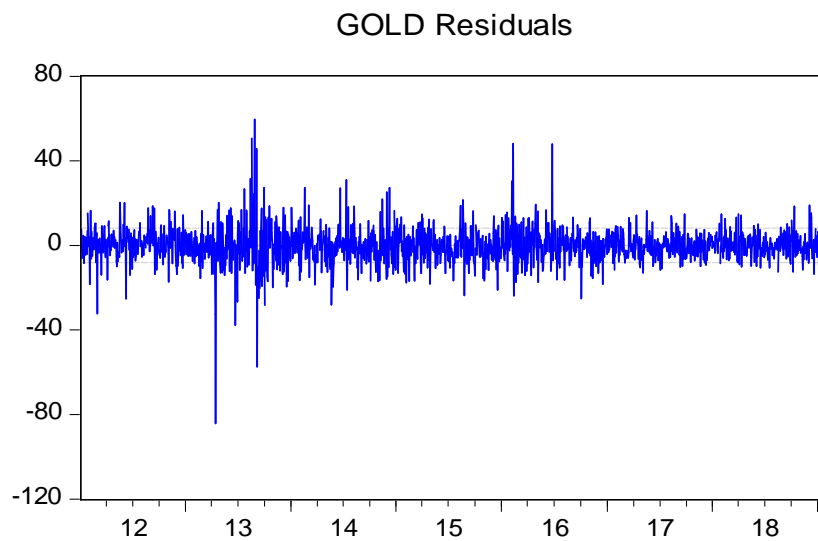
5.4 Granger Causality Test

Table-5.5: Granger Causality Test

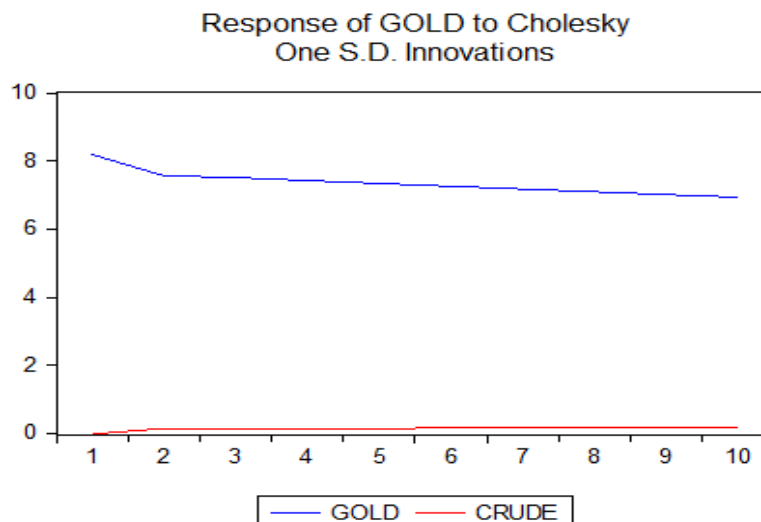
Pairwise Granger Causality Tests			
Date: 02/13/19 Time: 15:53			
Sample: 12/30/2011 2/01/2019			
Lags: 5			
Null Hypothesis:	Obs	F-Statistic	Prob.
CRUDE does not Granger Cause GOLD	1814	0.92986	0.4604
GOLD does not Granger Cause CRUDE		0.94115	0.4531

Both Crude oil and Gold Granger cause each other. This is result is contradicting with cointegration results. However literature says whenever the data do not cointegrate, it always granger cause. Hence the results are validated with the use of literature and books.

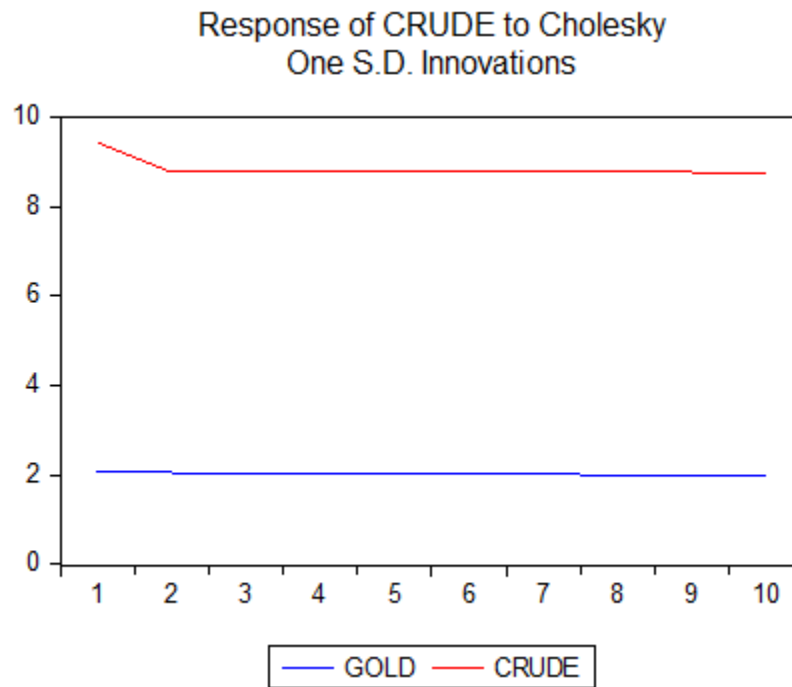
5.5 Error /Residuals



5.6 Impulse Response of Crude and Gold







Using impulse response functions we analyse the effect of crude oil index shocks on gold index. The impulse response report revealed that gold markets responded positively and significantly to oil prices, however this is only in the short-run, with the effect dissipating over the long run. The decay in the plot illustrates that, as time passes, the effects of a shock in crude oil and gold decay to 0.

## 6. CONCLUSION

Analysis of both liquid and metal precious elements is always an interesting research. This paper attempted to check the relationship using econometric tools.

Hence started to check data fitness and found both crude oil and gold indices are stationary at 1 difference with the use of ADF test. Since both are at same levels, analysis and further testing becomes more feasible.

Then checked the normality test and found both crude oil and gold indices to be normal which proves the data and its results to be more reliable.

Cointegration test reveals that there is no long run relationship among crude oil and gold price movements.

Granger causality test revealed that crude oil and gold granger cause each other. This is not contradicting; literatures and studies have proved that non cointegrating results always granger causes each other.

Further impulse response function analysed the impact of price shock among crude oil and gold and results proved that both crude oil and gold positively responded to the initial shocks and later it moved to constant position.

Overall, the paper concludes that crude oil and gold doesn't prove long run relationship however on short run it has a relationship.

This knowledge of crude oil and gold price co-movement will be more useful for portfolio managers who aspire to have a diversified portfolio and an investment protection against downside risk. Further, this is also useful for designing policy strategies, given the association between crude oil and gold.

The results and recommendation are arrived only based on sample data.

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**SKILLING THROUGH GAMIFICATION****Aruna A<sup>1</sup> and Dr. Mahesh Kumar K. R<sup>2</sup>**Principal<sup>1</sup>, Vidyavahini First Grade College, Kuvempu Nagar, Tumkur  
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**ABSTRACT**

*Talent crisis is one of the major challenges being faced by many countries today. India, though considered as youngest nation of the globe, is grappling with unique paradox. Huge global employment opportunities and unemployment / underemployment is co-existing today in India. Across all industry verticals skill gaps are becoming very evident. All of a sudden Skills development has become one of the priority areas of government today. Today, Vocational Educational & Training (VET) is getting its due recognition on par with traditional education.*

*Skilling sector has witnessed many disruptions off late. Efforts are being made to make learning student centric. Today's millennial do not prefer traditional teaching pedagogy. Gamification is considered to be one of the best tools to impart necessary knowledge and skills to students today. Because of its entertainment value, gamification motivates and increases the commitment of students towards learning. Several studies have shown gamification enhances students' transversal skills like problem-solving and critical thinking, analytical skills, self-management and communication skills etc. which will consequently lead to higher chances of these students finding a job.*

*In this paper a sincere attempt is made to highlight the importance of gamification in learning & development. The paper suggests how government and other educators can adopt gamification in skilling endeavors. It also throws some light on challenges in embracing gamification for skilling and way forward for successful skilling.*

*Keywords: Skilling, Gamification, Learning and Development, Vocational Education & Training, Employability.*

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**1.0 INTRODUCTION**

With the advancements in Information and communication technology, the way we perceive life has dramatically changed. Right from entertainment to learning, literally everything and anything can be reached just with a click of a button. In this era of complete digitization, even the teenagers are referred as screen-agers. Today's young generation hugely depends upon the digital platforms right from decision making to problem solving. This scenario raises questions, in making this young workforce industry- ready with required skillsets. The learning environment, education system and dynamic interaction between educators and learners become very crucial in building the Gen X and Y workforce. The traditional teaching methodologies are losing its sheen and the present students are more inclined towards experiential learning. Gamification is one such tool which has the power to sustain the learner's interest and also helps in building capabilities.

**2.0 GAMIFICATION DEFINED:**

*Gamification* is defined as the application of game principles to a non-game situation to promote desired behaviors and to acquire new skills. The main objective of gamification is to motivate and develop the interest for learning among individuals, by using certain rewarding motivators like points, badges and leaderboards. The process also focuses to strengthen the desired behaviors and to weaken the undesired behaviors of young adults. As the student undergoes an experiential learning, it helps the educators to make the learners get engaged and promote the whole experience of learning through fun (Kai erenli , 2013).

**Differences between Gamification, Games and Game Based Learning (GBL)**

Though, the terms, games and gamification are used interchangeably in general, there is a distinct difference between these two terms. A game is an activity, which involves knowledge, skill or chance and fixed rules to follow to win an opponent. On the other hand, Gamification commonly employs some game design elements and makes it more interactive, to improve user engagement. The ultimate goal of a game is to entertain user, while that of gamification is to change the behavior of the users.

In modern day education scenario, gamification has become one of the most effective pedagogies used to develop the interests of the young adults in the learning process. With the timely intervention of gaming tools such as points, badges, score boards, it naturally boosts the motivation of the students and makes them more competitive and stay connected with lessons.

In contrast to games and gamification, in game based learning we achieve educational targets by involving or participating in games. Game based learning is intended to teach any concept using game. The students get connected easily not just because of fun, but the immediate feedbacks, score boards, level points creates a sense of achievement. As a result of this, the skills acquired are deeply rooted and this becomes a success factor in the learning process.

### **3.0 ELEMENTS OF GAME-BASED LEARNING**

Traditionally speaking, gamification is defined as the application of game related elements in non- game contexts. The main objective of gamification is to enhance the intrinsic motivation of the students and make them acquire new skills. With the benefits of the same, it is widely used in educational space, to make the learning processes more effective (Dr. Antonio Pérez-Manzano and Javier Almela-Baeza , 2018). Many scholars have thrown light on the different aspects of Gamification. The essential principles to be considered while designing Digital Game- Based Learning (DGBL) are:

- **Intrinsic motivation** plays a dominant role in gamification, as it enables an individual to participate more willingly, thus making it more effective.
- **Learning through intensive enjoyment** and thus making the participant to get into the flow of: the doable task, with concentration, clarity in objectives, immediate feedback, easy involvement, sufficient control, and absence of one's consciousness and loss of sense of time.
- Learning processes should be based on specific practices rather than abstract notions of formal learning, making it more authentic.
- Playing games encourages autonomy in making the players think and explore their interests.
- Gamification provides an experiential learning to the players and the designed education program is enhanced by using points, levels, badges, classification tables, prizes and rewards, progress bars, plots etc.,
- The success of DGBL product is associated with immediate feedback. The greater the intensity and immediacy of the feedback, the greater will be the involvement of the students.

### **4.0 THE REASONS TO USE GAMIFICATION IN LEARNING**

Though the whole process of Gamification, looks more appealing and successful, the technicalities are quite complex. Gamification allows the students to learn through fun, gets involved and stay motivated with timely feedback and a sense of accomplishment. But, one should know how to comprehend and analyze the feedbacks and pointers and use it effectively further. However, one should have clarity in the context in which the games are being used, how, why, when to use. The concepts logically crafted through games will definitely enhance the effectiveness of the leaning program and go a long way in creating new opportunities. Many studies are substantiating the strong reasons to use gamification in learning. Few of them are listed below:

- Boring concepts may be presented in an interesting and challenging manner
- Learning through games is always fun
- High rate of student engagement
- Helps to understand concepts better through application
- Immediate feedbacks and scores motivates the students and thereby increases participation
- Students learn how to comprehend, analyze and resolve the problems and thereby apply the same
- Concepts thus learnt will be deeply rooted

### **5.0 GAMIFICATION AS A TEACHING STRATEGY**

Talent crisis is one of the major challenges being faced by many countries today. India, though considered as youngest nation of the globe, is grappling with unique paradox. Huge global employment opportunities and unemployment / underemployment is co-existing today in India. Across all industry verticals skill gaps are becoming very evident.

All of a sudden Skills development has become one of the priority areas of government today. Today, Vocational Educational & Training (VET) is getting its due recognition on par with traditional education.

Skilling sector has witnessed many disruptions off late. Efforts are being made to make learning student centric. Today's millennial do not prefer traditional teaching pedagogy. Gamification is considered to be one of the best

tools to impart necessary knowledge and skills to students today. Because of its entertainment value, gamification motivates and increases the commitment of students towards learning. Several studies have shown gamification enhances students' transversal skills like problem-solving and critical thinking, analytical skills, self-management and communication skills etc. which will consequently lead to higher chances of these students finding a job (Kyle Felker, 2014).

### **6.0 HOW DO WE APPLY GAMIFICATION FOR OUR SPECIFIC COURSES?**

Typically, a teacher in a class introduces theoretical concepts and supplements it with few specific examples. Individual assignment is given at the end of each class. Based on the results of assignment, profiling of each individual is done. Subsequently, based on the profiles, groups are formed. During this group formation it is ensured skills of group members are complementary. Thereafter, groups are given with real time cases to solve and present. Intergroup performances are assessed. The entire exercise reflects a game.

Thus we build experience by applying gamification scheme on our courses. How gamification mechanics are blend with the classical education scheme are enunciated below through corresponding parallel elements.

- a) Story lines replace domains and sub-domains: how students make choices along the path lead to their profiling in terms of interest and skills
- b) Characters replace actors: Assignment or in gaming terms, the quest, is given by teachers. According to the storyline students or players solve the quest. During this they collaborate with other players and assume the role based on their skillsets. The work dynamics are managed internally with mutual respect and responsibility. Along the process external observers may intervene, with few suggestions or information.
- c) Quests replaces themes: cumulative individual progress and group based assignments according to skill sets.
- d) Completed levels replace evaluation: up skilling on a continuous path.

### **7.0 ISSUES TO CONSIDER WHILE DESIGNING A SUCCESSFUL GAME**

Every game is distinct and has its own challenges. There are few pain points which hold true for the design of any game (Kyle Felker, 2014).

#### **Define Your Objectives**

Without concrete learning goals the educational gaming experiences has no value. Two important questions we should ask ourselves are (i) at the end of each game what should the players be able to know and (ii) how we can assess this learning. A metric to measure the outcomes of games is very important. Else, we can conclude whether the game has been successful.

#### **Be Patient, Be Iterative**

As gamification is a new development, the game designer should keep trying all best practices for better results. Many iterations will finally help designer to get it right. Meeting of the goal is important than getting instant gratification.

#### **Involve Others**

In the commercial sector game design is a team affair which demands diverse skill sets. Hence, finding a diverse team and designing a game is very crucial.

#### **Identify Player Motivation**

While designing game we need to strike a balance between our educational objectives and motivation of the players.

#### **Marketing**

Once the game is ready letting people know about the game is very important. Adequate time and resources must be set aside for promoting the game.

### **8.0 WAY FORWARD: ADOPTING GAMIFICATION STRATEGICALLY FOR SKILL DEVELOPMENT**

First, it is very important for us to have clarity about how a game technology impacts skilling far beyond gamified apps and engagement. For rapid skill acquisition virtual game technology may be effective across different verticals like sales training, clinical training, patient coaching, customer service etc. But the point here is we must be able to move beyond gamification after certain stage.

The use of game technology depends on learning objectives. If acquiring knowledge is our learning objective, then we may embrace various creative solutions in the elearning space. Gamification just for engagement does not help. The engagement does help in recalling of facts or ideas, but do not go beyond. Through game technology people must be empowered so that they apply knowledge in realistic situations, thereby help them to

take better decisions. When learners apply knowledge effectively in practical situations they achieve optimal performance, driving the skill acquisition process.

If we wish to train someone the application of new decision making skill, we would first ensure they have required background knowledge and then support them practice the skill, putting them in real time situation, and mentor them in terms of recognizing the expert mental models we use to make those decisions. Subsequently, we provide different situations and continue the training process until the individual acquires sufficient competence.

It is very well know fact that the entire skill acquisition is deeply rooted in cognitive science. The learning methodologies here are quite practical and intuitive. Practices like experiential learning, cognitive apprenticeship etc may be applied effectively. However, this process works well with one-on-one training, which in fact is the ideal way of learning. Practicing in a mentor guided environment will help us not to waste learning hours by trial and error and also in future we do not make costly mistakes in real-life situations.

Moving forward, one of the critical agenda is, how do we transform what works well in skill development setting into scalable, digital solutions? The biggest challenge is scaling the approaches used in a real life setting. One of the reasons for this is the expertise required for scaling is scattered across country or the world. If the digital solution emulates the real life learning experience, then we consider it as effective.

Developing and implementing digital cognitive science principle and integrating it with technology are very important. Game technology is suited to accomplish this task.

Now the next challenge is to build learning environment with game technology. Game engines are designed typically for entertainment, not learning. By including game mechanics through deliberate integration of cognitive learning methodologies in the game engine, we can reinforce skill acquisition. Here, expansion of physical environment is not the objective.. Instead, for most organizations, there is a need to deep dive the learner in realistic situations with virtual characters, so that they learn to make optimal decisions. The designers in fact apply this skill acquisition process to many verticals which has been mentioned above. Using game technology, the designer can transform attributes that fosters skill acquisition in live skilling into a virtual experience. There are three dimensions of skill acquisition in which game technology excels. These three dimensions include (i) realistic situations (ii) feedback and expert coaching and (iii) expert mental models

Finally, what is required is to align game technology with our goals. Gamification can provide the sizzle if our goal is to add more engagement to our elearning for knowledge acquisition. However, if our emphasis is skill acquisition to enhance performance, then we are required to integrate cognitive science learning methodologies with game technology. Virtual environments do help in scaling the skilling endeavours. Better and realistic the virtual experience, better the transfer of training to real-world performance.

## 9.0 CONCLUSION

It is strongly believed that in the current education system, traditional methods of teaching and learning are not effective and unexciting to the students. The gen y and z students have different learning styles in this highly digital era. Both in terms of information processing and comprehension, today's generation are different in comparison with earlier generations. Today, most of the teachers and educators report that, present day students are usually demotivated and are less engaged in the learning process. It has become imperative to educational systems to incorporate appropriate activities, which will support students' learning process.

In this scenario, educators are slowly adopting gamification as a tool to impart required skill sets to trainees / students. Gamification will not only help in meaningful engagement with students, but if cognitive science learning dimension is integrated with gaming technology, gamification becomes the most powerful tool for skilling.

For successful adoption of gamification in skilling, we need to first transform the real time setting into digital solutions. Further by building learning environment with gaming technology and aligning this technology with our overall goal we realize effective skilling.

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**IHRM: THE NEED FOR HIRING AND BUILDING GLOBAL VIRTUAL TEAMS**

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**ABSTRACT**

*The world is changing every day and the change is imminent in all aspects for the growth and development of nations across geography. Many political events and technological disruptions are changing the global landscapes. These changes have direct impact in cultural, social, political, business and technological spheres. Technological disruptions and globalization have led to creation of a new human resource management called IHRM or Global HRM.*

*Hiring global virtual teams have been one of the important responsibilities of the IHRM team or Global HRM. Here is a little snippet about the global virtual teams.*

*A virtual team, like every team, is a group of people who interact through interdependent tasks guided by common purpose. The image of face-to-face interactions among people from the same organization typifies our older models of teamwork. What sets virtual teams apart is that they routinely cross boundaries, awesome array of interactive technologies at their disposal. Virtual teams now use communication and collaboration technologies to cope with the opportunities and challenges of cross-boundary work. In this paper, we will study about the virtual teams and the need for hiring and building global virtual teams.*

*Keywords: IHRM, Global HRM, Human resource management, Virtual team, Technology disruption, and Global hiring.*

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**INTRODUCTION**

IHRM is defined as set of activities aimed in managing organizational human resources at international level to achieve organizational objectives and achieve competitive advantage over competitors at national and international level. The role of **International Human Resource Management (IHRM)** is to achieve the organization's goals at optimal cost and resource. The companies will be ready to expand/move their operations into another country and effectively manage their employees to achieve smooth operations of the organizations.

**Virtual Team** A virtual team (also known as a geographically dispersed team, distributed team, or remote team) is a group of individuals who work across different time zone, space, culture and organizational boundaries. Another definition of a virtual team is, "A small temporary groups of geographically, organizationally and/ or time dispersed knowledge workers who coordinate their work predominantly with electronic information and communication technologies in order to accomplish one or more organization tasks".

In today's workplace, the use of virtual teams and, for that matter, virtual workers in general, is increasingly common. There are many reasons for this: young workers entering the workforce who bring new attitudes about virtual working patterns; a larger number of employees wanting to balance work and life; and companies seeking ways to save money.

**REVIEW OF LITERATURE****Exploring Successful International Human Resource Management: Past, Present, And Future Directions**

*Mohammad Reza Noruzi, Jonathan H. Westover, 2010, IEEE Conference*

This paper helped to develop an understanding and competencies necessary for HR managers to succeed in global environment. This paper aims to review the most important aspects of International Human Resource Management(IHRM) in general, such as the development and challenges of IHRM, IHRM vs. domestic HRM and the similarities and differences.

Successful localization and its advantages and disadvantages are also explained well in this paper. It also discusses the issues that are likely to gain importance in IHRM in near future. Talent management in IHRM is an important aspect and the future of IHRM have also been part this paper. This literature study offered good insights to the future of IHRM as a field of study and as an integral part of HR management practice.

**Virtual Teams: A Literature Review**

*Nader Ale Ebrahim, Shamsuddin Ahmed and Zahari Taha, 2009, Australian Journal of Basic and Applied Sciences*

In the competitive market, virtual teams represent a growing response to the need for faster time-to-market, low-cost, and rapid solutions to complex organizational problems. Virtual teams enable organizations to pool the talents and expertise of employees and non-employees by eliminating time and space barriers. Nowadays, companies are heavily investing in virtual team to enhance their performance and competitiveness. Despite virtual team growing prevalence, relatively little is known about this new form of team. This study offered an extensive literature review with definitions of virtual teams and a structured analysis of the present body of knowledge of virtual teams.

**Managing Virtual Project Teams**

*Bryan Rolf Trautsch, San Francisco State University, 2003*

The purpose of this project is to explore the communications and collaborations issues associated with managing virtual project teams. To establish a better understanding of the problem, the paper evaluates virtual teams against more traditional collocated teams to provide some background and depth to the research. Surprisingly, the research data did not show that there was a significant change in the way virtual project managers managed their teams.

**OBJECTIVE OF THE STUDY**

The objective of this study is to understand about the need for hiring global virtual teams and its existence in the modern Industry. It also tries to address various queries pertaining to global virtual team, virtual team environment and how IHRM is providing the support. The study will provide an insight about the hiring global virtual team and create awareness about changing job market and HRM practices.

**RESEARCH PROBLEM**

- Define IHRM and its significance in global hiring.
- Define virtual Teams and its scope.
- Is there a real need for hiring global virtual teams?
- Why do building global virtual team is essential in the ever-changing world?

**SCOPE OF THE STUDY**

IHRM is an emerging subject and it has well defined framework on various process and functions. Global hiring is one of the functions in IHRM, that is significant. The scope of this study is limited to the need for hiring of global virtual teams. This study tried to touch upon IHRM, global virtual teams and the need for its emergence.

**METHODOLOGY**

The method used in the research is descriptive and was in the format of a questionnaire consisting of five questions. The questionnaire was delivered through e-mail (through [www.surveymonkey.com](http://www.surveymonkey.com)) to various HR managers and team members dispersed throughout the world. The sample size of the study approximately 25 members. Five responses were gathered from individuals in organizations that varied from relatively small firms to Fortune 500 firms. The responses were grouped according to each question and analyzed qualitatively. The questionnaire was designed to get a broad sense of understanding associated with global virtual teams hiring. These responses were used as primary data and the secondary data is collected through research portal and journals.

**RESEARCH DATA (PRIMARY) AND ANALYSIS**

**Table-1: List of Primary Survey Questions**

Question No.	Question
1	Are you working or worked with teams that are geographically distributed?
2	Does your company have global presence?
3	Does your company have Global HRM or International HRM team?
4	Why do your company need to hire global virtual teams?
5	Is having a global virtual team provides any benefits for your project?

**Question-1: Are you working or worked with teams that are geographically distributed?**

The rise of the Internet and development of collaborative software have instilled a new dimension into project management. The important ingredient is the World Wide Web along with cost effective email, broadband, collaborative technologies. The concept of virtual teams emerges with all the hype associated with the Internet breakthroughs. Out of 25 respondents, 24 members were already part of virtual team environment. This is a clear indication that majority of the members are already part of virtual team. Moving forward there is no turning back, world is going to be operating completely virtual.

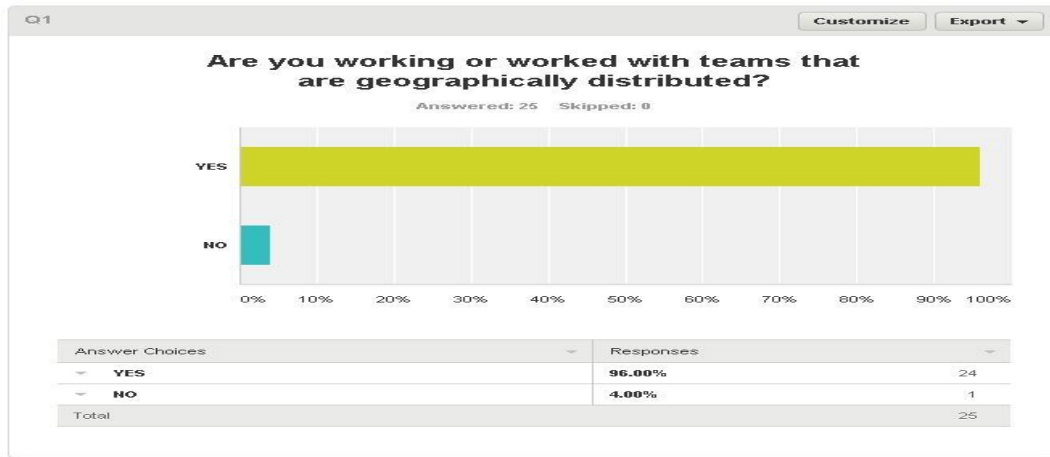


Figure-1: Survey response on Virtual team

**Question 2: Does your company have global presence?**

A person who goes for the interview to any company always look up if the company is operating in multiple countries or at least in multiple geographies. Just to attract the talent pool, many companies boost or associate themselves as global companies aka “MNC Companies” even each company that operates in different countries are subsidiaries of parent company and they operate independently. Out of 25 respondents, 19 persons said YES, there company has global presence, and 6 persons said NO. This is a clear indication that every person aspires to work for MNC companies and companies are also equally showing interest to get the “MNC” tag.

**Question 3: Does your company have Global HRM or International HRM team?**

To boost operational excellence, modern day companies are consolidating the operations support functions to one location/geography and create an expertise pool of work force for that support area/domain. To do that the HRM team have to go global and do the local hiring in respective countries. Out of 25 respondents, 17 persons said YES, there company has global HRM team, and 8 persons said NO. These responses confirm that at least 2/3<sup>rd</sup> of the companies indeed have Global HRM / IHRM team to do the global virtual team hiring.

**Question 4: Why do your company need to hire global virtual teams?**

This question is an open-ended question, and It is in fact kept is open ended to receive individual responses and objective is not confine the respondents with choices. Collating the responses and consolidating the results have become a challenge. But in broader terms most of respondents have mentioned about Skill gap, Resource readiness, Infrastructure availability, Cost factor, Government Subsidy, Government stability, Business continuity, Minimum wage restrictions, etc. Majority of the respondents have given similar responses and the most number of responses are consolidated in the table below.

**Question 5: Is having a global virtual team provides any benefits for your project?**

This question is again an open-ended question, and It is in fact kept is open ended to receive individual responses and the objective is not confine the respondents with choices. Collating the responses and consolidating the results have not become a challenge here, because all most all the respondents have touched upon three important factors about a project and the benefits that brings to project execution. Broadly these factors can be classified as time, cost & quality. In nutshell, the benefits of having global virtual team in a project is to Lower cost, shorter time duration and better quality.

**Table-2: Summary of Primary Survey Responses**

Question	Most common responses to questions
Q1. Are you working or worked with teams that are geographically distributed?	Out of 25 responses, 24 persons said YES, and one said NO.
Q2. Does your company have global presence?	Out of 25 responses, 19 persons said YES, and 6 persons said NO.
Q3. Does your company have Global HRM or International HRM team?	Out of 25 responses, 17 persons said YES, and 8 persons said NO.
Q4. Why do your company need to hire global virtual teams?	Skill set availability, Business continuity, On -time project completion, and Resource/Infrastructure readiness as well as availability.
Q5. Is having a global virtual team provides any benefits for your project?	Cost advantage, Project execution in shorter duration with Quality.



**LIMITATION OF THE STUDY**

Global virtual teams and the virtual work environment is a vast area that has various constraints. The scope of this study is limited to have an understanding on the need for hiring the global virtual teams. The responses obtained here are limited to only 25 members, if the same study is conducted with wide audience that might through different insight about hiring global virtual team. This study tried to touch upon only the “WHY” aspect of hiring global virtual teams but still many specific topics like challenges in hiring, work culture differences, building a right virtual team, specific skills needed for global virtual team members, virtual project management etc., which are not part of research problem can be explored further. Use of communication and collaboration tools in hiring global virtual team itself is a big research area on its own. This has good potential to be explored further.

**CONCLUSION**

Hiring global virtual teams in the information age has become a norm now and it is much needed to make the product and services available at an affordable price, with quality and shorter time to market.

In this study, several research questions related to International hiring, virtual team, and global virtual team environment, are all investigated. Surprisingly, the research data showed that some Multi-national companies are already using global virtual team and others are exploring the available options to optimize the cost of the product and services by going global. Hence IHRM plays a significant role is hiring global talents, nurture local talents and help to assemble right set of work force who can improve efficiency and reduce cost, and time in project execution / product development.

At least 10-15 years back, the hiring of global team is a challenge, setting up of a Multi-National Company's subsidiary took long time. Due to globalization and easing of trade policies, now clearly the trend is changing. With the advancement in communication, collaboration tools and technologies, the corporate companies' enable the IHRM team to move towards hiring the global virtual teams and help in establishing the global virtual working environment.

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**THE IMPACT OF SCOPE FOR CREATIVITY AT THE WORKPLACE ON FAMILY – LIFE AND WORK-LIFE BALANCE OF EMPLOYEES**

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**ABSTRACT**

*Increased job responsibilities due to an increased demands at the workplace to achieve the objectives set at the workplace, together with family responsibilities at the home-front, have created a need to balance both the domains. To overcome this problem, employer and employees can introduce creative methods at the workplace innovate new methods and strategies at their home-front and at their workplace and entrepreneurial activities can also be considered. Employees should have the support of the management in use of creativity at the workplace and also to enhance their productivity without affecting their family-life. Hence, this article throws light on the studies done in this domain, the strategies that could be adopted and the challenges faced in trying to maintain a balance between family-life and work-life.*

*Keywords: Responsibility, Demand, Creative and Family-Life and Work-Life Balance.*

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**INTRODUCTION**

Present situation, world is facing a very competitive environment. People are giving more important on their work, than family-life and people are spending more time at the workplace. Family-Life and Work-Life balance is not an easy task meaning one's professional and family responsibilities managing both equally in an effective manner. One can have work-family balance but may not have anything left for oneself for one's community and one's personal growth and development. Sometimes it is possible to have family-work balance and at times it may seem as individuals still need to achieve work – life balance.

In western scenario, other than work, all activities are considered a part of life. This may include family-life and social-life. But, when we look at Indian scenario, Family and Work are treated as two separate entities. Family is given a top priority and ideally family-life and work-life suits more to an Indian situation. We can say that, experiences associated with family are called family-life. An experience associated with work is called work-life.

**REVIEW OF LITERATURE**

Marta Mas-Machuca et al (2016) in their research, “Work-Life balance and its relationship with organizational pride and job satisfaction”, have found that the work-life balance of employees was showing a positive relation with organization pride and job satisfaction. Further, the results showed that the work-life balance of supervisors of these employees provide autonomy and supports the work-life balance of these employees. In other words, the degree of work-life balance achieved by superiors in an organization affects the work-life balance of their subordinates.

Sucheta Agarwal Usha Lenka (2015) in their research paper the scholars have discussed about the problem of work-life balance for working women executive. To overcome the conflict issue they need to balance between personal life style and work life style. It suggests that women should start their own business to gain more flexibility and control on their personal obligations and on their work.

Salma Semlali, Abderrahman Hassi, (2016) in their research paper the research scholars noticed that employees try to fulfill the private and professional lives. The study was conducted on the work life balance of Moroccan women working in IT sector. Here the organizations are key factor in employees' work life balance. Some main recommendations of this study is to increase the maternity leave, flexibility of the work, workplace nurseries and also telework may help the women employees in work life balance and their well being which will reduce their stress level in working place.

Veronika Koubova, Aaron A. Buchko, (2013) in their research paper have discussed on work life balance and emotional intelligence and its conceptual linkage. Emotional intelligence is been viewed as an important aspect in individuals work life balance. Personal life is important and work is viewed as a component to satisfy the overall life. So the organization should develop the Emotional intelligence in work place and improve the abilities of employees.

Rupashree Baral, Shivganesh Bhargava (2010) in their research paper tell about the work-family enrichment, relationships between organization interventions for work life balance and job outcomes. It shows that

outcomes of the work life balance are positively related to job outcomes and work to family enrichment will be related to job characteristics. Work family culture and support of the supervisor are also positively related to job satisfaction and an outcome were found between work life benefits and policies.

### **OBSERVATIONS**

By reviewing the above literature, an impression can be drawn about the importance of balancing family and work. The significant points that can be noted are:

- Support of the Superior is required at the workplace.
- A certain level of autonomy if provided can be useful to employees in balancing family and work.
- Employers can consider facilities such as day-care, work-from-home, flexibility of work-time etc., for reducing the stress level of employees.
- It was seen that the outcomes of work-life balance is positively related to the job outcomes.
- Starting off own-ventures/business if possible would be a great initiative for the individuals in balancing life.

### **WORK – LIFE BALANCE DEFINITIONS**

Work-life balance is defined as “the management of one’s professional responsibilities and family responsibilities towards children, ageing parents, and disabled family member, or a partner/spouse effectively. One can have work-family balance, but may or may not have anything left for oneself, for one’s community, for one’s own personal growth and development, rest and relaxation”. (Buddhapriya,2009)

According to Hudson(2005), work/life balance, in its broadest sense, is defined as a “satisfactory level involvement or ‘fit’ between the multiple roles in a person’s life”.

### **ANALYSIS OF THE ABOVE DEFINITIONS**

The first definition pertains to the divided responsibilities that the individuals have to fulfill at the family and at work. The responsibility at the home-front is towards spouse, children, ageing parents and other family members. The responsibility at the work-place is in fulfilling and executing the given tasks as per expectations at the work.

The second definition emphasizes on the satisfactory involvement of individuals between multiple roles in life.

A conclusion can be drawn, that in trying to maintain a balance in family and at work, understanding and fulfilling responsibility in both domains is important and this can be done through satisfactory involvement of individuals between multiple roles.

### **CHALLENGES IN BALANCING FAMILY– LIFE AND WORK-LIFE**

- Excessive work confronts with tasks involving with children, home, in-laws, parents and their social circle. Employees mostly have multiples roles in their personal lives along-with an increase in demands on the job so the working population have to spend long hours in work place, at times can be carried to homes which leads to excessive work both at home and at work.
- Work interference will affect the family-life because mostly working hours are not limited to 7 to 8 hours day it may extend till 12 -16 hours also. This may lead to little time for family-life due to long hours that are spent in completing the work tasks.
- Majority employees are highly stressed and undergo anxiety, they have to manage both work responsibilities together with family responsibilities. This may lead to high levels of anxiety in having to compete with a competitive environment and juggling between the family and work preventing them from aspiring to progress in their career beyond the particular level.
- Everyday decisions on important matters in family-life and/or work-life will be difficult to handle and manage, this may result in stress which will lead to health issues.
- Sometimes due to prioritizing the family, employees may lose many opportunities and by the time they are in a position to accept the greater responsibilities, repetitive and monotonous nature assigned to them also inhibits their creativity. This will lead to imbalance and frustration and resentment which greatly impact their various roles. And hence, sometimes they are unable to realize their full potential in both work and family .
- Work responsibilities interference may often cause displeasure among the family members. This may result in disharmony among the members of the family/at home.

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- If at home, there is a tendency wherein, as a primary role for the man results in dumping of all households responsibilities upon the women this leads to biased treatment on the women which will result in the imbalance and frustration in balancing family and work.
  - Emotions create imbalance at family and work.
  - Targets at the workplace in the form of meeting deadlines, completion of tasks, too much work to be completed in too little time etc., creates imbalance and this can be a reason and will act as a challenge in trying to balance family and work.
  - Organization creates imbalances and gives resources to balance the imbalance.
  - Whether at home or at work, if lot of energy is consumed then the problem solving ability of a person comes down. Hence this poses as a challenge in maintaining a balance between family and work.

**SCOPE FOR CREATIVITY TO MAINTAIN FAMILY-LIFE AND WORK-LIFE BALANCE**

In view of challenges, creativity can be incorporated. This has been discussed from the Management and from the Employee point of view.

**FROM THE MANAGEMENT CONTEXT**

- The Company can provide with Day-care or child-care with free of cost or with lower cost.
- The company can give a thought to job sharing positions to reduce the stress level of employees together with completion of tasks on time can happen.
- Company can give employees some extension or permissions if asked by employees with regard to the maternity or paternity leave beyond the minimum legal period.
- Flexible working hours can be introduced.
- If employee is full time worker but due to some reason the employee wish to work for part time the company can make way for them.
- The company can have recreational activities such as sports, arranging of talk from diverse fields, cultural programs etc.
- The Company can arrange for career counseling, advisory services like legal, family, financial supports etc.
- Fluctuating phenomenon at the workplace is a common scenario in IT sector hence, outsourcing of work, seeking extra hands during work over-load can be considered by the company.
- The organisation can give more importance for discussions and clarifications of job related matters over phone and mail, and reduce a personal/face-to-face discussions so that time can be saved and performance can be better.

**FROM THE EMPLOYEE CONTEXT**

- Explore the possibilities of doing the work easily.
- To avoid unnecessary worries.
- Not to mix emotions.
- An employee should not imagine the work is difficult; this will lead to energy drain out.
- Employee should get clarity on the responsibility and expectations.
- Employee can ask for help from colleagues when required.
- Be time-conscious.
- Expanding the way of thinking.
- More work consumes more time, hence planning is required.
- Each activity should follow the next required activity.
- Every time an employee needs clarification, then phone, e-mail or texting can be considered instead of reaching out in person.

- Experience teaches creativity. If an employee is involved in doing a particular job for a long period of time, then because of his expertise in that field he will be more creative and knowledgeable in completing the task faster.
- Attitude represents energy; hence the overall attitude of an employee should be positive and accept the situation.

These are the some of the strategies which the company can implement to the employee so that employee can feel better and concentrate on their family-life which can give good results in work-life balance also.

### **CONCLUSION**

Individuals play multiple role in the family-life and work-life. If there is no satisfaction and balance in both these domains it may result in frustration, inability to realize full potential, stress and anxiety, they do not enjoy the harmonious family-life and health issues may arise. So for this, an employee can consider entrepreneurship and start their own business. They can spend time with family as well as in work which leads to great innovation and creative things can be considered. They can manage and create they own boundaries. Social recognition and social status will give them a boosting power. This also help them to spend more time with the members of family. Employer should give the opportunities to work from home so that employees can have breathing time with family members and children. Today's world is more career conscious than ever. Employees demand more in terms of career growth and development. Organizations that fail to allow employees to meet their individual career growth needs will lose the best employees. An organization's most treasured asset is Employee's creativity. Experience teaches a person to be creative. Employees should be given facilities to enhance their creativity and self development.

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**COMPARATIVE ANALYSIS OF MARKET RISK AND CREDIT RISK BETWEEN INDIAN AND ASEAN BANKS****A Mary Lavanya**

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**ABSTRACT**

*This research examines and compares the market risk and credit risk between Indian and ASEAN banks. The study covers 6 public & 2 private banks from India which are investing in ASEAN region and 8 state owned banks from ASEAN region over the period of 2008 to 2018. Market risk is estimated using Value at Risk (VaR) and credit risk is analyzed with the data of total loans and non performing loans which is considered from the balance sheet of respective banks. The results showed that Indian banks are more prone to market risk as compared to ASEAN banks and Indonesia from ASEAN region is facing more credit risk. There is a positive correlation between market risk and credit risk of Indian and ASEAN banks. This explains that market and credit risk are related to each other in a way that the probability of the non-performing loans (NPL) unexpectedly changes the credit risk.*

*Keywords: ASEAN, Market risk, Credit risk, Value at Risk, Non-Performing Loans.*

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**1. INTRODUCTION****India's relation with ASEAN**

The Association of South East Asian Nations (ASEAN) includes Vietnam, Singapore, Laos, Myanmar, Brunei, Thailand, Philippines, Malaysia, Cambodia and Indonesia. India is concentrating on a fortified and versatile relationship with ASEAN, which resulted in the major transformation of world's economic and political situation since 1990.

India's association with ASEAN is considered to be a main foundation of the foreign policy and the establishment of Act East policy. The development of the association into a strategic partnership in 2012 was progress for India since it turned into a sectoral partner of the ASEAN in 1992, Summit level partner in 2002 and Dialogue partner in 1996. There are 30 dialogue mechanisms ongoing among India and ASEAN countries.

The India-ASEAN investment and trade relations have been developing relentlessly, ASEAN is the fourth largest trading partner of India. The India-ASEAN association is increasingly reinforced due to the investments made by India in ASEAN region which has brought peace, harmony stability, development and success between India and ASEAN region. As India is carrying out many investment projects in ASEAN region, so there is a need to analyze the market risk and credit risks of Indian banks to check whether they are worthy enough to invest in ASEAN region or not. Furthermore, to compare the outcomes with ASEAN banks to know whether the ASEAN Banks are performing well in their very own nations.

**2. LITERATURE REVIEW**

**Exim Bank (2018)** in their article has briefly explained about the ASEAN-India partnership, India-CLMV (Cambodia, Laos, Malaysia and Vietnam), and has showed the economic and macroeconomic outlook for all the ASEAN countries, International trade scenarios of ASEAN countries of all the ASEAN countries and the ways India is strengthening partnership with ASEAN region. **Bhogal P. (2018)** explained the India and Southeast Asia's economic and commercial relationship between them. The paper shows the analysis of the trade and investment relation between India and the member states of ASEAN. It shows the various difficulties in relation to the areas of institutional, physical and connectivity between the people, which have limited the integration of India in the regional value chain.

**Nguyen (2018)** examined the effect of diversification on cost and profit efficiency of six commercial banks from ASEAN nations over the period of 2007–2014. The author has used stochastic frontier approach (SFA) to measure the average profit efficiency scores and average cost efficiency scores for these countries. The study examines three components of diversification: funding, asset and income. The author has used a model to estimate the linkage between bank diversification and efficiency. **Ab-Rahim, R., Kadri, N., Ee-Ling, A. & Dee, A. A. (2018)** measured the performance of public listed banks in five ASEAN countries. The author has covered 63 public listed banks from Malaysia, Singapore, the Philippines and Thailand for the period 1997 to 2011. The author has adopted CAMEL methodology for analysis. The objective of the study is to identify the performance of selected banks and comparing it with other nations. The outcome of the CAMEL analysis demonstrates that the public listed banks of Singapore are best performing compared to their competitors.

**Badawi, A. (2017)** in his study aims to study the effect of market risk, credit risk and liquidity risk on the profitability of foreign exchange banks in Indonesia. The author has used casual method of research. The study includes all private foreign exchange public banking shares listed in Indonesia Stock Exchange (IDX). The author has used SPSS 21 software for the analysis of study. The outcomes proves that ROE variable, NPL variable, LDR variable does not affect ROE variable and NIM variable in this study. **Kattel, I. K. (2016)** explored the risk measurement practices of commercial banks of Nepal. The author attempted to endeavor the perceptions of bankers about the importance of credit risk measurement and the various tools to measure the risk level. The result of the study shows that the bankers in Nepal are aware of the methods to identify the risk level. The author has found positive relationship between credit risk assessment and risk measuring tools which are used in banks. **Syafi'I, M. & Rusliati, E. (2016)** analyzed the effect of credit risk, market risk, operational risk and liquidity risk on profitability of banks listed on the Indonesia Stock exchange for the period 2010-2014. The author took 30 banks for the study and used multiple regression tool for the analysis. The outcomes demonstrate that credit risk does not partially influence profitability. Market risk, liquidity risk and operational risk partially have positive effect on profitability.

**Perignon, C. & Smith, D.R. (2009)** indicates the level of VaR disclosure and the accuracy of it in their study. The authors took sample from US and international commercial banks for the study. The authors have developed a VaR disclosure index that can capture wide range of market risk disclosure. The authors collected data over the period of 1996-2005. According to the authors, historical simulation is the best method to calculate VaR. **Trenca, I. (2009)** highlighted the usage of VaR method by banks in market risk management. VaR gives a total perspective of a portfolio's risk that represents advantage, correlations, and current positions. Therefore, according to the author it is a true risk measure that applies not only to derivatives but also to all financial instruments. **Perignon, C., Deng, Z.Y. & Wang, Z.J. (2007)** explained the bank's risk management framework is dependent on non anonymous daily Value-at-Risk (VaR) and profit-and-loss data. The authors collected data from the six largest commercial banks in Canada. The authors have extracted the data from bank's annual reports using MATLAB. The authors have analyzed 7,354 trading days for their study. The authors also explained about the social and economic cost of reporting inflated VaRs.

### 3. RESEARCH GAP

Out of all public sector and private sector banks, the study will be majorly cover six public sector banks and two private sector banks from India which are investing in ASEAN countries. The present study will be covering only those banks from India which has set up in ASEAN countries which includes 8 public banks from India and 8 banks from ASEAN countries. Some of the difficulties are lack of unpublished information, access to finance reports etc.

### 4. RESEARCH METHODOLOGY

#### 4.1 Objectives of the study

1. To examine and compare the market risk and credit risk of Indian and ASEAN banks.
2. To identify the correlation between market risk and credit risk of Indian and ASEAN banks

#### 4.2 Sources of data

The data is collected from secondary sources. The sources are annual reports of company, web site, books, articles and journals, company documents, etc. The financials for last ten years were collected from the financial report for each bank.

#### 4.3 Statistical tools used for Analysis

Value at Risk (VaR) method is practiced to predict market risk of each selected bank to understand the impact of risk and uncertainty. This method requires the historic values of the stock prices of each bank. The credit risk is calculated using the ratio Amount of Non-performing loans to Total Loan amount proposed by **Darmawi (2011)**. The correlation between the credit risk and market risk is derived using SPSS where the correlation is determined by Pearson model.

#### 4.4 Hypothesis of the study

**H<sub>0</sub>**: There is no correlation between market risk and credit risk between India and ASEAN

**H<sub>1</sub>**: There is a correlation between market risk and credit risk India and ASEAN

### 5. DATA ANALYSIS AND INTERPRETATION

#### Market Risk

The study includes daily data from the Indian stock market (NSE), with the data period spanning from 31<sup>st</sup>, July, 2008 to 30<sup>th</sup>, July, 2018, and the estimation period spanning 1<sup>st</sup>, August, 2018 to 31<sup>st</sup>, December, 2018.



This is data of stock market prices of 2469 observations, so there are 2468 returns. VaR is calculated using the formulas: VaR95%= PERCENTILE (profit/loss range, 5%) or VaR99%= PERCENTILE (profit/loss range, 1%). VaR through historical simulation method is considered the best framework for estimating market risk. This model is intended to avoid exceptions when the actual losses are more than the estimated loss. There is a fixed possibilities that losses suffered during the holding period will be less or greater than the VaR amount.

**Indian banks**

**Table-1.1: Table showing market risk of Indian Banks**

VaR	BOI	SBI	Indian Bank	IOB	UCO	BOB	ICICI	AXIS
95%	-0.04287	-0.03396	-0.03939	-0.03609	-0.04012	-0.03704	-0.036632	-0.03628
99%	-0.06836	-0.05316	-0.063868	-0.06200	-0.06474	-0.06084	-0.062769	-0.06376

From the above table, we can see that VaR with confidence level of 95%, the bank which has higher rate of market risk compared to others is Bank of India closely followed by Uco Bank. State Bank of India has the lower rate of market risk. VaR with 99% confidence has also the same results as above.

**ASEAN banks**

**Table-1.2: Table showing market risk of ASEAN Banks**

VaR	DBS	UOB	Bank Negara	Bank Rakyat	Krung Thai	Siam Comm.	RHB	Alliance
95%	-0.04059	-0.04015	-0.06522	-0.07056	-0.0524	-0.045702	-0.04145	-0.041095
99%	-0.02213	-0.02231	-0.03502	-0.03746	-0.02899	-0.028302	-0.02132	-0.023458

The above table shows that VaR with confidence level of 95%, the bank which has higher rate of market risk compared to others is Bank Rakyat closely followed by Bank Negara, both the banks are from Indonesia. United overseas Bank has lower rate of market risk compared to others. VaR with 99% confidence has also the same results as above.

If we compare the market risk of Indian and ASEAN Banks as whole, Indonesia has more rate of market risk compared to other countries.

**CREDIT RISK**

The Credit risk can be defined as the potential of the bank borrower or counterparty who fails to fulfill their obligations with the agreed terms from the bank. The credit risk is calculated using the ratio The Amount of Non-performing loans to Total Credit/Loan amount. The study includes annual data from company’s annual report for the period 31<sup>st</sup>, July, 2008 to 30<sup>th</sup>, July, 2018. The obtained credit risk data is shown in the below table 1.3.

**Table-1.3: Table showing credit risk of Indian and ASEAN Banks**

Country	Bank	Credit risk
INDIA	State Bank of India	0.034895573
	Bank of India	0.043993634
	Indian Bank	0.030996963
	Indian overseas Bank	0.068735412
	Uco Bank	0.054660385
	Bank of Baroda	0.028736136
	ICICI Bank	0.028310112
	Axis Bank	0.015268459
SINGAPORE	DBS	0.014682589
	UOB	0.019627089
INDONESIA	Bank Negara	0.031662587
	Bank Rakyat	0.041510477
MALAYSIA	Alliance Bank	0.009558065
	RHB Bank	0.013995141
THAILAND	Krung Thai Bank	0.019604141
	Siam Commercial Bank	0.016744924

The limit of credit risk is 5% set by the World Bank which shows that banks having less than specified credit risk are able to manage their credit risk successfully and minimize their risk of bad credit. The condition of lower credit risk arises when the banks give credit to the productive sector and works on lowering the Non Performing Loans (NPL). From the above table, we can see that all the selected banks from India and ASEAN have maintained the limit of credit risk rate except two Indian banks which are UCO Bank and Indian Overseas Bank having credit risk of 5.56% and 6.87% respectively.

Among India, the bank which has the lowest credit risk is Axis bank with the credit risk of 1.53% whereas Indian overseas bank has the highest credit risk compared to other Indian Banks. Among ASEAN Banks, Alliance Bank of Malaysia has the lowest credit risk of 0.96% whereas Bank Rakyat of Indonesia has the highest credit risk of 3.16%.

**CORRELATION BETWEEN MARKET RISK AND CREDIT RISK OF INDIAN AND ASSEAN BANKS**

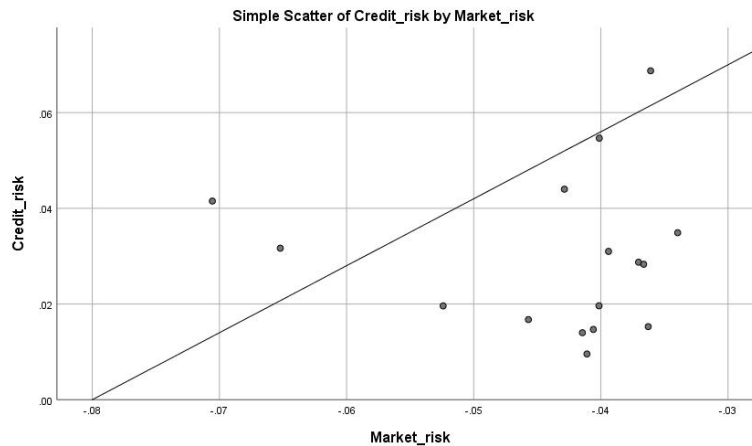
The correlation coefficient calculates the strength and connection between two variables. The value of correlation varies from +1 to -1. Correlation estimates the strength and direction of linear relationship between the variables.

**Table-5.4: Table showing correlation coefficient of market risk and credit risk**

**Correlations**

		Market risk	Credit risk
Market risk	Pearson Correlation	1	.033
	Sig. (2-tailed)		.903
	N	16	16
Credit risk	Pearson Correlation	.033	1
	Sig. (2-tailed)	.903	
	N	16	16

**Graph-5.4: Graph showing correlation coefficient of market risk and credit risk**



The above table and graph shows that the correlation between market risk and credit risk of Indian and ASEAN banks which shows that there is 3% relationship between the market risk and credit risk of Indian and ASEAN banks. The few points in graph are close to the line but other points are far from it, which indicates only a moderate linear relationship between the variables. The direction of the relationship is positive which shows that market risk and credit risk are positively correlated. The increase in 1% of market risk tends to increase .033% of credit risk. So, reject ( $H_0$ ) and accept  $H^1$ . There is a correlation between market risk and credit risk of Indian and ASEAN banks. This explains that market and credit risk are related to each other in a way that the probability of the non-performing loans (NPL) unexpectedly changes the credit risk.

**6. CONCLUSION**

The study measures the market risk and credit risk of selected banks from Indian and ASEAN region. To measure market risk, VaR tool is used at the confidence level of 95% and 99%. VaR with confidence of 95% tells that the loss won't exceed the estimated value similarly VaR with of 99% also points out the same. Among Indian and ASEAN region, Bank Rakyat from Indonesia is having higher rate of market risk compared to others

banks which means Bank Rakyat is more prone to market risk compared to other banks. So, the bank needs to work on mitigating the risk through the technique forecasting and try to study the environment on time to time. World Bank has set the limit of credit risk at 5%, rate below this shows that the bank is able to manage their credit risk successfully and can minimize the risk. A good credit of a bank implies that the bank is getting timely repayment of interest and loan principal by their customers. All ASEAN and Indian banks have maintained the limit of credit risk except two Indian banks which shows that the borrowers or counterparties are not able to meet their obligation and they are not getting timely repayments of the interest and loan principal which it has granted to their clients, this in turn can affect the performance of the bank or survival of the business. To avoid this situation, banks can adopt strategies to reduce risk, follow effective method of credit recovery from their clients, banks can commence separate department of loan recovery which works to reduce the NPL. From the analysis, we can say that Axis Bank, ICICI Bank, Bank of Baroda, State Bank of India and Indian Bank which has already set up in ASEAN countries are continuing their operations without any hardships compared to other Indian banks which are Bank of India, Indian Overseas Bank and UCO Bank as their credit risk rate is also high compared to other banks. Overall if we see Indian banks are more prone to market risk as compared to ASEAN banks and Indonesia from ASEAN region is facing more credit risk.

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**SALESMAN'S PREDISPOSITION TOWARDS BUYERS – A RETAIL PERSPECTIVE; AN ANALYSIS IN THE CITY OF BANGALORE****AVR Mahadev<sup>1</sup> and Dr. Satish Kumar<sup>2</sup>**Research Scholar<sup>1</sup>, Management Studies, Jain University  
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**ABSTRACT**

*This paper attempts to measure the attitude of the salesperson towards the customers, the predisposition if any, can be a hindrance in making a sales interaction successful. The study thus undertaken has revealed the intensity of such predisposition, the salespersons across ten different retail businesses in classifying the customers as a preferred customer or a non-preferred customer based on the data assumed by the salespersons.*

*It has been found that there is evident discrimination of customers to be treated as preferred and non – preferred. Six noticeable characteristics of customers in categorizing them to be fit for preference were validated as the reasons for discriminations. The intensities of these discriminations varied across retail outlets across the ten industries studied. It was also found that the intensity of the discrimination between preferred and non-preferred customers was varying across the industries for the factors of discrimination.*

*The bias thus exhibited by the salespersons is more because of the predisposition they have towards the customers. This demonstrates the very clear case of a preset mind influencing the behaviour of the salespersons.*

*Keywords: Salesperson, predisposition, preferred customers, Differential treatment.*

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**INTRODUCTION**

A Salesperson's typical job involves a lot of interactions with the prospective customers. Verbal, virtual, telephonic, and email being the array of communication tools used. Each prospect does create an impression in the salesperson's mind through the various modes of interaction.(Wise, G. L. (1974), A mental map of the customer is made by the salesperson by his experience over a range of time. A stereotyping made in categorizing customers into various types by his/her own perceptions developed by his/her previous experiences(Paparoidamis, N. G., &Guenzi, P. (2009). This is applicable to the salespersons across all formats of sales.

This study focused on the impact of the stereotyping retail salespersons develop in their interactions with customers, a regular continuous one(Stock, R. M., & Hoyer, W. D. (2005). This stereotyping is a result of their mindsets developed over time and thus leading to a predisposition towards each of the customer. There are various considerations each salesman will have in his mind to "classify" the prospective customers to be "Preferred" or Non-Preferred". (Singh, R., &Venugopal, P. (2015), Chen, Y., Rivas, A. A., & Wu, W. (2018),

Each sales interaction requires a sequence of efforts by the salesperson to make it successful. There are various types of efforts the retail salesperson needs to put in to complete a sale. These efforts are influenced by the image/perception the salesperson has on the prospective customer. ((Gillis, C., Pitt, L., Robson, M. J., &Berthon, P. (1998).

This study thus focused on the impact of the factors of classification of a customer to be preferred or non-preferred Evans, K. R., Kleine,Robert E., I,II, Landry, T. D., & Crosby, L. A. (2000)and the intensity of the efforts in the process of in person sale of a retail product. The results are varying across businesses largely based on their nature of target customers.

**Methodology**

A salesperson can have a predisposition in case of retail sales across different types of retail outlets and product industries.

Based on the inputs through personal interviews with select retailers across a mix of the retail outlets in the city, the parameters chosen by the retailers to arrive at the profiling of the customers were taken(Thomas, R. W., Soutar, G. N., & Ryan, M. M. (2001). The Individual characteristics of the prospective customers were thus arrived at in the following order:

1. Group size
2. Relationships within the group
3. Nativity

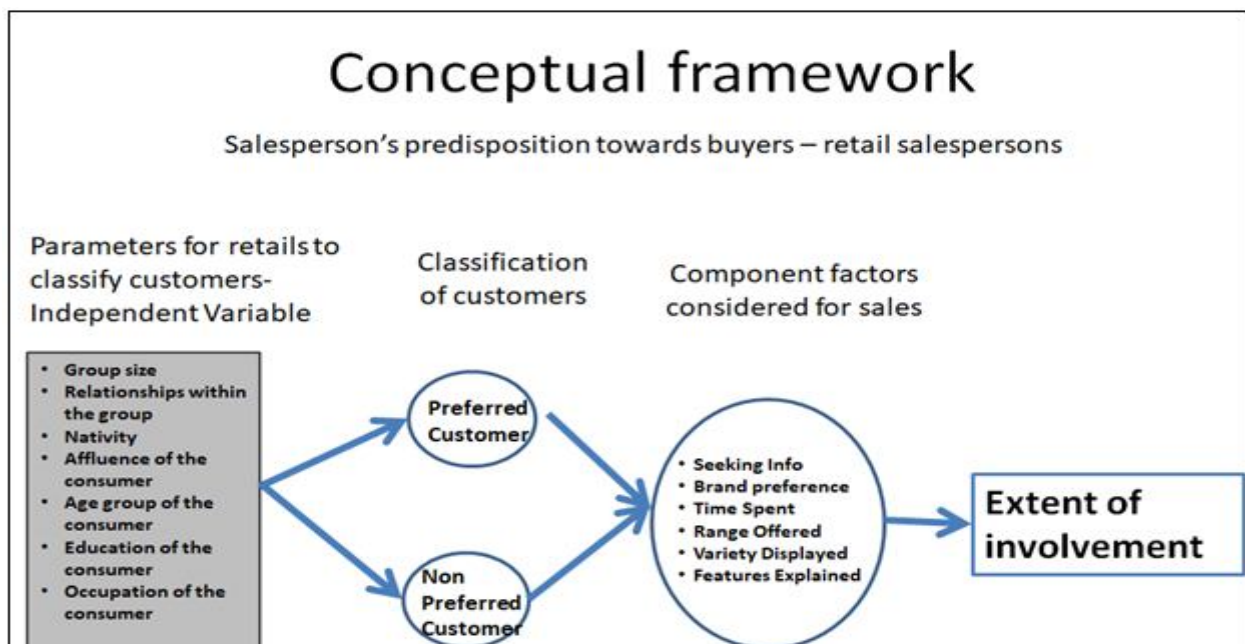
4. Affluence of the consumer
5. Age group of the consumer
6. Education of the consumer
7. Occupation of the consumer

In the interaction the salesperson has with the prospective customer, the following are the indicators for a retail sale that reflect the involvement the salesperson has with the customer.

1. Seeking Information from the customer of his needs, product specifications, etc. This information of the customer is the most vital input a salesman would seek to decipher the right product- profile mix and thus offer the most suitable product. (Sharma, A. (2001)
2. Brand preference: The preference of the brands the customer intends to purchase. Here the brand choice of the customer is also a very important factor in suggesting the product as this would enable the salesperson to give the maximum satisfaction to the customer, including his emotional relationship with brands.(Pettijohn, C. E., Pettijohn, L. S., & Taylor, A. J. (2002).
3. Time spent with the customer in the complete interaction from the beginning to the conclusions the customer arrives at. Again a very strong indicator of the effort the salesperson would put in to have a satisfactory transaction. And also indicates the importance given to the customer in the transaction (Davis, H. L., & Silk, A. J. (1972).
4. Range offered: The range of products/ offered to the customer on parameters of Price, utility, functionality and benefits for the end user.(Davis, D. D. (2008).
5. Variety Displayed: To help the customer make the right choice of products and also to make the right choice of the products, the variety of products displayed to the customers is very crucial. (Dawson,LyndonE.,Jr, Soper, B., &Pettijohn, C. E. (1992).
6. Features Explained: A customer would like to understand the features of the products displayed that differentiate each product from the other. In this process, the complete knowledge of the product that the customer chooses would be very crucial to make a sales transaction successful. (Aggarwal, P., Castleberry, S. B., Ridnour, R., & Shepherd, C. D. (2005).

The intensity and scope of these six variables may not be uniform across all the categories of retailers (Chen, Y., Rivas, A. A., & Wu, W. (2018).Retail outlets where the interaction between salespersons and customers is very intense(Das, G., Mukherjee, A., & Smith, R. J. (2018). and of considerable duration were needed to be chosen. These are the outlets where the predisposition of the salesperson is measurable as this requires both knowledge of the salesperson and the intensity of the discussion have a prominent role.

The following Conceptual framework describes the study diagrammatically.



**DATA COLLECTION**

Questionnaires (Appendix 1) were distributed to various salespersons with the retailers. Based on the responses those were thus obtained from the retailers, data of 477 questionnaires across various businesses retailers have been analyzed.

The questionnaire had three parts. Part 1 was used to capture the specific product category the retail outlet deals with.

Part two was used to understand the specifics of the target segment on the characteristics which the salesman carries in his mind for the preferred customer.

Part 3 of the questionnaire was a Likert Scale (1-5) based measure of the involvement of the salesperson in the six steps of the sales process. Here 1 is the least amount of involvement in the steps of the sales process, while 5 represents the maximum involvement.

The following retail stores were chosen by random sampling considering the population of the stores across the city of Bangalore and on the fitment of criteria to validate the study.

1. Apparels: 59
2. Artefacts: 47
3. Computers: 50
4. Consumer Durables: 38
5. Cosmetics: 38
6. Footwear: 40
7. Furniture: 50
8. Jewelers: 57
9. Mobiles: 49
10. Restaurants: 49

**HYPOTHESES**

H01: There is no difference in the level of seeking information from the customer based on preferred customer or non- preferred customer considering

H11: There is difference in the level of seeking information from the customer based on preferred customer or non- preferred customer considering

H02: There is no difference in the level of Brands considered for the customer based on preferred customer or non- preferred customer considering

H12: There is difference in the level of Brands considered for the customer based on preferred customer or non- preferred customer considering

H03: There is no difference in the level of Time Spent with the customer based on preferred customer or non- preferred customer considering

H13: There is difference in the level of Time Spent with the customer based on preferred customer or non- preferred customer considering

H04: There is no difference in the Range offered to the customer based on preferred customer or non- preferred customer considering

H14: There is difference in the Range offered to the customer based on preferred customer or non- preferred customer considering

H05: There is no difference in the Variety Displayed to the customer based on preferred customer or non- preferred customer considering

H15: There is difference in the Variety Displayed to the customer based on preferred customer or non- preferred customer considering

H06: There is no difference in the Features Explained to the customer based on preferred customer or non-

preferred customer considering

H16: There is no difference in the Features Explained to the customer based on preferred customer or non-preferred customer considering

Table 4.1: Profile of Customers preferred by the Sales People of Different Product Categories

Following is the inference from the statistical data gathered with regard to the profile of the customers preferred by the salespersons across the different industry retailers.

Product Category	Size of the Group	Relationship with in the group	Income level of the Group	Age Group	Education Level of the group
Apparel	Up to 4 Members	Family & Friends	More than Rs. 30,000 per month	15 - 30 years	No Preference for Education
Restaurants	More than 2 members	Family, Friends & Colleagues	More than Rs. 10,000 per month	All age groups	At least a Graduate
Computers	Up to 4 Members	Family & Friends	More than Rs. 30,000 per month	Above 21 years	At least a Graduate
Artefacts	Any Number	Family & Friends	More than Rs. 30,000 per month	Above 21 years	At least a Graduate
Mobile Phones	Up to 4 Members	Family & Friends	More than Rs. 10,000 per month	Above 21 years	No Preference for Education
Appliances	More than 2 members	Family & Friends	All Income groups	21 - 45 years	At least a Graduate
Cosmetics	Up to 4 Members	Family & Friends	More than Rs. 30,000 per month	21 - 45 years	No Preference for Education
Footwear	Up to 4 Members	Family & Friends	More than Rs. 30,000 per month	15 - 45 years	No Preference for Education
Furniture	More than 2 members	Family & Friends	More than Rs. 30,000 per month	Above 30 years	At least a Graduate

Source: Primary data

**Inference**

The expectation of the retailers across different industry segments is as follows

1. Family and Friends are the relationships the customers share with the people who accompany them for the shopping. Customers also include their colleagues as their accompanying group members in the case of Restaurants.
2. The group size is the highest of up to 4 members. But is more significant for the Restaurants, Appliances and Furniture with a minimum of 2 members being part of the customer group. An individual customer visiting the outlet is possible with the other business segments like Apparel, Computers, Mobile Phones, Cosmetics, Footwear. The retail customer groups of Artefacts don't have any specific size of the groups and the composition of the group can be any number.
3. The monthly income expected of the customers across the different industry retail customers is a minimum of Rs. 30,000/- except in case of Restaurants and Mobile phones. There is no such expectation of the minimum income of the customers for the Appliances industry retail outlets.
4. The minimum age of the customers is expected to be 21 years by the retailers of the Computers, Artefacts, Mobile Phones, Appliances and Cosmetics industries
5. The minimum age of the customers is expected to be 15 years by the retailers of the Apparel and Footwear industries.
6. The minimum age of the customers is expected to be 30 years by the retailers of the Furniture products
7. Restaurants do not have specific age profile of the expected customers.
8. The maximum age of a customer is desired to be 30 years by the Apparel Retailers but as 45 years by the Appliances, Cosmetics and Footwear Retailers.
9. No such upper age criterion exists for the Computers, Artefacts, Mobile Phones and Furniture retailers.
10. With regard to the education profile of the customers, Restaurants, Computers, Artefacts, Appliances and Furniture retailers expect them to be at least a graduate.

11. No such educational expectation of the customers exists for the Apparel, Mobile Phones, Cosmetics and Footwear retailers.

**Table-4.2: Involvement level of Sales people for different product Categories for a Preferred Customer**

ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
Seeking Information from the Preferred Customer	Between Groups	34.609	9	3.845	6.016	0.000
	Within Groups	298.502	467	0.639		
	Total	333.111	476			
Sales Person's Suggestion for the Preferred Customer in choosing the Brand / Product	Between Groups	153.133	9	17.015	12.917	0.000
	Within Groups	615.173	467	1.317		
	Total	768.306	476			
Time Spent by the Sales Person with the Preferred Customer	Between Groups	57.342	9	6.371	8.821	0.000
	Within Groups	337.304	467	0.722		
	Total	394.646	476			
Price Range of Products shown to the Preferred Customer	Between Groups	151.897	9	16.877	14.724	0.000
	Within Groups	535.311	467	1.146		
	Total	687.208	476			
Variety of Products / Brands shown to the Preferred Customer	Between Groups	56.703	9	6.300	7.406	0.000
	Within Groups	397.264	467	0.851		
	Total	453.966	476			
Features/ Benefits / Applications explained to the Preferred Customer	Between Groups	38.206	9	4.245	4.723	0.000
	Within Groups	419.761	467	0.899		
	Total	457.966	476			

Source: Primary data

**Table-4.3: Post Hoc Analysis – ANOVA**

Seeking Information from the Preferred Customer

Tukey B

Product Category	N	Subset for alpha = 0.05			
		1	2	3	4
Restaurants	49	3.653			
Artefacts	46	3.717			
Furniture	51		4.020		
Footwear	40		4.025		
Appliances	38		4.105		
Apparel	59		4.136		
Mobile Phones	49		4.163		
Cosmetics	38			4.289	
Computers	50			4.340	
Jewelry	57				4.579

Source: Primary data

**Table-4.4: Seeking Information from the Non - Preferred Customer Tukey B**

Product Category	N	Subset for alpha = 0.05						
		1	2	3	4	5	6	7
Furniture	51	1.784						
Footwear	40	1.900						



Cosmetics	38		2.211				
Restaurants	49		2.388	2.388			
Mobile Phones	49			2.408			
Apparel	59				2.610		
Artefacts	46					2.957	
Jewelry	57					3.053	
Appliances	38						3.237
Computers	50						3.560

Source: Primary data

**Inference**

Restaurants and Artefacts make the least effort for seeking information from the customers while Cosmetics, Computers and Jewelry outlets make the maximum effort in seeking information from the customers.

Computer retailers make the maximum effort in seeking information from a non-preferred customer, while Jewelry outlets do not put in as much effort as they would do for preferred customers.

**Table-4.5: Sales Person's Suggestion for the Preferred Customer in choosing the Brand / Product -Tukey B**

Product Category	N	Subset for alpha = 0.05			
		1	2	3	4
Restaurants	49	2.286			
Artefacts	46		3.370		
Jewelry	57		3.491		
Furniture	51			3.863	
Footwear	40			4.000	
Appliances	38			4.026	
Computers	50			4.040	
Apparel	59			4.051	
Mobile Phones	49				4.245

Source: Primary data

**Table-4.6: Sales Person's Suggestion for the Non - Preferred Customer in choosing the Brand / Product - Tukey B**

Product Category	N	Subset for alpha = 0.05			
		1	2	3	4
Restaurants	49	1.571			
Cosmetics	38		2.026		
Jewelry	57		2.070		
Footwear	40		2.225		
Furniture	51		2.275		
Mobile Phones	49		2.347		
Apparel	59		2.373		
Artefacts	46			2.587	
Computers	50				3.120
Appliances	38				3.316

Source: Primary data

**Inference**

Restaurants put in least effort in pushing a brand to the preferred customers while the maximum effort for brand push comes from the mobile phone outlets.

There is significant decrease in the involvement of salespersons in suggesting the brands to choose among the Mobile phones, Apparel and Appliances in the case of non-preferred customers.

**Table-4.7: Time Spent by the Sales Person with the Preferred Customer - Tukey B**

Product Category	N	Subset for alpha = 0.05				
		1	2	3	4	5
Restaurants	49	3.408				
Artefacts	46		3.630			
Furniture	51			3.843		
Footwear	40			3.975		
Apparel	59			4.119		
Mobile Phones	49				4.286	
Computers	50				4.340	
Jewelry	57				4.351	
Cosmetics	38					4.421
Appliances	38					4.553

Source: Primary data

**Table-4.8: Time Spent by the Sales Person with the Non - Preferred Customer- Tukey B**

Product Category	N	Subset for alpha = 0.05				
		1	2	3	4	5
Furniture	51	1.608				
Footwear	40	1.675				
Cosmetics	38		2.105			
Mobile Phones	49		2.286			
Restaurants	49		2.347			
Apparel	59			2.475		
Jewelry	57				2.614	
Artefacts	46				2.783	
Appliances	38					3.079

Source: Primary data

**Inference**

Restaurants spend the least amount of time relatively among the businesses and Appliances and cosmetics retail outlets spend the maximum time with Preferred customers.

In the case of non-preferred customers, Appliances outlets are the ones that spend the maximum time relatively while cosmetic outlets are the most noticeable in choosing to spend very less relative time with the non-preferred customers.

**Table-4.9: Price Range of Products / Services shown to the Preferred Customer - Tukey B**

Product Category	N	Subset for alpha = 0.05				
		1	2	3	4	5
Restaurants	49	2.531				
Furniture	51		3.392			
Footwear	40			3.600		
Artefacts	46			3.674		
Apparel	59			3.898		
Appliances	38				4.079	
Computers	50				4.120	
Mobile Phones	49				4.163	
Jewelry	57					4.439
Cosmetics	38					4.605

Source: Primary data

**Table-4.10: Price Range of Products shown to the Non - Preferred Customer Tukey B**

Product Category	N	Subset for alpha = 0.05			
		1	2	3	4
Restaurants	49	1.571			
Footwear	40	1.850			

Furniture	51	1.941			
Mobile Phones	49		2.163		
Apparel	59		2.305		
Cosmetics	38		2.316		
Jewelry	57		2.386		
Artefacts	46			2.826	
Computers	50				3.140
Appliances	38				3.237

Source: Primary data

**Inference**

Cosmetics and Jewelry salespersons will show the highest spread of price range of products in the case of preferred customers while Restaurants are very not responsive in the price range of products shown to the customers, either preferred or non-preferred customers.

Computers and Appliances salespersons do show a wider range of products across all types of customers.

**Table-4.11: Variety of Products / Brands shown to the Preferred Customer- Tukey B**

Product Category	N	Subset for alpha = 0.05		
		1	2	3
Restaurants	49	3.306		
Artefacts	46	3.478		
Furniture	51		3.941	
Computers	50		4.000	
Footwear	40		4.000	
Apparel	59		4.051	
Appliances	38		4.053	
Jewelry	57			4.298
Mobile Phones	49			4.306
Cosmetics	38			4.526

Source: Primary data

**Table-4.12: Variety of Products / Brands shown to the Non - Preferred Customer - Tukey B**

Product Category	N	Subset for alpha = 0.05		
		1	2	3
Footwear	40	1.950		
Apparel	59	2.220		
Furniture	51	2.235		
Cosmetics	38	2.237		
Jewelry	57	2.263		
Mobile Phones	49	2.408		
Restaurants	49	2.449		
Artefacts	46		2.717	
Computers	50			3.160
Appliances	38			3.237

Source: Primary data

**Inferences**

Jewelry, Mobile phones and cosmetics retail salespersons show the widest variety of products to the customers but is the lowest in case of restaurants and artefacts category of products.

The highest disparity of customers is more evident in the case of Footwear, Apparel, Furniture, Cosmetics, Jewelry, Mobile Phones and Restaurants for the non-preferred customer categories

**Table-4.13: Features/ Benefits / Applications explained to the Preferred Customer- Tukey B**

Product Category	N	Subset for alpha = 0.05			
		1	2	3	4
Artefacts	46	3.500			
Restaurants	49	3.633			

Footwear	40		3.800		
Furniture	51		3.863		
Apparel	59		3.949		
Computers	50			4.100	
Appliances	38			4.132	
Cosmetics	38			4.158	
Mobile Phones	49			4.265	
Jewelry	57				4.456

Source: Primary data

**Table-4.14: Features/ Benefits / Applications explained to the Non - Preferred Customer - Tukey B**

Product Category	N	Subset for alpha = 0.05		
		1	2	3
Footwear	40	1.750		
Apparel	59	2.153		
Cosmetics	38	2.211		
Furniture	51	2.255		
Mobile Phones	49	2.306		
Restaurants	49	2.408		
Jewelry	57		2.561	
Artefacts	46		2.674	
Appliances	38		2.868	
Computers	50			3.180

Source: Primary data

**Inference**

Jewelry Salesmen are the most effective in explaining the Features/ Benefits / Applications of the end products in the case of preferred customers while computers do focus on the explaining of features and benefits in the case of non- preferred customers.

The disparity of preferred and non-preferred customers is more evident in the case of Footwear, Apparel, Cosmetics, Furniture, Mobile Phones, Restaurants category of retailers.

**DISCUSSION**

- The focus of this research was to identify and measure the involvement the retail salespersons the different retail businesses outlets have towards the range of customers that are visitors to the outlets
- The outlets since are chosen randomly based on the density of these business areas of Bangalore, are indicative and are limited to these areas of Bangalore
- Ten different businesses of retail outlets were found to have different behavior in their choice of customers whom they have categorized as preferable and non-preferable.
- The initial impressions the salespersons have on the customers is vital for their treatment of customers first by categorizing them as preferable or non-preferable.
- Across all the business types of outlets, it has been observed that some businesses are very intensely biased towards customers while some of them are not so sensitive to their categorization and the treatment they further give to the customers.
- Noticed more openness to customers and less bias in those businesses that require extensive feature explaining etc., to have the influence of customers and are actually universal products that have a little scope for differentiation and intensity of the product range.

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**A STUDY ON EMPLOYEE WELLNESS PROGRAMS AND ITS IMPACT ON PERFORMANCE AND TURNOVER WITH REFERENCE TO SOFTWARE COMPANIES IN CHENNAI**

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**ABSTRACT**

*Employee Wellness Programs or Workplace Wellness Programs is the recent benefit topping the Workplace Welfare charts of any organization. The importance of employee wellness Programs is widely popular in many countries as governments have started to think on the health aspects of employees in the work place. The enormous change in the lifestyle has a drastic and direct impact on the health of an Individual and also their attitude towards regularity, punctuality and their work. Frequent leave taking due to sickness, no top management support or care makes the employee frustrated and thereby dilutes their work performance which subsequently leads to delay, pressure, stress and finally quitting the organization. The reason for organizations to think on these lines of wellness Programs are due to increase in labour turnover, health hazards due to stress, increasing work pressure, unbalancing of Work and family life. Employees feel that due to continuous technological advancement and Competitive Scenario, Organizations put forth Deadlines, more pressure on performance and outcome. Due to this employees get drained and they start getting a negative approach towards work and the organization which leads a wide gap in the area of Employee Retention. Positive efforts are made by organizations to invest in these Programs in and out of the organization which would yield a good organization culture and a strong employer and employee relationship which aides for overall development of the organization.*

*The additional factors which corporate are concerned are because of the increased competitiveness and technological innovations across the globe. Cross countries competitive scenario has made companies to practice Lean and mean strategy in the wholesome operations of the entire HR functions primarily focusing on downsizing, elimination of employees in the units. These factors prove to have a costly impact on the health of employees which results in stress, low performance and ends in Labour turnover.*

*Software Companies due to the everyday mushrooming of new technologies leave them in state of race for updating and up gradations, to enable them to be relevant, competitive and performer. There arises a need for a comprehensive wellness program package to combat the level of stress at work place and balancing work and family. The Indian software industry has been a remarkable success story, with its ability to successfully access, learn and develop to the technological standards of global leaders.*

*A study was undertaken with a help of a structured questionnaire to analyze the effect of Employee wellness programs and its impact on Performance and Turnover in Software companies. For this various software companies were taken for study, the intricacies in terms of differences among companies the way it was perceived by the employees. The sample for the Study was 600 employees who work in the lower and middle level management of these companies. Structured questionnaire was administered to the respondents to gather the primary data. The relevant secondary data was collected through journals, magazines, newspapers, research articles, published information and details from websites of the software companies taken for study. The results showed a positive association between Employee wellness programs, performance and Turnover.*

*Keywords: Employee Wellness programs, Turn over, Performance, Stress, Health Hazards.*

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**INTRODUCTION**

Employee Wellness Programs or Workplace Wellness Programs is the recent benefit topping the Workplace Welfare charts of any organization. The importance of employee wellness Programs is widely popular in many countries as governments have started to think on the health aspects of employees in the work place. The enormous change in the lifestyle has a drastic and direct impact on the health of an Individual and also their attitude towards regularity, punctuality and their work. Frequent leave taking due to sickness, no top management support or care makes the employee frustrated and thereby dilutes their work performance which subsequently leads to delay, pressure, stress and finally quitting the organization. The reason for organizations to think on these lines of wellness Programs are due to increase in labour turnover, health hazards due to stress, increasing work pressure, unbalancing of Work and family life. Employees feel that due to continuous technological advancement and Competitive Scenario, Organizations put forth Deadlines, more pressure on performance and outcome. Due to this employees get drained and they start getting a negative approach towards work and the organization which leads a wide gap in the area of Employee Retention. Positive efforts are made

by organizations to invest in these Programs in and out of the organization which would yield a good organization culture and a strong employer and employee relationship which aides for overall development of the organization.

The additional factors which corporate are concerned are because of the increased competitiveness and technological innovations across the globe. Cross countries competitive scenario has made companies to practice Lean and mean strategy in the wholesome operations of the entire HR functions primarily focusing on downsizing, elimination of employees in the units. These factors prove to have a costly impact on the health of employees which results in stress, low performance and ends in Labour turnover.

Software Companies due to the everyday mushrooming of new technologies leave them in state of race for updations and up gradations, to enable them to be relevant, competitive and performer. There arises a need for a comprehensive wellness program package to combat the level of stress at work place and balancing work and family. The Indian software industry has been a remarkable success story, with its ability to successfully access, learn and develop to the technological standards of global leaders. India is the world's largest sourcing destination for the information technology (IT) industry, accounting for approximately 67 per cent of the US\$ 124-130 billion market. The industry employs about 10 million work forces. There is an enormous rapid growth and development in the IT industry. The scope of IT industry in Chennai is growing as there are many IT companies emerging in Chennai. There are many people who are working in the IT industry and developing the quality of human life. It has changed the life style of people and progressively increased the economy of Indian people. In the software segment, there are 1000 companies in and around Chennai employing more than 3, 50,000 professionals and with annual exports exceeding \$ 25 billion.

#### **LITERATURE REVIEW**

The study done by **Janice T.S. Ho (Division of Human Resource and Quality Management, Nan yang Business School, Nan yang Technological University, Singapore 2016)** indicate that employees in organizations with wellness programs generally have a more positive attitude towards their organizations, show higher job satisfaction and satisfaction with the benefits provided for them. As employees are conscious about health hazards, Organization's should not delay nor show less interest to adopt health promotion activities in the workplace.

The study by **Rand, 2013** analyzed that due to illness and absence from work (absenteeism) that is there a loss of productivity and performance while at work (presenteeism). The impact of chronic disease on employee health and well-being, the cost of healthcare coverage, and loss of competitiveness, employers are adopting to health promotion and disease prevention strategies, commonly referred to as workplace wellness programs. The program had high employee engagement. After 1 year, the benefits included clinically important improvements in physical and mental health.

**Yu and Bang (2013) stated that there is** a link between employee health, lost work time and productivity. As healthcare issues are grabbing greater there is a great impact of improved health on company's performance.

The study by **DaCosta, Deborah, PhD; Joseph, Lawrence, PhD; Grover, Steven, A., MD, MPA 2011** was to evaluate the impact of an employee wellness program in Canada adopted a comprehensive Wellness program including lifestyle challenges was analysed to understand the effect of annual health screenings. The findings were positive and companies started practicing it for the welfare of its Employees.

**Gerdeset. Al (2009)** described that employee wellness programs focus on promoting healthy behaviors and correcting employee's poor health in ways that also enhance the performance and productivity of the organization.

#### **OBJECTIVES OF THE STUDY**

To analyze the impact of Employee Wellness Programs on Employee performance

To analyze the impact of Employee Wellness Programs on Employee Turnover.

#### **METHODOLOGY**

A study was undertaken with a help of a structured questionnaire and a statistical method of drawing representative data by selecting people because of the ease of their volunteering or selecting units because of their availability or easy access was adopted to analyze the effect of Employee wellness programs and its impact on Performance and Turnover in Software companies. For this various software companies were taken for study, the intricacies in terms of differences among companies the way it was perceived by the employees. The sample for the Study was 600 employees who work in the lower and middle level management of these



companies. By using a large, convenient size, we will be able to conclude confidently that the sample represents the population. Structured questionnaire was administered to the respondents to gather the primary data .The relevant secondary data was collected through journals, magazines, newspapers, research articles, published information and details from websites of the software companies taken for study.

**HYPOTHESIS TESTING**

Hypotheses were formulated to identify the association of Wellness Programs in relation to Employee Performance and Turnover. Chi –square analysis was done to get the results of the study. To obtain accurate statistical inferences testing of hypothesis is essential and its very popular and widely adopted strategy in decision making in business. Hypothesis were formulated to test whether there is relationship between,

Employee Wellness Programs and Employee Performance

Employee Wellness Programs and Employee Turnover

**LIMITATIONS OF THE STUDY**

The study is a sample based study and the inferences derived from the analysis and interpretation are expected to be representative of the total population However the study is subject to following limitations:

1. The area of the study is limited to city of Chennai, State of Tamil Nadu, India. Hence the sample may have the limitations pertaining to the area, tradition, custom and culture of the people in that place. The survey was conducted during the period of 2017-18, in which the inference also based on the period only not able to implement in future IT environment.
2. The researcher has mainly concentrated on the software companies, which has made it difficult to judge the impact across other industries. The outcome of the study cannot be generalized, as the data has been collected only from a section of employees and not from the entire organization.
3. There are many variables having an impact on Performance and Turnover apart from employee Wellness Programs which was not researched. The study was conducted under the assumption that the information given by the respondents are authentic.

**DATA INTERPRETATION**

**Descriptive Analysis**

**Table No-1: Table showing Employee Wellness Programs in the Organization**

<b>Opinion</b>	<b>No. of Respondents</b>	<b>% of Respondents</b>
Strongly disagree	8	1.3
Disagree	21	3.5
Neutral	97	16.2
Agree	307	51.2
Strongly agree	167	27.8
<b>Total</b>	<b>600</b>	<b>100</b>

Source: Primary Data

**Interpretation**

The above table shows that majority of the respondents 51.2 Percent agree that Employee Wellness Programs are available in the organization and 27.8 Percent of respondents strongly agree to the point Employee Wellness Programs are available in the organization But 16.2 Percent are in the neutral status, 3.5 Percent disagree and 1.3 Percent strongly disagree that there is no Employee Wellness Programs available for them in the organization.

**Table No-2: Table showing Employee Wellness Programs reduce stress and helps in better Performance**

<b>Opinion</b>	<b>No. of Respondents</b>	<b>% of Respondents</b>
Strongly disagree	5	0.8
Disagree	14	2.3
Neutral	130	21.7
Agree	279	46.5
Strongly agree	172	28.7
<b>Total</b>	<b>600</b>	<b>100</b>

Source: Primary Data

**Interpretation**

The above table shows that the majority of the respondents 46.5 Percent agree that employee wellness Programs reduces stress and helps them to perform better and 28.7 Percent of respondents strongly agree to the same point. But 21.7 Percent are in the neutral status, 2.3 Percent disagree and 0.8 Percent strongly disagrees that the statement employee wellness programs reduces stress and helps in better performance.

**Table No-3: Table showing Employee Wellness Programs lead to reduction in employee Turnover**

Opinion	No. of Respondents	% of Respondents
Strongly disagree	10	1.7
Disagree	20	3.3
Neutral	122	20.3
Agree	280	46.7
Strongly agree	168	28.0
<b>Total</b>	<b>600</b>	<b>100</b>

Source: Primary Data

**Interpretation**

The above table shows that majority of the respondents 46.7 Percent agree that employee wellness programs leads to reduction in employee turnover in the organisation and 28 Percent of respondents strongly agree to the same point. But 20.3 Percent are in the neutral status, 3.3Percent disagree and 1.7 Percent strongly disagree that there is no connectivity between employee wellness programs and employee turnover.

**INFERENCE ANALYSIS -CHI-SQUARE TEST**

**Relationship between Employee Wellness Program and Performance**

H<sub>0</sub>: There is no significant relationship between Employee Wellness Program and Performance

H<sub>a</sub>: There is significant relationship between Employee Wellness Program and Performance

**Table No-4: Table Showing the Relationship between Employee Wellness Program and Performance**

	Value	Degrees of Freedom	Asymp. Sig (2 – Sided)
Pearson Chi – Square	8.181 <sup>a</sup>	12	0.001
Likelihood Ratio	8.286	12	0.007
Linear – by – Linear Association	0.280	1	0.597
No. of Valid Cases	600		

Source: Calculated Data

**Interpretation**

The above table shows the relationship between Employee Wellness Program and Performance. It is observed that with Chi – Square value of 9 cells (45.0 Percent) have expected count less than 5. The minimum expected count is 1.00. The P value 0.001 is lesser than significance level 0.01, hence the null hypothesis is rejected and it is clear that there is significant relationship between the Employee Wellness Program and Performance.

**Relationship between Employee Wellness Programs and Employee Turnover**

H<sub>0</sub>: There is no significant relationship between Employee Wellness Programs and Employee Turnover

H<sub>a</sub>: There is significant relationship between Employee Wellness Programs and Employee Turnover

**Table No-5: Table Showing the Relationship between Employee Wellness Programs and Employee Turnover**

	Value	Degrees of Freedom	Asymp. Sig (2 – Sided)
Pearson Chi – Square	14.608 <sup>a</sup>	12	0.009
Likelihood Ratio	14.737	12	0.026
Linear – by – Linear Association	1.301	1	0.025
No. of Valid Cases	600		

Source: Calculated Data

**Interpretation**

The above table shows the relationship between Employee Wellness Programs and Employee Turnover. It is observed that with Chi – Square value of 6 cells (45.0 Percent) have expected count less than 5. The minimum expected count is 1.54. The P value 0.009 is lesser than 0.01 significance level, hence the null hypothesis is rejected and it is clear that there is significant relationship between Employee Wellness Programs and Employee Turnover.

**FINDINGS**

1. 79 Percent of the Employees agree that Employees are recognized by the Management for the Performance.
2. 75.2 Percent agree that Employee Wellness Programs help them to reduce stress and Perform Superior.
3. 74.7 Percent agree that Management care for them and offer suitable Wellness Programs
4. 73.3 Percent agree that Employees get a Sense of belongingness towards the organization.
5. 74.7 Percent agree that there is a reduction in turnover due to Wellness Programs available in the organization.
6. 77.7 Percent agrees to the fact provision of Employee Wellness Programs improves the Morale of the Employees.
7. It is observed that with Chi – Square value of 9 cells (45.0 Percent) have expected count less than 5. The minimum expected count is 1.00. The P value 0.001 is lesser than significance level 0.01, hence the null hypothesis is rejected and it is clear that there is significant relationship between the Employee Wellness Program and Performance.
8. It is observed that with Chi – Square value of 6 cells (45.0 Percent) have expected count less than 5. The minimum expected count is 1.54. The P value 0.009 is lesser than 0.01 significance level, hence the null hypothesis is rejected and it is clear that there is significant relationship between Employee Wellness Programs and Employee Turnover.

**SUGGESTIONS**

**Based on the findings of the study the following recommendations are made**

1. Organizational fairness has a strong impact on Employees attitude and behavior so it has to be effectively practiced.
2. Organization should effectively deliver more Wellness Programs to keep employees at good health, work place advantages and rewards which in turn will give them a core group of highly engaged productive and committed Employees who are invested in their employers' long term success.
3. It is imperative for IT companies to review their practices to strengthen the bond between Employees and Organization, maintains good levels of motivation and Job Satisfaction by offering more Wellness Programs.

**CONCLUSION**

The study on Employee Wellness Program and its impact on employee performance and turnover have brought to light the positive effects of these wellness programs at work place. Wellness Programs have become a routine part of every organization as the entire human resource is foundation for successful business. Employees have to be provided relevant and suitable programs based on the need and requirements to overcome stress and become highly productive. The research also focuses on the same aspect to create a healthy work environment.

**SCOPE FOR FURTHER RESEARCH**

The experience while doing the current research work by the researcher helped to list out the following points for future study.

1. The research topic can be conducted in other industries.
2. The same research topic can be conducted analyzing other factors that has binding on Employee Wellness Program and comparisons can be made on the effectiveness.

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**A STUDY ON AN IMPACT OF COMMODITY MARKET ON STOCK MARKET IN INDIAN CONTEXT**

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**ABSTRACT**

*The commodities market works just like any other market. It is a physical or a virtual space, where one can buy, sell or trade various commodities at current or future date. India has six commodity exchanges Multi Commodity Exchange (MCX), National Commodities and Derivatives Exchange (NCDEX), National Multi Commodity Exchange, Indian Commodity Exchange, ACE Derivatives Exchange and the Universal Commodity Exchange.*

*The stock market refers to the collection of markets and exchanges where the regular activities of buying, selling and issuance of shares of publicly held companies take place. Such financial activities are conducted through institutionalized formal exchanges or over-the-counter (OTC) marketplaces which operate under the defined set of regulations*

*The objectives set for this research paper are to study the impact of Commodity Market on Stock Market, relationship between the selected variables and risk and return analysis. In this research paper, descriptive study is used and six variables are considered in Commodity i.e., Aluminium, Crude Oil, Copper, Gold, Silver, Zinc and one variable in Stock Market i.e., Sensex. Normality Test has been used for selected seven variables and found that alle not normally distributed. Further with that, Augmented Dickey Fuller Test (ADF) has been used for Unit Root and found that all variables except Gold are non-stationery. Hence, researcher converted all the variables into log returns. The result of Multi-Regression Analysis proved that there is no significant impact of Commodity Market to Stock Market and the Correlation result specifies that, there is no correlation between Stock Market to all selected Commodity Variables.*

*Keywords: Returns, Risk, Correlation, ADF Test.*

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**I. Introduction**

Commodity Market: A platform for the exchange of certain goods in bulk like grains, precious metals, natural gas etc. is called Commodity Market. The market works as long as the buyers and sellers of such commodities are active. The commodities market trading can happen either in spot market or futures market. The prices of traded commodity are not set by the exchanges but are determined by supply and demand factors.

The Commodity Market can be referred to a place, physical or virtual that enables the buying, selling and trading in raw or physical products. They are basically divided into hard and soft commodities. Hard commodities are natural resources that are mined or extracted whereas soft commodities are agricultural products or livestock.

Stock Market: It is a place where securities of various listed companies are traded. The securities are bought and sold between investors at the prevailing market price or the price agreed upon by both the parties. This market works under different set of regulations. The indices like NIFTY and SENSEX are the financial performance indicators of NSE and BSE respectively. The Stock Market refers to a place where buying and selling of stock in the nature of shares, debentures or bonds take place, through institutionalized formal exchanges or over-the-counter (OTC) that operate under the defined set of regulations.

**II. REVIEW OF LITERATURE**

Dr. Arvind Kumar Singh,, IJSRM volume 3 issue 12 Dec 2015, conducted a research study to conclude several things about the relationship between Commodity Market and Stock Market. They also considered those instances about the cyclical periods of time in between where they find some sort of negative correlation.

Pratap Kumar Jena and Phanindra Goyari, 22(1):37 49 · July 2016, The Empirical Relationship Between Commodity, Stock and Bond Prices in India: The DCC Model Analysis, talked about the conditional correlation between commodity and stock prices indicating that both the variables are negatively correlated.

Kam Fong Chan and Stephen Gray - Journal of Banking & Finance (June 2011), Asset market linkages: Evidence from financial, commodity and real estate assets, Chan et al. (2011) studies the returns pattern of stocks, T-bills, gold, oil and other commodities. Here the different asset classes like financial assets, commodities and real estate assets are examined. The study considers two different time periods like the period of economic expansion and the period of economic decline. According to this study, there is a positive correlation between oil prices and other assets.

Naveed Raza, Syed Jawad Hussain Shahzad, Aviral Kumar Tiwari, Muhammad Shahbaz. (2016) Asymmetric impact of gold, oil prices and their volatilities on stock prices of emerging markets, Raza et al. (2016) studies the short and long run asymmetric impact of gold prices, oil prices and their associate volatilities on the stock prices. It is found that the gold prices and crude oil prices have a significant positive impact on stock prices. The gold volatility and crude oil volatility negatively impact the stock prices in India.

**III. OBJECTIVES**

1. To study commodity market’s impact on stock market i.e. Sensex.
2. To identify correlation between selected dependent and independent variables.
3. To identify risk and returns of selected variables.

**IV. SCOPE OF THE STUDY**

To analyze the relationship between Commodity and Stock Market requires intensive study. The two markets offer more or less the same risk-reward pattern and hence a careful consideration of the data and interpreting the same requires relevant skill and expertise. Our idea is to see and establish whether there is a significant impact of Commodity Market on the Stock Market as to achieve the same, we have considered seven variables, six being the variables of commodity market namely; Aluminium, Copper, Gold, Silver, Zinc and Crude Oil and one being the stock market metric, Sensex.

We have taken the data for a time period of 10 years i.e., from 2010 to 2018.

**V. NEED FOR THE STUDY**

There are many avenues for investment to an investor. In that, Stock market, Commodity market and Forex market are also avenues for an investment. The main aim to check relationship between Stock market and Commodity market is the need for this study.

**VI. RESEARCH METHODOLOGY**

**Type of Research:** Descriptive research used for the study, with the characteristics of prices of selected variables.

**Method of sampling:** Sampling technique followed is Convenience Sampling. Sample units chosen are Indian Stock Market and 6 Commodity variables.

**Sample Size:** The study covers 6 Commodity variables and for a period of 5 years i.e., from April 2013 to March 2018.

**Research Technique:** The following econometrics tools were used for analyzing Multi-Regression Analysis.

Sl. No	Statistic/Econometric Tools	Purpose
1	<b>Descriptive Statistics</b>	To describe the nature of data set.
2	<b>Jarque-Bera test</b>	To test whether stock indices of the various countries individually follow the normal probability distribution and Goodness of fit. (Normality Test)
3	<b>Unit Root Test: Augmented Dickey Fuller Test</b>	The selected data will be tested for the stationary.
4	<b>Correlation</b>	To test whether there is any significant, positive correlation between Commodities and Stock Market.
5	<b>Multiple-Regression Analysis</b>	When there is more than single independent variable, the regression is termed as <b>multiple regression scrutiny</b> , used to check inter-dependency.
6	<b>Granger Causality Test</b>	To establish whether in the long run the variables under study would move in the same direction or not.

**VII. LIMITATIONS**

- The study is conducted with the help of only six tests that enable us to conclude that there is no relationship between Commodity and Stock Market.
- The study is limited to a time period of only 10 years.
- The study takes into consideration only six variables.

**VIII. DATA ANALYSIS AND INTERPRETATION**

**1. Normality Test**

H<sub>0</sub>: The data set is normally distributed.

H<sub>1</sub> : The data set is not normally distributed.

**Descriptive Statistics**

	ALUMINIUM	COPPER	GOLD	ZINC	SILVER	SENSEX	CRUDE OIL
Mean	112.8013	399.0417	27341.54	129.9402	44066.81	23397.75	79.83353
Median	109.8000	409.8500	27746.30	116.9000	41312.35	21746.92	75.02000
Maximum	171.2000	502.3000	33343.80	232.0000	73349.40	36283.25	133.8700
Minimum	93.30000	287.8000	19747.00	87.00000	28238.30	15175.08	30.80000
Std. Dev.	11.60500	43.79961	2531.293	35.03892	9091.846	5553.481	25.92621
Skewness	1.510294	-0.650426	-0.954517	1.255320	0.544880	0.415207	0.149570
Kurtosis	5.603220	2.530922	3.812448	3.482788	2.199231	1.933481	1.773651
Jarque-Bera	1387.336	166.8440	375.5658	570.3006	159.5636	159.4103	9.958847
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.006878
Sum	236206.0	835593.4	57253184	272094.8	92275907	48994892	
Sum Sq. Dev.	281876.9	4015223.	1.34E+10	2569630.	1.73E+11	6.46E+10	
Observations	2094	2094	2094	2094	2094	2094	

Source: Author’s Calculation by using Eviews

All the selected variables are not normally distributed. Hence, it rejects the Null Hypothesis since the “P” value is less than 0.05.

**2. Augmented Dickey Fuller Test**

H<sub>0</sub>: The data set has Unit Root (Non-Stationery)

H<sub>1</sub>: The data set does not have Unit Root (Stationery)

**ADF Test results for all selected Variables at Level and at 1<sup>st</sup> Difference**

Sl. No	Variables	Level			First Difference		
		ADF T-Statistic	P-Value	Hypothesis	ADF T-Statistic	P-Value	Hypothesis
1	Aluminium	-2.587495	0.2861	Accepted H <sub>0</sub>	-30.14538	0.000	Rejected H <sub>0</sub>
2	Copper	-2.452075	0.3523	Accepted H <sub>0</sub>	-50.48641	0.000	Rejected H <sub>0</sub>
3	Crude Oil	-2.566410	0.2964	Accepted H <sub>0</sub>	-7.353089	0.000	Rejected H <sub>0</sub>
4	Gold	-3.126343	0.0248	Rejected H <sub>0</sub>			
5	Sensex	-2.453751	0.3514	Accepted H <sub>0</sub>	-42.27179	0.000	Rejected H <sub>0</sub>
6	Silver	-3.514714	0.0380	Accepted H <sub>0</sub>	-49.58900	0.000	Rejected H <sub>0</sub>
7	Zinc	-1.958661	0.6229	Accepted H <sub>0</sub>	-45.72872	0.000	Rejected H <sub>0</sub>

Source: Author’s Calculation by using Eviews, ADF Test

ADF Test is used to set the stationery with trend and intercept and found that all the selected variables except Gold are non – stationery at level and stationery at their first difference.

**3. Risk and return analysis**

	Aluminium	Copper	Gold	Silver	Zinc	Sensex
Sum	42.32	36.27	37.57	31.51	80.69	69.49
Avg per day	0.02	0.02	0.02	0.02	0.04	0.03
Avg per annum	7.28	6.24	6.46	5.42	13.88	11.95
Std Deviation	1.17	1.32	1.92	1.75	1.41	0.97
CV	0.16	0.21	0.29	0.32	0.10	0.08
Rank	3	4	5	6	2	1

On the basis of risk and return analysis, it is found that investment in sensex provides high return with less risk and hence is most preferred followed by Zinc, Aluminium, Copper, Gold and Silver.

4. Correlation

	LRALUMINIUM	LRCOPPER	LRGOLD	LRSENSEX	LRSILVER	LRZINC
LRALUMINIUM	1	-0.0073	-0.0154	-0.0028	0.0538	-0.0610
LRCOPPER	-0.0073	1	-0.0461	-0.0161	0.0170	-0.0128
LRGOLD	-0.0154	-0.0461	1	0.0051	0.0089	0.0161
LRSENSEX	-0.0028	-0.0161	0.0051	1	-0.0208	0.0201
LRSILVER	0.0538	0.0170	0.0089	-0.0208	1	-0.0147
LRZINC	-0.0610	-0.0128	0.0161	0.0201	-0.0147	1

From the correlation analysis it is found that there is no significant correlation between the variables.

5. Multi-regression analysis

H<sub>0</sub>: There is no impact of the commodity variables on Sensex.

H<sub>1</sub>: There is an impact of the commodity variables in Sensex.

Dependent Variable: LRSENSEX				
Method: Least Squares				
Date: 02/18/19 Time: 15:48				
Sample (adjusted): 8/06/2010 6/07/2018				
Included observations: 2093 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.033016	0.021202	1.557266	0.1196
LRALUMINIUM	-0.000495	0.018185	-0.027236	0.9783
LRCOPPER	-0.011253	0.016102	-0.698846	0.4847
LRGOLD	0.002165	0.011063	0.195658	0.8449
LRSILVER	-0.011253	0.012132	-0.927542	0.3538
LRZINC	0.013491	0.015094	0.893808	0.3715
R-squared	0.001090	Mean dependent var		0.033201
Adjusted R-squared	-0.001303	S.D. dependent var		0.968619
S.E. of regression	0.969250	Akaike info criterion		2.778273
Sum squared resid	1960.621	Schwarz criterion		2.794460
Log likelihood	-2901.463	Hannan-Quinn criter.		2.784203
F-statistic	0.455599	Durbin-Watson stat		1.863111
Prob(F-statistic)	0.809436			

As a result of multi-regression analysis, it is found that there is no impact of commodity variables on Sensex. Hence accept H<sub>0</sub>.

6. Granger's Causality Test

Pairwise Granger Causality Tests			
Date: 02/18/19 Time: 16:11			
Sample: 8/05/2010 6/07/2018			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
LRCOPPER does not Granger Cause LRALUMINIUM	2091	0.34727	0.7067
LRALUMINIUM does not Granger Cause LRCOPPER		0.79446	0.4520
LRGOLD does not Granger Cause LRALUMINIUM	2091	1.15371	0.3157
LRALUMINIUM does not Granger Cause LRGOLD		0.02061	0.9796
LRSENSEX does not Granger Cause LRALUMINIUM	2091	0.59798	0.5500
LRALUMINIUM does not Granger Cause LRSENSEX		3.46476	0.0315
LRSILVER does not Granger Cause LRALUMINIUM	2091	0.16887	0.8446
LRALUMINIUM does not Granger Cause LRSILVER		0.14705	0.8633



LRZINC does not Granger Cause LRALUMINIUM	2091	2.23576	0.1072
LALUMINIUM does not Granger Cause LRZINC		459.903	3E-166
LRGOLD does not Granger Cause LRCOPPER	2091	0.13682	0.8721
LRCOPPER does not Granger Cause LRGOLD		1.25490	0.2853
LRSensex does not Granger Cause LRCOPPER	2091	0.13179	0.8765
LRCOPPER does not Granger Cause LRSensex		1.22875	0.2929
LRSILVER does not Granger Cause LRCOPPER	2091	5.20410	0.0056
LRCOPPER does not Granger Cause LRSILVER		8.38164	0.0002
LRZINC does not Granger Cause LRCOPPER	2091	0.48900	0.6133
LRCOPPER does not Granger Cause LRZINC		0.05918	0.9425
LRSensex does not Granger Cause LRGOLD	2091	0.49053	0.6124
LRGOLD does not Granger Cause LRSensex		0.56404	0.5690
LRSILVER does not Granger Cause LRGOLD	2091	1.17728	0.3083
LRGOLD does not Granger Cause LRSILVER		2.32623	0.0979
LRZINC does not Granger Cause LRGOLD	2091	0.87349	0.4176
LRGOLD does not Granger Cause LRZINC		0.89387	0.4092
LRSILVER does not Granger Cause LRSensex	2091	3.01672	0.0492
LRSensex does not Granger Cause LRSILVER		0.36734	0.6926
LRZINC does not Granger Cause LRSensex	2091	0.58145	0.5592
LRSensex does not Granger Cause LRZINC		0.04573	0.9553
LRZINC does not Granger Cause LRSILVER	2091	0.62483	0.5355
LRSILVER does not Granger Cause LRZINC		5.78522	0.0031

From the Granger’s Causality Test, it is found that Silver and Aluminium have a cause on Sensex.

**IX. CONCLUSION**

From the above research study, we can conclude that there is no relationship and impact of Commodity Market on Stock Market. The two markets are independent of one another and do not show any fluctuations or changes when one is affected. The investor can be suggested, based on the study conducted to allocate the risk by investing in those stock that provide high return with less or moderate risk and is suggested to follow the prices of Aluminium and Zinc before taking a decision since they cause Sensex under Granger Causality Test.

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**EASE OF DOING BUSINESS - CURRENT POSITION OF INDIAN STATES**

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**ABSTRACT**

*Ease of doing business ranking of states of India is that the annual easy doing indicator of states and union territories of India supported the completion share various action things points of annual Business Reforms Action Plan (BRAP) under the make in India initiative. There has been a paradigm shift within the approach towards governance because the government has undraped multitude of reforms aimed towards up the business climate in India. In the recent ease of Doing business ranking released by the world bank India is at 100th spot that indicates that all the efforts created to create India a manufacturing hub is bearing fruits still there are few challenges which has to be dealt so as to assist India to continue its glorious run. the current paper tries to analyse the rankings of ease of doing business of Indian states and explain the suggestive measures. It also tries to thrive on the key issues which dampens the trust of investors, various suggestive measures are offered that when enforced are going to be helpful in reconstruction the confidence of investors to invest in India and make it a preferred business destination.*

*Keywords: Ease of Doing Business, Make in India, Manufacturing hub*

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**INTRODUCTION**

States play a important role in the overall development of the Indian Economy. State governments facilitate by dismantling barriers in production process like land, labour, capital and entrepreneurship and contribute in an exceedingly huge manner towards infrastructure building and industry. The recent breakthrough within the implementation of GST is commendable which will scale back the barriers between states and will create the country a typical market.

A wider assets and higher compliance can boost overall economic process of the country. At the socio economic front the states have taken effective measures towards the implementation of reforms in care, education and basic physical and social infrastructure. The states are currently on their thanks to fast industrialisation through coordinated development of tiny, Medium and huge scale enterprises. although preponderantly some states are rural in nature, however the commercial sector within the states has conjointly emerged as a big contributor in their economic and social development. The states provide favourable atmosphere for attracting industrial investments through capitalist friendly policies and higher infrastructural support.

The states have developed sensible infrastructure for promoting the thriving sectors like business enterprise and IT trade with varied profitable public-private partnerships (PPP). The states are that specialize in strengthening their infrastructure base and creating the business atmosphere a lot of contributes to industrial developments. many countries are best-known for his or her efforts within the space of talent development and sensible governance.

Hereafter, many countries have shifted their focus towards disaster management techniques and therefore the others have already developed railways, roadways, port and flying field infrastructure.

Going ahead, the role of states is predicted to be more crucial in sustaining the development of the country in coming back times. many challenges to their growth, like easing the provision facet constraints within the economy, upskilling the work force and increasing producing aggressiveness are still the main areas of concern. The state policies ought to be that specialize in diversifying the beneficiaries of the socio-economic development programmes to confirm Associate in Nursing all comprehensive growth within the country.

The states should conjointly concentrate on the comparative benefits of their individual strengths and specializations and may conjointly adopt best practices of every other's strengths. just like the state of Rajasthan has taken effective measures towards the implementation of labour reforms. geographical region is currently well on its thanks to fast industrialisation through coordinated development of tiny, Medium and huge scale industries. In a shell, the reforms undertaken by the state governments ar expected to bring out sturdy outcomes which might pave the manner for sturdy and property economic process of the country within the coming back times. With the continual increase in per capita financial gain of the states, there exist an incredible potential for enlargement of shopper markets, and increased employment opportunities with increasing production risk frontiers of companies.

**LITERATURE REVIEW**

Economic growth has been believed to depend upon a range of things prevailing within the macro-economic setting of the country. Barro (1996) conducted a cross-country study on economic growth, and vital factors like schooling, life expectancy, Government policies, legal factors, inflation, foreign policy, etc., were highlighted.

In recent empirical studies, other factors resulting in money development, viz., foreign currency inflows, foreign aids, convenience of bank credit, correct social control of tax and other regulatory procedures, etc., have also been studied. within the recent times, particularly following the planet Bank’s ranking since 2004, such factors have gained accumulated importance for the expansion of any country. they have been incorporated as a district of the “Ease of Doing Business” index. when inbound at the ‘Doing Business’ rankings, the world Bank ranks 10 parameters that impact businesses across various stages of their lifecycle – at start-up, getting a location, getting finance, and daily operations. the ten parameters included in World Bank’s index of ease of doing business comprise of:

1 Starting a business	2 Dealing with construction permits
3 Getting electricity	4 Registering a property
5 Getting credit	6 Protecting investor
7 Paying taxes	8 Trading across borders
9 Enforcing contracts	10 Resolving insolvency

Investment during a country is primarily generated from the domestic savings of households, especially in a closed economy. In an open economy however, the domestic savings and investments might not match. If there's a deficit in investment, funds might flow in from alternative countries. The condition here is that the opposite countries should realize the domestic country a secure and engaging destination. Asian nation has witnessed good growth. However, to sustain its growth path, India needs to move further up the list of most well-liked international investment destinations.

The Government reforms play a key role here, as they help place the country on associate equal footing amongst countries having a favourable, flexible, liberalized and more transparent business environment.

On the date of access, this index places Asian nation in 130th position among regarding 189 countries, lower than the other BRICS (Brazil, Russia, India, China, South Africa) countries, and many other smaller countries. Singapore ranks first on an equivalent index. Upon further scrutiny, it will clearly be ascertained that Asian nation ranks low on all parameters, except rank eight on “protecting minority investors”. On important parameters like “enforcing contracts” and “dealing with construction permits”, Asian nation ranks among the lowest altogether the countries. This portrays India as a rustic where doing business isn't easy – therefore India needs to move up the list by implementing crucial reforms.

DIPP (Department of business Policy and Promotion) reports reveal that by 2020, India’s population can bit one.35 billion individuals. Out of this population, 906 million people can belong to the working age. To sustain India’s growth, employment needs to be created. These jobs will only be generated by the manufacturing and repair sectors in Asian nation. Thus, these sectors should be allowed to grow and be property. For this reason, the sector must strengthen desperately with applying the required business reforms. Therefore, the restrictive framework in Asian nation must be improved, so as to come up with employment and capital formation. the govt of India has already made several efforts to improve India’s Doing Business rank to 50 (from current rank of 130) by 2017.

It should be noted here that reforms are often applied simultaneously at numerous levels, viz. State, Central etc. Efforts at the Centre must be synchronic with efforts at the State levels. the key areas that comprise these reforms and wish attention embrace (as per World Bank): easy starting a business; registering property; obtaining credit; protective investors; paying taxes; trading across borders; and implementing contracts. Asian nation ranks rather low on these parameters.

Past literature on this subject has extensively used the Doing Business Rankings and corresponding parts mentioned on top of in analysis. Djankov, McLiesh and Ramalho (2006) targeted on mixture impacts exploitation cross-sectional analysis with mounted country effects, and revealed that the countries with a better Doing Business Ranking in 2004 significantly influence growth. Busse and Groizard (2008) in their study found that the countries with lower levels of strict regulation square measure more probably to stimulate growth. Eifert (2009) studied individual parts of the Doing Business Rankings to reveal that the time taken to enforce contracts stimulates growth. easy doing business is additionally shown to rely on foreign direct investment (FDI) which successively promotes economic growth (Alfaro, 2003; Basu&Guariglia, 2007).

Alfaro (2003) remarks “FDI are often a source of valuable technology ... which can help jump begin an economy”, whereas Wacziarg (2001) suggests FDI perpetuates trade edges that then promotes economic process. Researchers have also used GDP, GDP growth, GDP per capita, etc., as determinants of economic process (Blonigen, 2011; Alfaro, Chanda, Kalemli-Ozcan&Sayek, 2009; Di Giovanni, 2005) that successively impact the benefit of doing business. for example, high GDP growth suggest large economies of scale (Dhakai, Rahman & Upadhyaya 2007) whereas high GDP per capita might indicate giant market size (Walsh & Yu, 2010) – each of that square measure contributory to engaging business opportunities. Also, factors like labour flexibility; infrastructure quality; money depth; judicial autonomy; legal system competence; reduced corruption; political stability; government efficacy; and regulatory practices, exert their influence on doing business ratings (Kostevc, Redek&Susjan, 2007; Masron&Abdhulla, 2010).

Table 1 below presents a summary of the rank and scores of various states of India, based on areport in DIPP (2018).

<b>TOP ACHIEVERS (ABOVE 95%)</b>		
<b>RANK</b>	<b>STATE</b>	<b>SCORE (%)</b>
1	ANDHRA PRADESH	98.30
2	TELANGANA	98.28
3	HARYANA	98.06
4	JHARKHAND	98.05
5	GUJARAT	97.99
6	CHHATTISGARH	97.31
7	MADHYA PRADESH	97.30
8	KARNATAKA	96.42
9	RAJASTHAN	95.70
<b>ACHIEVERS (90 - 95%)</b>		
<b>RANK</b>	<b>STATE</b>	<b>SCORE (%)</b>
10	WEST BENGAL	94.59
11	UTTARAKHAND	94.24
12	UTTAR PRADESH	92.89
13	MAHARASHTRA	92.88
14	ODISHA	92.08
15	TAMIL NADU	90.68

<b>FAST MOVERS (80 - 90%)</b>		
<b>RANK</b>	<b>STATE</b>	<b>SCORE (%)</b>
16	HIMACHAL PRADESH	87.90
17	ASSAM	84.75
18	BIHAR	81.91
<b>ASPIRERS (BELOW 80%)</b>		
<b>RANK</b>	<b>STATE</b>	<b>SCORE (%)</b>
19	GOA	57.34
20	PUNJAB	54.36
21	KERALA	44.82
22	JAMMU & KASHMIR	32.76
23	DELHI	31.69
24	DAMAN & DIU	28.69
25	TRIPURA	22.45
26	DADRA & NAGAR HAVELI	21.88
27	PUDUCHERRY	15.65
28	NAGALAND	14.16
29	CHANDIGARH	11.54
30	MIZORAM	3.66
31	ANDAMAN & NICOBAR ISLANDS	1.25
32	MANIPUR	0.27
33	SIKKIM	0.14

34	ARUNACHAL PRADESH	0.00
34	LAKSHADWEEP	0.00
34	MEGHALAYA	0.00

**DIPP and World Bank’s Ease of Doing Business Ranking Framework**

This year, the DIPP carried out a comprehensive business-to-government (B2G) feedback exercise, whereby feedback was taken from businesses on the quality of implementation of the reforms claimed by the states and Union territories (UTs).

The feedback survey was based on a representative sample of users of reform services while the “reform evidence score” was allotted on the basis of 372 recommendations for reforms on regulatory processes, policies, practices, and procedures spread across 12 areas.

The reform areas taken into consideration for feedback and reform evidence score were:

- Registering property
- Inspection enablers
- Single-window system
- Land availability and allotment
- Construction permit enablers
- Environment registration enablers
- Obtaining utility permits
- Paying taxes
- Access to information and transparency enablers
- Sector specific
- Labour regulation enablers
- Contract enforcement

**OBJECTIVE**

- To identify the significant factors of Ease of Doing Business.
- To analyse rankings of States in Ease of Doing Business in India.
- To explain the suggestive measures for Ease of Doing Business for India.
- To assess the future of Ease of Doing Business in India

**RESEARCH METHODOLOGY**

The study is based on secondary data. The required data related to ease of doing business has been collected from various sources i.e. publications from Ministry of Commerce, Govt. of India and DIPP. The Ease of business index data is downloaded from the websites of World Bank.

**DATA ANALYSIS**

The ranking of States on the basis of ‘ease of doing business’ on a regular basis may be a sensible exercise because it helps to evaluate the best practices in governance. By formally putting down the States on a scale, benchmarking becomes easier and that they will work towards rising their position.

The new dimension added this point is that the feedback from users. the method thence is twofold wherever the primary step involves yielding with a series of reforms in terms of changes in systems, that is less complicated to implement. however additional necessary is however the stakeholders feel concerning a similar. By giving a weighted score, each the problems are self-addressed.

Newer States better placed, quite interestingly while States like Telangana and Jharkhand score 100 for ‘reform evidence’, the corresponding score on feedback was 83.95 and 81.67, severally. In fact, the State with the highest score in ‘feedback’ was AP with 86.5. Quite clearly, tick-marking a reform is easier to do as against obtaining it right in terms of implementation. it's not shocking that there are indications created that in future the feedback criteria would be the additional necessary one.

How is one to read into these numbers? States that area unit new and comparatively little would be higher placed to get well as those beginning would notice it easier to herald the simplest practices as adaptation would be easier. The larger State economies can have legacy problems and ought to adjust to the book bit by bit.

A simple factor like creating applications for construction or extension of a building as a plant would have a longtime system that has got to be disbanded before making a brand new one, which is able to take time as recent records and staffing, among alternative things, ought to be self-addressed. sometimes bidding processes ought to be invoked to decide on vendors which might be long. Therefore, there would be time lags. Typically a lower score here wouldn't be thanks to ideologic variations however operational problems.

Some surprises are like Maharashtra, that is perhaps the foremost industrial State and additionally lodging the money hub of city, having a rank of thirteen. state comes even lower at fifteen. These 2 are thought of to be the additional advanced States beside Gujarat and Karnataka. It will seem that State rankings on 'ease of doing business' aren't a necessary condition for drawing investment.

Investment selections area unit driven by factors such as: accessibility of power, intrinsic strengths like being a mineral base, roads, access to ports, links with supportive industries, accessibility of good and unskilled labour, accessibility of land or rentals, and access to finance. this might air the availability facet.

Also, on the demand facet, linkages need to be robust and thence investment selections aren't taken only supported 'ease of doing business' massive IT hubs in Bengaluru would attract all retail participants no matter the EODB. It'd most likely solely be at the margin once an entrepreneur has got to make a choice from 2 States alternative things being a similar that the ranking might become decisive.

It shows that the EODB rank isn't necessary to attract massive investments. Maharashtra, Odisha, Tamil Nadu, state and West Bengal have ranks in double digits. Yet, they score well in terms of investment intentions. Investors are available in wherever there's chance and would most likely increase their exposures once the surroundings is congenial. However they'd not stop their investment just in case it's powerful to try to business.

Therefore, some States with sensible rank are ready to get the extra 'delta' on this score. A State like province that incorporates a low rank of 18 in EODB did well in terms of investment in 2016 with a rank of ten. once a State is rich in minerals, investment would come back no matter whether or not or not the EODB is congenial. This value of doing business would be higher and get reflected in final costs.

An analogy is supplied with the national-level EODB, wherever India was a most well-liked destination even once the world Bank rank was within the 130s. rising the rank will bring in some extra FDI that was visible once the score improved within the last 2 years. However the chance has got to be there. At a special level, the country's credit rating at with regards to investment grade doesn't deter FPI and FDI as Bharat has been disclosed to be a most well-liked marketplace for investments.

Therefore, not abundant should be browse into the State ranking for EODB as being the be all and finish all for future investment. These area unit valuable signposts on what ought to be finished higher governance systems. These area unit fully essential and there is no argument on this score.

This kind of benchmarking can encourage States to a minimum of adjust to the principles to confirm that they score well on 'reform evidence'. However having these necessities in situ doesn't guarantee investment and governments have to be compelled to work on the opposite prerequisites too, like making infrastructure to multiply these flows.

It is, therefore, one parameter on which to judge State economies and definitely not the overriding one. This is the spirit in which the ranking must be viewed.

### **SUGGESTIVE MEASURES**

It has been determined that all states square measure progressing in varied areas of growth and development. whereas the suggestive measures for every of the participating states have already been mentioned, it's necessary to say the suggestive measures that should be followed by the states to achieve robust and property development.

First and foremost, land reforms are seen to be the foremost necessary focus areas for all states since land may be a major ingredient within the four factors of production, therefore the availableness of land becomes crucial for industrial enterprise. The state governments can have to play a proactive role in creating land out there for fixing of industries in their various territories. The states will do thus by making a "land bank" for the utilization of the business or by giving long run leasing in states wherever outright purchase isn't potential.

The second necessary focus space is of infrastructure development altogether states, whereby provision of social and physical infrastructures is that the key to boost the commercial setup among the state. The state governments ought to build state of the art infrastructural facilities together with rail, road, ports, and airdrome and may additionally focus on reforms within the power sector by giving high priority to transmission and distribution networks. business sector might even be improved by constructing higher roads, well managed traveler lodges and updated websites having info regarding day to day climate and information regarding the state.

The third most vital focus space is of labour reforms, since labour is additionally a serious ingredient of the four factors of production. Labour reforms square measure required within the states to assist the business to lock and deepen the method of industrial enterprise. The states ought to focus upon specific problems associated with labour laws and may additionally produce an agenda to solve problems annually and so monitor improvements year when year.

The fourth most vital focus space is of agri-agro reforms that, the states have to be compelled to develop agricultural market intelligence and use their natural resources in an economical manner. The state governments ought to concentrate on the agriculture sector so as to increase the productivity level of varied food grains and business crops to diversify from the standard crop pattern to the modern demands and techniques.

Therefore, the states ought to concentrate on the fundamental ingredients of infrastructure building and industrialization together with reforms within the four factors of production viz. land, labour, capital and entrepreneur and may additionally concentrate on talent development of workforce; increased research and development activities with robust university industry linkages and last however not the least good governance.

### **CONCLUSIONS**

The role of states has been immense in the growth and development of our country, particularly in the promotion of all inclusive development. although some states are predominantly agricultural in nature, the industrial sector is also rising as a major contributor in their economic and social development.

The states are currently on their way to fast industrialization through coordinated development of little, medium and enormous scale enterprises as they provide favourable atmosphere for attracting industrial investments through user friendly policies and higher infrastructural support. Meanwhile, at the socio-economic front, the states have taken effective measures towards the implementation of reforms in care, education and different socio-economic segments.

In the coming years, the role of states is expected to be increasingly more crucial in sustaining the development of the country. Therefore, the states ought to enhance their existing capacities of specialized areas and at the same time should adopt best practices of other states for the improvement in numerous segments of their various economies. Further, so as to boost the growth of the industrial sector, the states should concentrate on ability development and sensible governance alongside the state-of-the-art infrastructure therefore as improve the competitiveness of businesses.

In nutshell, the time is most opportune to strengthen the state's development ingredients so as to enhance the opportunities for employment and income. With the rise in per capita income of the states, there exist an amazing potential for expansion of consumer markets and enhanced production possibility frontiers of businesses.

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**A STUDY ON SERVICE QUALITY MAPPING OF PEOPLE ASSOCIATED WITH NETWORK MARKETING COMPANIES IN KARNATAKA**

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**ABSTRACT**

*The dynamic and ever changing market environment forces businesses to figure out new and innovative ways to capture the customers. One such innovative way is the network marketing which is also popularly known as multilevel marketing. However, to capture the customers in today's market with intense competition, the solution is to deliver value to the customers in mutually profitable ways resulting in long-term customer satisfaction and loyalty. This paper aims to know the difference in the service quality requirements of members and discontinued members of network marketing companies, to study the difference between the expectations and perceptions and finally to examine whether there is a difference in the service quality requirements of members and discontinued members of network marketing companies.*

*For this research open ended structured questionnaire is used and hypothesis will be defined. In this paper, expected outcome would be that expected value is not delivered by networking marketing for discontinued members*

*Keywords: Network Marketing, Multi Level Marketing, Service Quality, Expectations v/s Perceptions.*

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**I. INTRODUCTION**

The swiftly changing market environment is forcing businesses to come up with new and innovative ways to win back the customers. One such innovative way is the network marketing which is also popularly known as multilevel marketing. However, capturing the customers has never been easy in today's market with intense competition. Customers are willing to associate with companies which deliver value to them by meeting their needs and expectations (Sánchez, C., 2003; Sánchez-Fernández, R., & Iniesta-Bonillo, M. Á., 2007).

Network marketing is a business model which incorporates a network of non-salaried independent distributors also called as "members" to build the business (DuBoff & Leonard, 2004). This contemporary approach needed development of a wholly different and new business model to capture the market by not only delivering just goods and services but also delivering the value (Debroj, 2013). In network marketing, the company has to initially recruit a set of members, who work for a commission without any obligations (Mendelsohn & Martin, 2004). These members in addition to buying products from their parent network marketing company, as a next step build their down-line by adding willing individuals to take-up this business opportunity and become members, who further build their business by recruiting more members and also by selling the goods and services of the parent company (Vander Nat & Keep, 2002; DuBoff & Leonard, 2004).

Though the concept of network marketing originated in USA during 1940s, the era of network marketing started in India only by 1995 (Attri, Rekha & Chaturvedi, 2011). The direct selling / network marketing industry has grown tremendously in India since 2011. It has reached Rs.126.2 Billion in 2016 and with an expected CAGR of about 4.8% to reach Rs.159.3 Billion by 2021 (Shenoy, 2018). The average sale per independent distributors in India is around Rs.20,000 per annum, which is still very much less than global average of about Rs 1,20,000 per annum as per ASSOCHAM.

Customers prefer companies/products which deliver value to them. Customer value is a central marketing concept; Value is can be explained as a bundle of tangible and intangible benefits offered to the customers by a company much more than just satisfying needs and wants of the customers (Kotler & Keller, 2007). The marketing activity itself is built on the foundation of customer value (Kumar, 2004). However, it has never been easier to deliver the value to customer as per their expectations, requirements and establish long-term customer loyalty.

When we look at the various components of customer value, one of the important determinants is quality of after-sales service (Kotler & Keller, 2007). The perception of after-sales service quality may differ from person to person and it is this perceptual difference which makes any product preferable or not preferable. This may also influence the members in deciding whether to continue or discontinue their association with respective network marketing companies. This research paper aims at understanding the service quality requirements of members and discontinued members of network marketing companies by mapping perceived and expected

service quality with the help of SERVQUAL model developed by Parasuraman, Zeithaml and Berry (1985, 1988 & 1991).

## **II. OBJECTIVES & HYPOTHESIS OF THE STUDY:**

### **Specific objectives of the study are**

- To study the difference between the expectations and perceptions of the members of network marketing companies.
- To examine whether there is a difference in the service quality requirements of members and discontinued members of network marketing companies.

### **Hypothesis of the study are**

1.  $H_0$ : There is a significant difference in the expectations and perceptions of members of network marketing companies.
2.  $H_0$ : The service quality requirements of members and discontinued members of network marketing companies are not different.

## **III. LITERATURE REVIEW**

### **Network marketing**

Network marketing is also known as multi-level marketing, pyramid selling, referral marketing and direct selling (Clegg & Brian, 2000; Kitching & Trevor, 2001; Vander Nat, Peter, Keep & William, 2002; Carroll & Todd, 2003). It is a business model which incorporates the recruitment of non-salaried, commission based individuals as independent distributors also known as members who gets associated with the network marketing company without any obligation (Mendelsohn & Martin, 2004). As a next step, in addition to becoming both customers and sellers of products of their parent network marketing company, these members recruit more number of willing individuals as members as their down-line thereby earning a part of sales revenue generated by their down-line as commission (Wojnowski, 2007; World Federation of Direct Selling Associations, 2011). The genuine network marketing business requires the development of a legitimate direct selling and socially growing web of distribution channels (Albaum & Peterson, 2011). However, there are several illegal marketing schemes operating in the disguise of network marketing business such as Ponzi schemes, money multiplier chain-link schemes etc., (Charles & James, 2000).

The history of network marketing dates back to 1940s where the companies such as California Perfume Co. and California Vitamin Co. in USA founded and fueled the concept of network marketing later these companies were renamed as Avon and Amway respectively (Attri, Rekha & Chaturvedi, 2011). Though this direct selling industry has commenced its journey in India only by 1995, the network marketing business is growing at a steady phase with a respectable CAGR of 4.8% (Shenoy, 2018). However, there have been a slew of legal issues and fraud schemes, which have impacted the perception of the customers resulting in membership issues, high member turnover and slowed down the growth of network marketing business (Babu & Anand, 2015), there seemed to be a gap between what people are expecting and the perception that they developed after they became associated with these network marketing companies.

### **Value**

Customer Value is an essential aspect of marketing. It begins with the identification of customer requirements to delivery of products including even after sales service experience (Kumar, 2004). Customers prefer goods and services which are perceived and considered to be delivering value to them consistently and continuously. As explained earlier, the companies are continuously trying to experiment with innovative methods of delivering value to the customer in mutually profitable ways which could result in long-term customer satisfaction and loyalty. Value is nothing but a benefits package offered to the customers by an organization meeting or even exceeding the requirements and expectations of the customers (Kotler & Keller, 2007).

Any package of benefits offered by a company in the form of a product should result in basically solving a problem that the customer is facing, if any product fails in doing so then the customer considers the product to be useless and does not offer the expected value (Sureshkumar & Palanivelu, 2011). Value is primarily made of three important components such as price, quality and service, which is also known as customer value triad (Kotler & Keller, 2007). Value is considered to be the judgment arrived out of individual cognitive evaluation of benefits package offered by a company (Hilton, Hughes, & Chalcraft, 2012). However this value perception may vary due to the factors such as price, quality and service influencing the value. The influence of service quality normally referred to as after sales service quality need to be identified.

**Service Quality**

The services are typically associated with physical goods to provide after-sales services or value-added services (Berry, 1999; Wiersema, ed. & Bitner, 2003). The service quality has its direct influence on the value perception of the customers and members alike (Kotler & Keller, 2007). In a detailed study regarding service quality of the pure services of Dhaka Electric Supply Co., in Bangladesh carried out by Rahman, Qi, Saif, Ibrahim, & Sultana (2017) using extended SERVQUAL model, it was found that the expectations of the customers on service quality does not influence customer satisfaction. However, it certainly affects the germination of perception regarding the service quality. This Perception of customers regarding the actual quality of service considerably influences the customer satisfaction and creates customer loyalty. The study carried out by the researchers Jana, A. (2014) on impact of service quality perception regarding the casual dining experience in the restaurants, it was found that most of the determinants of service quality have strong positive influence on satisfaction level of the customers. It is observed that none of the studies have been conducted on service quality parameters of members and discontinued members in network marketing area.

**IV. RESEARCH METHODOLOGY**

**Sample Design**

This study has been carried out by collecting primary data from respondents across 20 districts of Karnataka state. The convenient sampling technique was used for collecting data from 233 respondents.

**Inclusion Criteria**

The study includes 233 respondents out of which, 156 are members and 77 discontinued members of network marketing companies. The sample population considered for research was with a good mix of respondents based on gender, age groups, education and income categories.

**Tools adapted for data collection**

A structured questionnaire was administered to the respondents in order to collect the data regarding demography, affiliation, perception and expectations based on various SERVQUAL parameters.

**V. DATA ANALYSIS**

**Scale Reliability Test:** Cronbach's Alpha test was used to measure the scale reliability of the questionnaire used the results are shown in Tables 1.1 and 1.2:

		N	%
Cases	Valid	233	100.0
	Excluded <sup>a</sup>	0	.0
	Total	233	100.0

Cronbach's Alpha	N of Items
.960	19

From the above test result in shown in Table 1.2, the obtained Cronbach’s Alpha value of 0.960, indicates the scale reliability of questions in the questionnaire is considered to be good.

**HYPOTHESIS TESTING**

**1. H<sub>0</sub>: There is a significant difference in the expectations and perceptions of members of network marketing companies.**

To test this above hypothesis, paired sample T-test has been used and the test results are given in Table 1.3 bellow.

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	RelKeep_Promise E RelKeep_Promise P	-.224	1.366	.109	-.440	-.008	-2.052	155	.042
Pair 2	RelSincereSolve E RelSincereSolve P	-.224	1.560	.125	-.471	.022	-1.796	155	.074

Pair 3	RelRightSer E RelRightSer P	-.154	1.406	.113	-.376	.068	-1.367	155	.174
Pair 4	RelPromisedtime E RelPromisedtime P	-.147	1.386	.111	-.367	.072	-1.329	155	.186
Pair 5	RelErrorFreeRec E RelErrorFreeRec P	.103	1.895	.152	-.197	.402	.676	155	.500
Pair 6	RExactSerDate E RexactSerDate P	-.538	1.956	.157	-.848	-.229	-3.439	155	.001
Pair 7	RPromptSer E RPromptSer P	-.397	1.784	.143	-.680	-.115	-2.782	155	.006
Pair 8	RWillinglyHelp E RWillinglyHelp P	-.385	1.576	.126	-.634	-.135	-3.048	155	.003
Pair 9	RNeverBusy E RNeverBusy P	-.269	1.546	.124	-.514	-.025	-2.174	155	.031
Pair 10	AInstillConf E AInstillConf P	-1.346	1.641	.131	-1.606	-1.087	-10.247	155	.000
Pair 11	AFeelsafeTrans E AFeelsafeTrans P	-1.122	1.434	.115	-1.349	-.895	-9.771	155	.000
Pair 12	ACourteous E ACourteous P	-.109	1.973	.158	-.421	.203	-.690	155	.491
Pair 13	AEmpKnowled E AEmpKnowled P	-.513	1.736	.139	-.787	-.238	-3.690	155	.000
Pair 14	individAtten E individAtten P	-.154	1.712	.137	-.425	.117	-1.122	155	.263
Pair 15	ConvenientHrs E ConvenientHrs P	.417	1.423	.114	.192	.642	3.657	155	.000
Pair 16	PerAttention E PerAttention P	-.218	1.456	.117	-.448	.012	-1.870	155	.063
Pair 17	bestInt E bestInt P	1.224	1.740	.139	.949	1.500	8.790	155	.000
Pair 18	Understandneed E Understandneed P	-.173	2.029	.162	-.494	.148	-1.065	155	.288

a. you are associated with NMC as = Member

**Analysis**

The two tailed paired sample t-test (as shown in the Table 1.3) the comparison between expectations and perceptions of members of network marketing companies regarding the after sales service quality was conducted. The test shows the difference between expectations and perceptions is significant (<0.05) in majority of the pairs. Therefore H<sub>0</sub>, the null hypothesis is accepted.

**Interpretation**

There is a significant difference between the expectations and perceptions of members of network marketing companies in majority of the service quality parameters thereby indicating that the companies are not meeting expectations of the members which might result in high member attrition.

**2. H<sub>0</sub>: The service quality requirements of members and discontinued members of network marketing companies are not different.**

The second hypothesis was tested by using independent samples t-test for obtaining t-values for SERVEQUAL parameters such as expectations (Table 1.4) and perceptions (Table 1.5) separately for members and discontinued members of network marketing companies.

**Table-1.4: Independent Samples Test: Expectations (Between Members and Discontinued Members)**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
RelKeep_Promise E	Equal variances assumed	6.046	.015	-.891	231	.374	-.197	.221	-.634	.239
	Equal variances not assumed			-.967	187.775	.335	-.197	.204	-.600	.205

RelSincere Solve E	Equal variances assumed	.366	.546	-.187	231	.852	-.037	.196	-.422	.349
	Equal variances not assumed			-.189	154.701	.851	-.037	.194	-.420	.347
RelRightSer E	Equal variances assumed	.031	.859	2.093	231	.037	.371	.177	.022	.719
	Equal variances not assumed			2.044	142.451	.043	.371	.181	.012	.729
RelPromisedtime E	Equal variances assumed	.012	.912	2.475	231	.014	.461	.186	.094	.829
	Equal variances not assumed			2.425	143.728	.017	.461	.190	.085	.838
RelErrorFreeRec E	Equal variances assumed	2.643	.105	2.027	231	.044	.395	.195	.011	.779
	Equal variances not assumed			1.915	130.915	.058	.395	.206	-.013	.803
RExactSerDate E	Equal variances assumed	1.633	.203	1.095	231	.275	.230	.210	-.184	.644
	Equal variances not assumed			1.150	172.644	.252	.230	.200	-.165	.625
RWillinglyHelp E	Equal variances assumed	.897	.345	2.533	231	.012	.482	.190	.107	.857
	Equal variances not assumed			2.427	135.729	.017	.482	.199	.089	.874
RPromptSer E	Equal variances assumed	4.566	.034	1.335	231	.183	.262	.196	-.125	.649
	Equal variances not assumed			1.403	172.694	.162	.262	.187	-.107	.631
RNeverBusy E	Equal variances assumed	.020	.887	2.308	231	.022	.443	.192	.065	.822
	Equal variances not assumed			2.291	148.661	.023	.443	.193	.061	.826
AInstillConf E	Equal variances assumed	6.810	.010	2.074	231	.039	.438	.211	.022	.855
	Equal variances not assumed			2.230	183.396	.027	.438	.197	.050	.826
AFeelsafeTrans E	Equal variances assumed	.743	.390	3.404	231	.001	.670	.197	.282	1.058
	Equal variances not assumed			3.360	146.312	.001	.670	.199	.276	1.064
ACourteousE	Equal variances assumed	2.071	.151	3.262	231	.001	.623	.191	.247	.999
	Equal variances not assumed			3.324	159.182	.001	.623	.187	.253	.993
AEmpKnowled E	Equal variances assumed	.559	.456	4.015	231	.000	.799	.199	.407	1.191
	Equal variances not assumed			3.789	130.664	.000	.799	.211	.382	1.216
individAtt en E	Equal variances assumed	5.676	.018	2.330	231	.021	.517	.222	.080	.954
	Equal variances not assumed			2.461	175.157	.015	.517	.210	.102	.931
ConvenientHrs E	Equal variances assumed	3.273	.072	3.935	231	.000	.775	.197	.387	1.163
	Equal variances not assumed			3.943	152.263	.000	.775	.196	.387	1.163
PerAttention E	Equal variances assumed	1.498	.222	2.609	231	.010	.509	.195	.125	.893
	Equal variances not assumed			2.609	151.455	.010	.509	.195	.124	.894

bestInt E	Equal variances assumed	2.907	.090	4.928	231	.000	1.020	.207	.612	1.428
	Equal variances not assumed			4.555	124.362	.000	1.020	.224	.577	1.464
Understandeed E	Equal variances assumed	1.329	.250	5.343	231	.000	1.018	.191	.643	1.394
	Equal variances not assumed			4.905	122.358	.000	1.018	.208	.607	1.429

**Analysis**

From the above Table 1.4 it is evident that the t-value for the comparison between the expectations of members and discontinued members is >0.05, which shows that the difference is not significant.

**Table-1.5: Independent Samples Test : Perceptions (Between Members and Discontinued Members)**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
RelKeep_Promise P	Equal variances assumed	.856	.356	3.950	231	.000	.610	.155	.306	.915
	Equal variances not assumed			4.077	164.615	.000	.610	.150	.315	.906
RelSince_resolve P	Equal variances assumed	2.226	.137	6.415	231	.000	.934	.146	.647	1.221
	Equal variances not assumed			6.294	144.121	.000	.934	.148	.641	1.227
RelRight_Ser P	Equal variances assumed	7.856	.005	6.308	231	.000	.849	.135	.584	1.114
	Equal variances not assumed			5.907	128.261	.000	.849	.144	.564	1.133
RelPromisedtime P	Equal variances assumed	16.331	.000	8.076	231	.000	1.238	.153	.936	1.540
	Equal variances not assumed			7.274	117.142	.000	1.238	.170	.901	1.575
RelError_FreeRec P	Equal variances assumed	.864	.354	5.651	231	.000	.882	.156	.575	1.190
	Equal variances not assumed			5.787	161.285	.000	.882	.152	.581	1.184
RExactSerDate P	Equal variances assumed	10.959	.001	4.825	231	.000	.783	.162	.463	1.102
	Equal variances not assumed			4.447	123.498	.000	.783	.176	.434	1.131
RPrompt_Ser P	Equal variances assumed	.938	.334	5.683	231	.000	.900	.158	.588	1.212
	Equal variances not assumed			5.679	151.143	.000	.900	.158	.587	1.213
RWillinglyHelp P	Equal variances assumed	5.561	.019	5.150	231	.000	.775	.150	.478	1.071
	Equal variances not assumed			4.875	131.686	.000	.775	.159	.460	1.089
RNever_Busy P	Equal variances assumed	.589	.444	4.167	231	.000	.660	.158	.348	.972
	Equal variances not assumed			4.157	150.528	.000	.660	.159	.346	.974
AInstillConf P	Equal variances assumed	5.963	.015	6.611	231	.000	1.201	.182	.843	1.559
	Equal variances not assumed			6.474	143.417	.000	1.201	.185	.834	1.567

AFeelsafeTrans P	Equal variances assumed	3.978	.047	6.123	231	.000	1.019	.166	.691	1.347
	Equal variances not assumed			5.900	137.629	.000	1.019	.173	.678	1.361
ACourteous P	Equal variances assumed	.067	.795	4.180	231	.000	.836	.200	.442	1.230
	Equal variances not assumed			4.279	161.144	.000	.836	.195	.450	1.221
AEmpKnowledge P	Equal variances assumed	.822	.366	5.817	231	.000	1.272	.219	.841	1.703
	Equal variances not assumed			5.745	146.561	.000	1.272	.221	.835	1.710
individAttention P	Equal variances assumed	.417	.519	5.739	231	.000	.989	.172	.650	1.329
	Equal variances not assumed			5.793	155.251	.000	.989	.171	.652	1.326
ConvenientHrs P	Equal variances assumed	1.448	.230	4.900	231	.000	.708	.145	.423	.993
	Equal variances not assumed			4.931	153.996	.000	.708	.144	.424	.992
PerAttention P	Equal variances assumed	46.825	.000	7.980	231	.000	1.220	.153	.919	1.521
	Equal variances not assumed			6.757	102.873	.000	1.220	.181	.862	1.578
bestInt P	Equal variances assumed	.038	.846	4.255	231	.000	.768	.181	.413	1.124
	Equal variances not assumed			4.247	150.735	.000	.768	.181	.411	1.126
Understandneed P	Equal variances assumed	.163	.687	3.377	231	.001	.737	.218	.307	1.166
	Equal variances not assumed			3.356	148.973	.001	.737	.220	.303	1.170

**Analysis**

From the above Table 1.5 it is clear that the t-value for the comparison between the perceptions of members and discontinued members is >0.05, which shows that the difference is not significant.

From the t-test values of Tables 1.4 and 1.5 which states that there is no significant difference in the service quality requirements between members and discontinued members, the null hypothesis H<sub>0</sub> is accepted.

**Interpretation**

From the analysis of t-values in Tables 1.4 & 1.5, it is found that there is no significant difference between the expectations and perceptions of members and discontinued members of network marketing companies thereby indicating that the companies need to improve on their service quality to give superior experience and enhanced value to their members.

**VI. FINDINGS OF THE STUDY**

**The findings of this research study are as follows**

1. There were significant differences found between the expectations and perceptions of the members of network marketing companies.
2. However, surprisingly there were no significant differences in the expectations and perceptions between members and discontinued members.
3. There is a gap in the after-sales service quality of network marketing companies as per their members. These companies are not meeting the service quality expectations of members while providing after-sales service.
4. The 3<sup>rd</sup> finding indicates that the members of these network marketing companies are not comfortable with the after-sales service quality, that is the reason why the service quality requirements of members is same as that of discontinued members.

**VII. RECOMMENDATIONS**

The following are the recommendations for the gaps identified in this research study:

1. The network marketing companies need device strategies to improve the quality of their after-sales services so as to meet the expectations of their members in order to improve the customer-member satisfaction and loyalty.
2. Since, the service quality requirements of members and discontinued members of network marketing companies are not different, the improvement in after-sales service quality may attract back the discontinued members and may influence them to consider re-associating with these network marketing companies.

**VIII. CONCLUSIONS**

As it was evident from the research that, there is a difference in the expectations and perceptions of members and there is no difference in the expectations and perceptions between members and discontinued members with respect to after-sales service quality of network marketing companies, these companies should concentrate on developing strategies for enhancing the after-sales service quality by improving the SERVQUAL parameters to deliver better value to the members, thereby increasing the brand loyalty and reducing the member attrition.

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**DETERMINANTS OF PRE-OPEN EQUILIBRIUM PRICES OF SECURITIES AND THEIR RELATIVE CAUSATION ON THE COMPONENTS OF INDIAN STOCK MARKETS****Girish B N<sup>1</sup> and Dr. H. Nagaraj<sup>2</sup>**Research Scholar<sup>1</sup> and Associate Professor<sup>2</sup>, St. Joseph's College of Commerce, Bengaluru**ABSTRACT**

The NSE and BSE introduced the pre-open call auction sessions from October 18, 2010, and these sessions are intended to reduce volatility and provide better liquidity in the markets. The focus of this research paper is to verify whether the overnight news impact is effectively captured by the pre-open prices of Indian Stock Markets or not and to analyse the impact of such discovered equilibrium prices on the different components of Indian Stock Markets. To verify this phenomenon the target variable chosen is Nifty Fifty Pre-open Market Price which is called as NFPMOP and probable causative factors chosen are, FTSE100 Index as a proxy to European Stock Market, S&P500 Index as a representative of US Stock Markets and Previous day closing prices of Nifty50 (NFPCP).

Further to study the impact of NFPMOP on various segments of Indian Stock Markets, Nifty Small Cap50 Index (NSC50), Nifty Small Cap (NSC 250), Nifty Large Midcap 250 (NLMC250) are selected and the study has employed innovative time series econometric tools such as VAR Granger Causality Test, Impulse Response Test, Variance Decomposition and it was found that the overnight news is significant and there is unidirectional causality running from equilibrium opening price of NIFTY50 to NIFTY Small Cap Segment. However the study could not find any such association with large midcap and broad market segments of Indian Stock Markets.

**Keywords:** Pre-market opening price, Equilibrium price, VAR Granger Test, Variance decomposition, Impulse response.

**JEL Classification:** C01, C22, D53, E44, G1, G14

**1) INTRODUCTION**

The NSE and BSE introduced the pre-open call auction sessions from October 18, 2010, and these sessions are intended to reduce volatility and provide better liquidity in the markets. The pre-open session lasts for 15 minutes from 9 AM to 9:15 AM and is divided into three parts. In the first 8 minutes, orders are placed. They can be canceled or modified during this time period also. In the next 4 minutes, price discovery will be done, and orders will be executed. The next 3 minutes are used to facilitate the transition from pre-open to regular session. Right now, only the index stocks are included in this session, and you can place both markets, and limit orders as part of the pre-open session. A price band of 20% is applicable to all securities in the pre-open session.

The pre-open session duration is 15 minutes i.e., from 9:00 am to 9:15 am. The pre-open session is comprised of order collection period and order matching period. After completion of order matching, there is a silent period to facilitate the transition from pre-open session to the normal market. Accordingly, Normal Market / Odd lot Market and Retail Debt Market will open for trading after the closure of pre-open session i.e. 9:15 am

**DETERMINATION OF EQUILIBRIUM OPENING PRICE**

The opening price shall be determined based on the principle of demand-supply mechanism. The Equilibrium Price will be the price at which the maximum value is executable. In case more than one price meets the said criteria the Equilibrium Price will be the price at which there is minimum order imbalance quantity (unmatched order quantity). The absolute value of the minimum order imbalance quantity, the Equilibrium Price will be the price closest to the previous day's closing price is the mid-value of a pair of prices which are closest to it, and then the previous day's closing price will be the adjustable closing price or the base price. Both limit and market orders shall reckon for computation of Equilibrium Price.

The Equilibrium Price determined in Pre Open Session is considered as open price for the day. In case of only market orders exist both in the buy and sell side, then order shall be matched at previous day's closing price or adjusted closing price/ base price. Previous day's close or adjusted close price/ base price shall be the opening price. In case of no price is discovered in Pre Open Session, the price of first trade in the normal market shall be the open price. In case more than one price meets the said criteria, the Equilibrium Price shall be the price at which there is minimum unmatched order quantity

**2) REVIEW OF LITERATURE**

Kumar and Reddy observed that pre-market equilibrium stock price helps the investors to trade without much volatility during the market opening time. The initiative called pre-open session by the

stock exchanges in Indian much be extended to many other actively traded shares to increase the confidence of the investors.

Easley and O'Hara (1987) show that informed traders are likely to use large trades instead of small trades. By contrast, Barclay and Warner (1993) show that informed traders may camouflage their private information and split their large trades into medium trades. Because actual trading does not occur during the pre-opening period

There is well-established literature documenting that stock return volatility is directly related to information arrivals (e.g., Clark, 1973). As such, volatility from the previous trading day may serve as a proxy for the intensity of aggregate information arrivals and the level of uncertainty about stock values that persist from the previous trading day. Therefore, we expect the volatility of the previous trading day to be a determinant of order aggressiveness during the pre-opening period.

Moshirian, Nguyen, & Pham, 2012 concluded that the efficiency of indicative opening prices gradually increases from 9:30 am up to the opening time. More importantly, this pattern becomes more significant when overnight announcements are released. Additionally, the intensity of overnight announcements influences order placement activities during the pre-opening period. When comparing returns following overnight and daytime earnings announcements, we find that price adjustment in response to overnight announcements occur primarily within the overnight period, with limited spillover effects after the market opens. By comparison, daytime earnings announcements can induce price fluctuations over a longer postevent trading period. Thus, the practice of providing investors with ample time to digest new information before trading commences appears to improve rather than hamper the price discovery process

In this backdrop, this study aims at studying the impact of overnight news and other influences on the pre-market opening prices of Indian Stock Markets.

### 3) RESEARCH METHODOLOGY

#### a) Research Design

The focus of this research paper is to verify whether the overnight news impact is effectively captured by the pre-open prices of Indian Stock Markets or not and to analyse the impact of such discovered equilibrium prices on the different components of Indian Stock Markets. For this purpose the research design is divided into two distinctive stages.

In the first stage, attempt shall be made to analyse the overnight news impact and its subsequent absorption by the Indian Stock Markets .To verify this phenomenon the target variable chosen is Nifty Fifty Pre-open Market Price which is called as NFPMOP and probable causative factors chosen are, FTSE100 Index as a proxy to European Stock Markes, S&P500 Index as a representative of US Stock Markets and Previous day closing prices of Nifty50 (NFPCP).

Further to study the impact of NFPMOP on various segments of Indian Stock Markets, Nifty Small Cap50 Index (NSC50), Nifty Small Cap (NSC 250) ,Nifty Large Midcap 250(NLMC250) are selected.

The data of the chosen variables for study is collected from 01-01-2014 to 31-12-2018 and has been downloaded from the historical data of NSE and the daily closing prices of the above mentioned selected Indices are taken as the frequency for the study. Eviews version 9 has been used for the application of econometric tools.

#### b) Statistical Tools used for the study

##### Stage-1

In the stage 1 of the study the following tools were applied:

##### i. T-Test

Initially to study the significance of Pre-market opening price the difference between NFPMOP and NFPCP has been extracted and a difference series is generated and to verify whether it is significantly different from zero, a T-Test is applied on the series

$$\text{Diff}_t = \text{NFPMOP}_t - \text{NFPCP}_{t-1}$$

and T-statistic was obtained by

$$T_{\text{diff}} = \frac{\overline{\text{DIFF}} - \mu}{SE}$$

**ii OLS Regression Equation**

To quantify the absorption of overnight news in the NFPMOP series, an OLS equation is estimated as follows:

$$DNFPMOP_t = \alpha_t + \beta_{1t} \sum_1^n tDNFPCP + \beta_{2t} \sum_1^n tNEWS + \epsilon_t$$

where DNFPMOP=First differenced series of Nifty Fifty Pre-open Market Price,

DNFPCP=First differenced previous day closing prices of Nifty50

**iii VAR Granger Causality Test**

The VAR can be considered as a means of conducting causality tests, or more specifically Granger causality tests. Granger causality really implies a correlation between the current value of one variable and the past values of others, it does not mean changes in one variable cause changes in another. By using a F-test to jointly test for the significance of the lags on the explanatory variables, this in effect tests for ‘Granger causality’ between these variables. It is possible to have causality running from variable X to Y, but not Y to X; from Y to X, but not X to Y and from both Y to X and X to Y, although in this case interpretation of the relationship is difficult. The ‘Granger causality’ test can also be used as a test for whether a variable is exogenous. i.e. If no variables in a model affect a particular variable it can be viewed as exogenous.

For a bivariate system,  $y_t, x_t$  defined by

$$\begin{aligned} \begin{bmatrix} y_t \\ x_t \end{bmatrix} &= \begin{bmatrix} A_{11}(B) & A_{12}(B) \\ A_{21}(B) & A_{22}(B) \end{bmatrix} \begin{bmatrix} y_{t-1} \\ x_{t-1} \end{bmatrix} + \begin{bmatrix} u_{yt} \\ u_{xt} \end{bmatrix} \\ &= \begin{bmatrix} \Phi_{11}(B) & \Phi_{12}(B) \\ \Phi_{21}(B) & \Phi_{22}(B) \end{bmatrix} \begin{bmatrix} u_{yt-1} \\ u_{xt-1} \end{bmatrix} + \begin{bmatrix} u_{yt} \\ u_{xt} \end{bmatrix} \end{aligned}$$

$x_t$  does not Granger-cause  $y_t$  if  $\Phi_{12}(B) = 0$  or  $\Phi_{12,i} = 0$ , for  $i = 1, 2, \dots$

**iv) Impulse Response Functions**

The impulse response functions can be used to produce the time path of the dependent variables in the VAR, to shocks from all the explanatory variables. If the system of equations is stable any shock should decline to zero, an unstable system would produce an explosive time path.

Consider a basic VAR (1) model:

$$s_t = A_1 s_{t-1} + u_t$$

Where  $s$  is a stock price return, if we then assume a simple two stock price system, then the matrices and vectors in full would be:

$$\begin{bmatrix} s_{1t} \\ s_{2t} \end{bmatrix} = \begin{bmatrix} 0.2 & 0.1 \\ 0.0 & 0.3 \end{bmatrix} \begin{bmatrix} s_{1t-1} \\ s_{2t-1} \end{bmatrix} + \begin{bmatrix} u_{1t} \\ u_{2t} \end{bmatrix}$$

The next step is to calculate the value for each dependent variable, given a unit shock to the variable  $s_{1t}$  at time  $t = 0$ . The value of each dependent variable can be determined at  $t = 0, 1, 2, 3$  etc. In this case there is no effect in the  $s_{2t}$  variable due to the way the model is set up, however if the  $s_{1t-1}$  variable had been significantly different to zero, then the shock would have affected both variables.

**Stage-2**

At this stage, we verify the impact of Pre-market Opening Price of Nifty50 on the selected mid and small cap segments. For this purpose we have used the following tools

**i) VAR Granger Causality Test**

The detailed procedure is explained in earlier section.

**ii) Variance Decomposition**

This is an alternative method to the impulse response functions for examining the effects of shocks to the dependent variables. This technique determines how much of the forecast error variance for any variable in a

system, is explained by innovations to each explanatory variable, over a series of time horizons. Usually own series shocks explain most of the error variance, although the shock will also affect other variables in the system. It is also important to consider the ordering of the variables when conducting these tests, as in practise the error terms of the equations in the VAR will be correlated, so the result will be dependent on the order in which the equations are estimated in the model.

4) Presentation and Discussion of Results:

**Fig-1: Graphical Representation of the differences in Previous day closing price and Pre-Market Opening Price of NIFTY 50**  
NEWS IMPACT

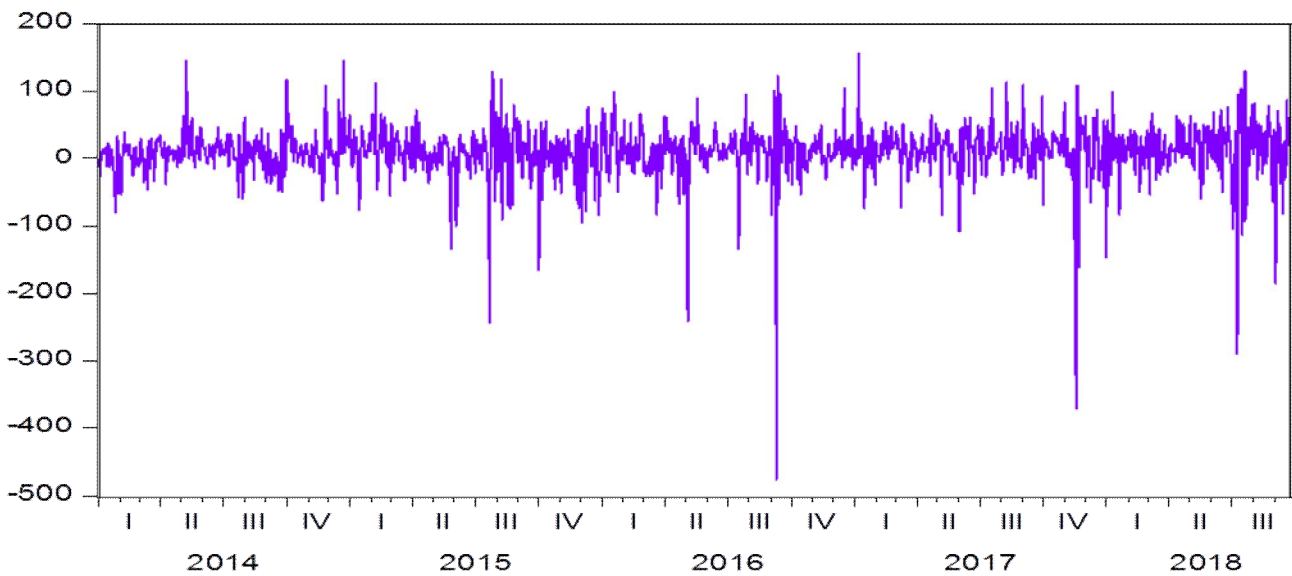


Figure 1 clearly represents the difference between previous day closing and pre-market opening price of NIFTY50 and the spikes reveal the shocks that were absorbed by the pre-market opening price of NIFTY50. A careful observation of these spikes exhibited the major macro-economic and market shocks such as US markets downsliding, announcement of demonetisation and we can further deduce that the system is stable, mean-reverting and stationary which implies that the shocks die down rapidly and pre-market prices adjust themselves effectively.

Result of T-Test for the differences

**Table-1: T-Test for the differences in Previous day closing price and Pre-Market Opening Price of NIFTY 50**

	diff in prices	Hypothesized Mean
Mean	10.53942	0
Variance	1781.742	0
Observations	1233	1232
Hypothesized Mean Difference	0	
df	1232	
t Stat	8.767497	
P(T<=t) one-tail	2.98E-18	
t Critical one-tail	1.646091	
P(T<=t) two-tail	5.95E-18	
t Critical two-tail	1.961891	

A T-Test was conducted to check whether the difference between the premarket opening price and its previous day’s closing price to account for the presence of the overnight news and impact of other markets. As per the Table: 1, the T-Test result is highly significant as compared to the critical alpha value of 0.05. In other words, there is a significant difference between the current nifty 50 preopening price and its previous closing price. This also suggest that the shocks and overnight news may be incorporated in the preopening price

**Result of OLS regression of Pre-Market Opening Price**

To quantify the absorption of overnight news in the DNFMOP series, an OLS equation was estimated and the results are as follows:

**Table-2**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.866353	1.071643	-9.206758	0.0000
DNFMOP	0.707348	0.014262	49.59575	0.0000
DIFF	1.039616	0.024673	42.13593	0.0000

The results of OLS Regression reveal that the impact of overnight news which is termed as diff is more than the previous day's closing price and is also statistically highly significant. Further this model was subjected to residual diagnostics to verify its adequacy and the results are as follows

**i) Correlogram of the Residuals of the Model**

**Fig-2**

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	-0.005	-0.005	0.0365	0.849
		2	0.023	0.023	0.7017	0.704
		3	0.032	0.033	1.9876	0.575
		4	0.013	0.013	2.2132	0.697
		5	0.029	0.027	3.2275	0.665
		6	0.003	0.001	3.2354	0.779
		7	-0.036	-0.038	4.8362	0.680
		8	0.011	0.009	4.9884	0.759
		9	-0.003	-0.002	4.9970	0.835
		10	0.018	0.019	5.3870	0.864

The Correlogram reveals that the ACF and PACF values of the residuals at all lags are not correlated and the Q Statistic of all the lags fail to reject the null hypothesis of no autocorrelation. Hence we can infer that the residuals are free from autocorrelation effect.

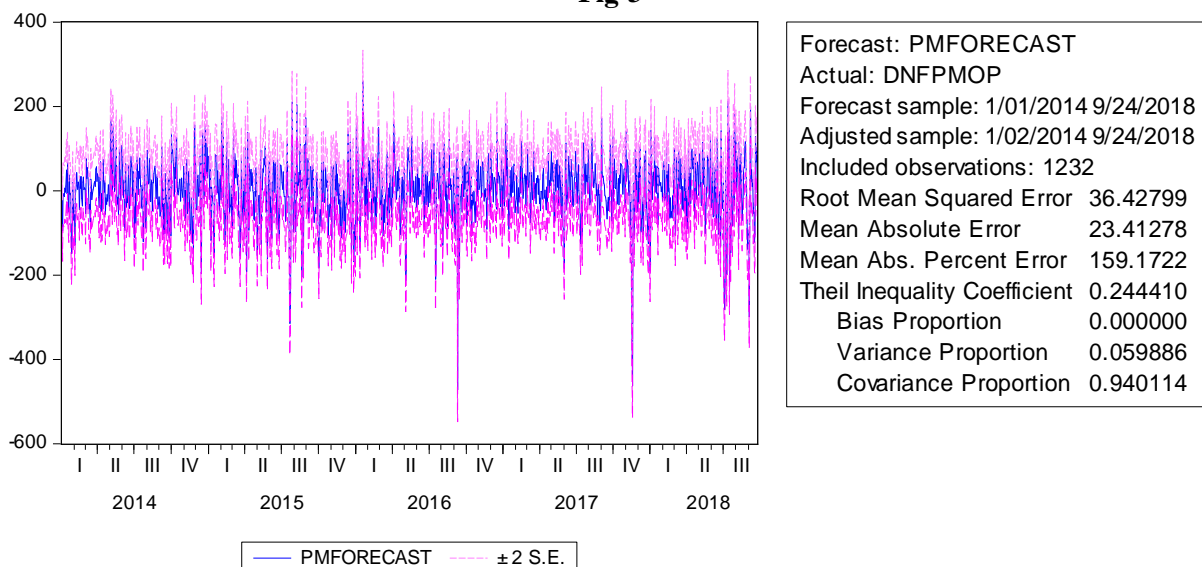
**ii) Test of Autocorrelation**

F-statistic	0.348643	Prob. F(2,1227)	0.7057
Obs*R-squared	0.699731	Prob. Chi-Square(2)	0.7048

The Breush- Godfrey Serial Correlation LM Test is a joint hypothesis test for autocorrelation and the result states that the null hypothesis of no autocorrelation cannot be rejected as the p-value of the statistic (0.705) is greater than the level of significance of 0.05%.

**iii) Forecast Evaluation of the Model**

**Fig-3**



The model was further tested for its forecasting ability by back testing the PMOP series and the result reveal that the model’s forecasting ability is robust as the Theil’s Inequality Coefficient is 0.2 and the bias and variance proportion is close to zero.

Therefore we conclude that the model defining the impact of overnight news on pre-market opening price of NIFTY50 is significant and well observed.

**Result of VAR Granger Causality Test of Pre-Market Opening Price**

**Table-3**

VAR Granger Causality/Block Exogeneity Wald Tests			
Dependent variable: DNFPMOP			
Excluded	Chi-sq	df	Prob.
DS_P500	3.842784	1	0.0500
DSGXN	1.991324	1	0.1582
DFTSE100	2.172225	1	0.1405
All	8.606767	3	0.0350

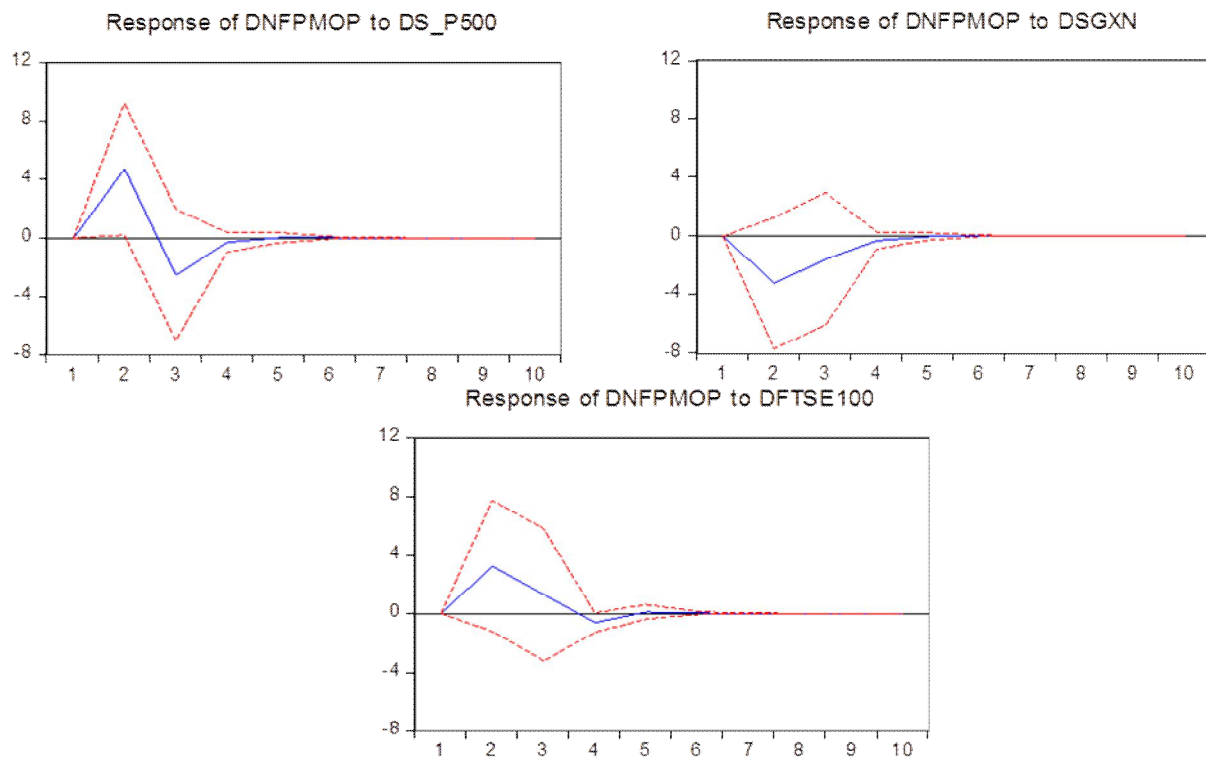
The result of VAR Granger Causality Test of Pre-Market Opening Price show that the null hypothesis of no granger causality is rejected in the case of S&P500 variable as the p-value is exactly same as the level of significance of 0.05%, but the null cannot be rejected in the case of other variables as the p-values are greater than the level of significance.

Therefore we can conclude that there is a unidirectional causality running from S&P 500 to NIFTY50 opening price.

**Result of Impulse Response Function of Pre-Market Price**

**Fig-4**

Response to Cholesky One S.D. Innovations ± 2 S.E.



The Impulse Response Function of Pre-Market Price exhibit that the response of NFPMOP is higher to the impulse of S&P 500 in comparison with that of other variables as the shocks are not rapidly converging and are taking up to four periods to settle down whereas other variables are not causing the same kind of impulse to NFPMOP.



Stage-2

Result of VAR Granger Causality Test of Pre-Market Opening Price on Mid and Small cap Segment

Table-4

Dependent variable: DNLMC250				Dependent variable: DNSC250			
Excluded	Chi-sq	df	Prob.	Excluded	Chi-sq	df	Prob.
DNFPMOP	2.375763	1	0.1232	DNFPMOP	5.566382	1	0.0183
DNSC250	0.043985	1	0.8339	DNLMC250	3.012849	1	0.0826
DNSC50	0.009797	1	0.9212	DNSC50	0.042771	1	0.8362
DN500	0.042204	1	0.8372	DN500	1.745364	1	0.1865
All	2.607135	4	0.6256	All	9.613279	4	0.0475

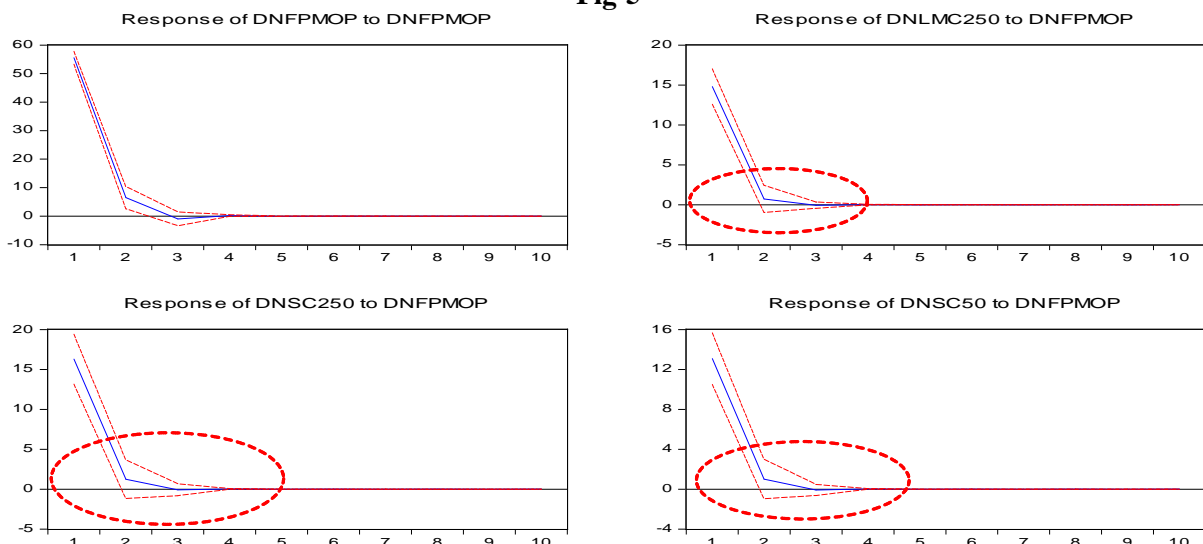
Dependent variable: DNSC50				Dependent variable: DN500			
Excluded	Chi-sq	df	Prob.	Excluded	Chi-sq	df	Prob.
DNFPMOP	4.787601	1	0.0287	DNFPMOP	2.025936	1	0.1546
DNLMC250	2.523055	1	0.1122	DNLMC250	0.002195	1	0.9626
DNSC250	0.010300	1	0.9192	DNSC250	0.029530	1	0.8636
DN500	0.871245	1	0.3506	DNSC50	0.008315	1	0.9273
All	10.74549	4	0.0296	All	2.137863	4	0.7104

The result of VAR Granger Causality Test of Pre-Market Opening Price on chosen variables show that the null hypothesis of no granger causality fails to be rejected in the case of Nifty500 and Large Midcap as the p-value of NFPMP is higher than the level of significance of 0.05%.

However, in the case of other variables the null of no causality is rejected as the p-values reported are lesser than 0.05%. Therefore we can conclude that there is unidirectional causality running from NFPMP on both the indices of small cap segment.

Result of Impulse Response Function of Pre-Market Price on other segments of Indian Stock Markets

Fig-5





The Impulse Response Function of Pre-Market Price exhibit that the response of NSC250 and NSC50 is higher to the impulse of NFPMOP in comparison with that of other variables as the shocks are not rapidly converging and are taking up to three periods to settle down whereas other variables are not causing the same kind of impulse to NSC segment.

**RESULT OF VARIANCE DECOMPOSITION OF VARIABLES**

**Variance Decomposition of DNFPMOP:**

	S.E.	DNFPMOP	DN250	DN50	DN500
1	53.00443	100.0000	0.000000	0.000000	0.000000
2	78.12746	47.29564	31.19117	3.20E-07	21.51319
3	79.00425	46.30006	31.89453	0.000760	21.80464
4	79.03886	46.26148	31.91633	0.000808	21.82139
5	79.04039	46.25976	31.91750	0.000809	21.82192
6	79.04045	46.25970	31.91754	0.000809	21.82195
7	79.04046	46.25969	31.91755	0.000809	21.82195
8	79.04046	46.25969	31.91755	0.000809	21.82195
9	79.04046	46.25969	31.91755	0.000809	21.82195
10	79.04046	46.25969	31.91755	0.000809	21.82195

**Variance Decomposition of DN250**

	S.E.	DNFPMOP	DN250	DN50	DN500
1	56.02290	9.682522	90.31748	0.000000	0.000000
2	57.21543	9.349154	90.54886	0.014940	0.087046
3	57.23104	9.344769	90.50023	0.015462	0.139536
4	57.23243	9.344402	90.50026	0.015464	0.139871
5	57.23245	9.344395	90.50020	0.015465	0.139945
6	57.23246	9.344395	90.50019	0.015465	0.139946
7	57.23246	9.344395	90.50019	0.015465	0.139946
8	57.23246	9.344395	90.50019	0.015465	0.139946
9	57.23246	9.344395	90.50019	0.015465	0.139946
10	57.23246	9.344395	90.50019	0.015465	0.139946

**Variance Decomposition of DN50**

Period	S.E.	DNFPMOP	DN250	DN50	DN500
1	46.28984	8.960196	86.04478	4.995025	0.000000
2	47.03644	8.740684	86.14134	4.851118	0.266858
3	47.04876	8.737123	86.10651	4.848857	0.307514
4	47.04967	8.736861	86.10634	4.848669	0.308126
5	47.04970	8.736855	86.10629	4.848665	0.308187
6	47.04970	8.736854	86.10629	4.848664	0.308189
7	47.04970	8.736854	86.10629	4.848664	0.308189
8	47.04970	8.736854	86.10629	4.848664	0.308189
9	47.04970	8.736854	86.10629	4.848664	0.308189
10	47.04970	8.736854	86.10629	4.848664	0.308189

The ten period variance decomposition of chosen variables show that the shocks of NFPMOP is spread on both the Indices of Small cap segment which is an indication that the variation NFPMOP will result in the variation of the small Cap segment but the same is not seen in the case of NIFTY500

**5) FINDINGS AND CONCLUSIONS**

1. The preopening price significantly captures the overnight news and volatility spillovers of other world markets and this phenomenon contribute to a large extent on the equilibrium price discovery of Stock Markets in India.
2. There is noticeable dependence of Indian Stock Markets on the fluctuations of US Stock Markets as there is short term feedback causing from the US Markets to Indian Markets.
3. Indian Stock Markets suffer from persistence effect as the shocks caused to the markets in the form of news arrivals do not die down rapidly. This reveals the general market inefficiency of Indian Stock Markets that pave the way for excess market returns and supports the ‘beat the market’ practices.

4. The NFPMOP Equilibrium price has a notable influence on small cap segment of Indian Stock Market as there are evidences of active information transmission from the equilibrium price to this segment
5. There is a moderate degree of persistence effect in small cap segment, which may help the traders and speculators to earn excess market returns by devising 'beat the market' strategies.
6. Though there is significant impact of premarket opening price on small cap segment in the short run, the segment appears to be efficient in the long run as the dependencies tend to diminish rapidly, which is a sign of informational efficiency. As there is scarce research that has happened in this phenomenon, further research may through more light on this price behaviour.
7. The study reveals that there is no significant influence of pre-market equilibrium price on broad market segments such as NIFTY500 and NIFTY Large Midcap 250, which allows us to conclude that these markets appear to be informationally efficient.

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**APPROPRIATE EVENT WINDOW LENGTH DETERMINATION TO STUDY MERGER EVENTS OF INDIAN ACQUIRER**

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**ABSTRACT**

*This paper emphasizes on identifying the appropriate length of an event window that absorbs the entire information available in the market after merger announcement by the company. For this event study we have chosen 15 companies from various industries that are listed in Indian stock exchange. In this paper we have taken three event windows (0 to +2, 0 to +5, 0 to+10). The stock prices of the companies announcing mergers are analyzed for these days and the day at which the stock price are getting consolidated to its pre announcement day price is taken as the indicator denoting the complete absorption of the information in the market and stock price. This helps in understanding the number of days the impact of announcement persist in the market.*

*Keywords: Event window length, stock price, merger announcement, abnormal return, mean trading volume.*

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**1. INTRODUCTION**

It is common to analyse the stock price of the companies that goes through some major events by event study analysis. This event studies has become an important tool to estimate the effect of any major announcement by the company through calculating abnormal return on the stock price of that company. It is very important to standardize the event window length for this study as too short and too long event window may result in error in estimating the effect of the announcement by the company. This estimation is done by analyzing the number of days that the market takes to absorb the entire information that will be seen as huge variation in the stock price compared to the stock price before the announcement. Keeping the basic premise that the capital market reflects all the information that is available about the company in their stock price. Event studies are made as a best tool to analyse the short term market reaction for announcement made by the listed companies. This helps in quantifying the announcement impact in their stock price. We consider event study analysis as factual technique that uses time as a dependent variable and looks for the behavior of explanatory variable that explains the changes happening in that duration or in other words it is the time till which the event occur. This compares the time before and after the occurrence of the event and estimates to what extent the event has changed the trajectory of the event.

**1.1 Objective of the Study**

The objective of the study is to determine the appropriate event window length that is the exact number of days taken by the stock market to completely absorb the announcement information. This determines the number of days that the impact of announcement prevails in the market.

**1.2 Hypothesis**

H0: There is no significant difference in the trading volume for certain number of days after the merger announcement and same number of days before the announcement.

H1: There is a significant difference in the trading volume for a certain number of days after the merger and same number of days before the announcement.

**2. LITERATURE REVIEW**

Event study methodology measures the stock price reaction to an unanticipated announcement of an event. Event studies are used to test that the market incorporates this new information efficiently and to examine the impact of the event on the wealth of the firm's stock holders (j.j., 1998). To measure the impact of an event on shareholder value, the difference between a firm's normal everyday returns and the abnormal returns experienced around the event date are calculated. This figure is achieved by computing the daily (or cumulative) abnormal returns accrued during the event window minus the expected normal returns as if no such event had occurred. Two main approaches to model the normal returns are used: the constant mean return model, and the market model (Mackinlay). The constant mean return model is based on the notion that the mean return of a given stock is constant over time. The market model assumes a linear relationship between the return of the overall market portfolio and the individual stock's return. Calculation of the market portfolio is often based on a leading broadbased stock index such as standard and Poor's (S&P) 500 index, the CRSP value-weighted index, or the CRSP equal-weighted index (Srinivasan R, 2004). Three pieces of information are required to undertake an event study – the names of stock-listed firms, the event dates in relation to the announcement of interest, and

the relevant stock prices. An appropriate event is one that is likely to have a financial impact on the firm, is unanticipated by the market and provides new information to the market (McWilliams, 1997). Identifying the exact date of the announcement's release to the public can be complicated. For example, investors might be privy to advance information, announcements might be made over a weekend when the stock exchange is closed, or announcements may be deliberately leaked to the press. The standard approach is to examine the days either side of the official announcement date. Some researchers (Clark, 2002) verify the release date by searching computerized newsprint databases such as Lexis-Nexis or Factiva for the very first public announcement of the information. This procedure is also used to check that no other firm announcements have been released during the same period of interest to confound the impact. (Bradley, 2012) Report that the bidding firm shareholders receive less than a 1% gain. (Jarrel, 2016) State that bidders realize small but statistically significant gains of about 1% to 2%. Analyzing a sample of 1086 takeovers from January 1, 1985 to June 30, 2002, (Hackbarth, 2008) find that the mean value of 3-day CAR to bidder firm shareholders is - 0.52%, which is slightly negative. A survey by (Gaughan, 2005) documents that wealth effects for bidder shareholders are either negative or neutral.

### 3. METHODOLOGY

In this paper two methods were followed to determine the length of the event window, in the first method we calculated the difference in mean trading volume for a specified number of days after merger announcement and the estimation period before the merger, this statistical difference helps in identifying exact number days that had high volatility in the trading volume compared to the trading volume outside the event window. For this, a set of random number of days after merger is taken as event window and compared with the estimation period usually 120 days before the merger and the event window that has significant difference will be fixed as the appropriate event window length. This significance value will be calculated through two tailed paired t test.

The above test will also be validated with CAR value on the abnormal return on these event window days, from the set of random days taken for study one that has highest CAR value will be said as the appropriate event window with appropriate length to go for further analysis.

#### A. Data

The data used for the study will be the daily trading volume of the company that announce the merger and daily closing price of that for 140 days (119 days before merger and 20 days after merger).

#### B. Source of Data

Since all the companies taken for the sample are Indian listed companies, daily trading volume and daily closing price of the companies can be taken from NSE website.

#### C. Period of Study

This study has taken companies that announced mergers between 2006 to 2015, stock prices were taken 120 days before merger announcement and 20 days after the merger announcement.

#### D. Statistical Tool Used

This study has used SPSS for two tailed paired test that shows the significant difference between the trading volumes before and after merger.

### 4. ANALYSIS

**Table-1: CARs of Indian bidding firms using the market model**

Company Name	3 Days CAR	5 Days CAR	10 Days CAR
Sun Pharma	-0.02826218	0.081722	-0.08625
Lupin	0.1290456	0.1720217	0.1704082
Cipla	-0.0052599	0.01466	-0.03577
Dr Reddys Lab	-0.068403	-0.120687	-0.053906
Tata Steel	0.022805	0.053394	0.041422**
Hindalco	-0.2651052	0.0901272	0.15701*
ONGC	0.015885	-0.002573	-0.057672**
Adani Enterprise	0.002339	0.01018	0.015856**
GVK Power	-0.02731	-0.042713	-0.0044576***
Infosys	-0.022629	-0.03596	-0.11441*
Wipro	-0.021405	-0.04626	0.0118394**
HCL	0.012825	0.047669	0.053858**
Hexaware	0.063355	0.0233701	-0.0023712***

TCS	0.00172	0.011042	0.034321**
Mahindra and Mahindra	0.02616	0.00817	0.01433**
<i>Average</i>	<i>-0.0109</i>	<i>0.107</i>	<i>0.009</i>

This table showing the CAR values of fifteen companies that had a merger announcement and its stock price reaction for three different event windows (3 days,5 days and 10 days) out of these three event windows two shorter event windows three days and five days event windows show similar pattern and five days event window seems to have absorbed the entire information in the market after which the 10 days event window shows consolidation in the stock price to its original price.

Three days CAR values doesn't show much deviation in the stock return except Lupin, Hexaware, Hindalco and Dr Reddy's lab. Hindalco shares are reacted in the way that the information in the market is misinterpreted as it shows negative return in the first day of the event and then it started showing positive from the 5 day CAR event window. These companies stock prices were fluctuated to a great extent in first few days either as positive or negative return, This shows only few companies shows great fluctuations in the stock price in 3 days event window. This is because the information is not fully absorbed by the market and this event window is too short to absorb the entire impact of the merger announcement.

From the three event window 5 days event window has most of the positive cumulative abnormal return Sunpharma, Cipla, Hindalco that had negative CAR in 3 days window has given positive CAR in 5 days window. All the companies shows a significant return in five days event window, this shows that companies share price shows major fluctuation only after two days of merger announcement and it prolongs till the fifth day of the announcement after which the stock price overreaction is slowly decreasing that can be seen in the 10 days event window.

Ten days event window being the longest shows the abnormal positive and negative return gets consolidated in the long run that is five days after the merger announcement stock prices reaction to the merger announcement is fully absorbed and then the cumulative abnormal returns gets stabilized. In this event window most of the stocks have shown the reversal trend in the stock price, in this window the companies that had positive CAR in five days event window has turned into negative. Three companies (Dr Reddys laboratory, Hindalco and HCL ) has continued the previous trend and the stock price grows on the same direction of the shorter event windows.

**Table-2: Significance test on three days and five days event length**

<b>Event window length</b>	<b>Standard Deviation</b>	<b>Paired T Value</b>
Three days (0,+1,+2)	3622605	0.0832
Five days (0,+1,+2,+3,+4)	4846163	0.0418**
Ten days (0 to +10)	7854321	0.3254

Table two finds the which of these three event window has major difference from the estimation period of 120 days before merger announcement that stops 5 days before the event date, Here majority of the company reject the null hypothesis(H0: that there is no significant difference in the trading volume of the companies before and after merger) at 5% confidence level. As most of the companies have significant difference in the trading volume after five days of the merger announcement so this accepts the alternate hypothesis(H1: There is a significant difference between the trading volumes of the companies before and after the announcement)

It is clear that most of the companies have significance difference in five days trading volume after the event announcement compared to the nonevent day trading volume this shows that the market actually takes five days to completely absorb the information. For certain event, based on the size of the announcement the market tends to react for those number of days and for the merger event the market react significantly for five days after merger announcement.

**CONCLUSION**

From this study it is concluded that shorter event windows are appropriate for the event study where three days event window shows very minimal impact of the merger announcement or the in other words we can say that the impact is not fully reflected in the stock price within the time span of three days at the same time it is not taking more than five days to completely react to the announcement information in the market that is evident from the above analysis as majority of the companies shows improvement in the stock price value in the same direction as of that in the three days event window on the five days event window also this shows the market is absorbing the information in the same direction which indicates prevalence of announcement information for five day. And the trading volume mean of five days is greatly differentiated from the 120 days mean of trading volume outside the event window this again proves that five days after the merger is the time when the share

price and the trading volume fluctuations gets consolidated and the stock price return to its regular trading price where the variance between the daily trading price reduces as the variance on daily closing price of these stock price will be high for five days after the merger announcement and the variance from the sixth day will be similar to the variance on nonevent days.

From this study it is concluded that the merger has impact for five days after the date of announcement so five days after the merger. This may not be the appropriate length for any event study as some of the announcements may have impact based on the size of the announcement. Dividend announcement may have a positive or negative impact for a day or two on the stock price fluctuation and abnormal trading volume. This even vary based on type of the announcement and the reputation of the company some negative news on the company may have impact in the share price for more number of days based on the type of the news for example a news on the reduction the sales may have impact based on the level of expectation that the shareholders had on the increase in sales if the negative news about any defaults that the company had made then the impact may prolong more than five days reflecting negative abnormal return in the stock price of that company as various announcement has different number of days as the duration of the impact in the stock price merger announcement has its impact in the stock price for five days after the merger announcement.

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**A STUDY ON PORTFOLIO CONSTRUCTION BY USING WILLIAM SHARPE'S SINGLE INDEX MODEL**

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**ABSTRACT**

*An Investment is something which a person sacrifices today for the future benefits. There are many investment avenues available for an individual to increase their wealth. But selection of a right portfolio is a challenging task. Portfolio is a group of securities that may consist of stocks, bonds and money market instruments. The process of selecting the best class of securities to obtain an expected return with a minimum risk is called portfolio construction.*

*The main objectives of this research paper are to check risk and returns relations, construction of portfolio and verifying Single Index Model in Indian context. Descriptive research methodology used for the study and considered 30 companies from BSE Sensex. The data has been taken is daily price of selected variables from June 2013 to June 2018.*

*The few findings of the paper are Britannia got highest returns for the last five years around 68% followed with Bajaj and Maruti. With the help William Sharpe's Single Index Model found that five companies are the best to invest i.e. Britannia, Bajaj, Maruti Suzuki, IndiaBulls and IndusInd.*

*Keywords: Risk, Returns, Beta, Portfolio construction*

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**I. INTRODUCTION**

A Portfolio is a mixture of financial assets like stocks, bonds, commodities and money market instruments. It also includes non-publicly traded securities, like real estates, art and private investments. A simple statement to understand the portfolio is that "A wise man never puts all his eggs in one basket". Portfolio follows basic two principles i.e. Time value of Money and Safety of money. The portfolio should be constructed keeping in mind the two things risk tolerance and investment objectives of the investors. Portfolio works on the basic two assumptions that - investors prefer high rate of return and they are risk avoiders. Normally portfolio managers invest the funds in such a way that the risk and return of the securities are balanced. Portfolio management is an art and science of managing the funds. It is a systematic method of investing the funds efficiently. The objective of portfolio managers is to help the investors to maximize the return for a given level of risk appetite.

**WILLIAM SHARPE'S SINGLE INDEX MODEL**

There is always confusion in the investors' mind in selecting the securities which yields higher return with minimum risk. Besides investors have to decide how much to invest in each securities. William Sharpe's Single Index model helps to come out of this confusion and guides the investor to select the best portfolio which leads to accomplish the investors' objectives. According to this model there is a direct relationship between the market and the price of the shares. If the market moves up, then prices of the most shares tend to increase and if there is a decline in the market then there will be decline in the price of shares.

**II. REVIEW OF LITERATURE**

Hetal D. Tandel identified that the Sharpe's Model has simplified the process of constructing the portfolio by relating the return in a security to a single market index. He has considered BSE Sensex top 30 companies to construct the optimal portfolio by considering daily indices along with the daily prices of 30 securities for the period of April 2008 to March 2013. The securities are selected on the basis of cut-off rate. He concluded by saying that out of 30 stocks only 9 stocks are suggested for investment.

**Mahammadrafiq U. Meman** has considered 28 securities from S&P BSE Sensex and were ranked based on excess return to beta ratio. The historical data of 28 securities for 10 years was considered for the study. He has found that out of 28 securities only 7 securities are good for portfolio construction.

**Mr. Dileep S, Dr. G.V. KesavaRao and Dr. M D Sai Baba** have considered 120 companies (3 companies each in 40 sectors) for the period from January 2009 to December 2014. They have concluded that Single Index Model always holds good in Indian Capital Market.

**III. OBJECTIVES FOR THE STUDY**

- To calculate risks and returns of selected stocks and to compare that to Sensex.
- To construct the portfolio by using Single Index Model.

➤ To verify the existence of Single Index Model in Indian context

**IV. SCOPE OF THE STUDY**

The study has been conducted using 30 companies of BSE Sensex from June 2013 to June 2018 (five years) by considering daily stock prices. The purpose of selecting daily stock prices is to have better estimate of beta coefficient because the returns are calculated using long time period. Risk free rate of return is considered based on Government 30 years Bond rate i.e. 6.65%.

**V. NEED FOR THE STUDY**

There are many investment avenues coming up these days. The financial consultant needs to be aware of all the benefits associated with these new investment avenues so that they can increase the return of the investors with minimum risk. Today there are many tools and methods available to the investors to construct an optimal portfolio. One among those is William Sharpe’s Single Index Model, which provides unique insight to value creation.

**VI. Research Methodology**

- i. **Type of Research:** Descriptive research used for the study, with the characteristics of daily prices of selected stocks.
- ii. **Method of sampling:** Sampling technique followed is Convenience Sampling. Sample units chosen based on selected 30 companies from Sensex.
- iii. **Sample Size:** The study covers 30 companies and for a period of 5 years i.e., from June 2013 to June 2018.
- iv. **Research Technique:** The tools were used for construction portfolio are; Returns, Risks, Beta, Systematic Risks and Unsystematic Risks.

**Formulas**

$Return = \frac{P1 - P0}{P0} * 100$
$\sigma = \sqrt{\frac{\sum(X - \bar{X})^2}{n - 1}}$
$Beta(\beta) = \frac{n\sum XY - (\sum X)(\sum Y)}{n\sum X^2 - (\sum X)^2}$
$Systematic Risk = \beta^2 * \sigma_m^2$
$\sigma_m^2 = \text{Market (SENSEX) Variance}$
$Unsystematic Risk = \sigma^2 - Systematic Risk$

**VII. LIMITATION FOR THE STUDY**

- 1. Considered only Five years of Data.
- 2. Used only William Sharpe’s Single Index Model for this research paper.
- 3. This research is only related to Indian selected stocks.

**VIII. DATA ANALYSIS**

**Table-1: Descriptive Statistics of all selected stocks along with Sensex**

	Return	Beta	Standard Deviation	Systematic Risk	Unsystematic Risk
SENSEX	18.38	1	0.88	0.78	0
ASIAN PAINTS	7.22	0.96	3.00	0.73	8.27
AXIS BANK	1.45	1.50	3.06	1.78	7.63
BAJAJ FINANCE	60.82	0.93	3.33	0.68	10.42
BHARTI AIRTEL	12.72	0.85	1.86	0.57	2.89
BRITANNIA	67.65	0.57	1.64	0.25	2.45
COAL INDIA LTD	-0.44	0.78	1.76	0.48	2.62
GAIL	10.86	0.90	2.10	0.64	3.77
HCL TECH	17.40	0.51	2.21	0.20	4.70
HDFC	27.27	1.23	1.62	1.19	1.43
HERO MOTO CORPORATION LTD	24.98	0.81	1.48	0.52	1.67



HINDALCO	34.84	1.53	2.51	1.84	4.47
INDIA BULLS	50.80	1.17	2.32	1.09	4.29
INDUSIND	43.85	1.18	1.75	1.10	1.97
INFOSYS	-3.19	0.62	2.53	0.30	6.10
JSW STEELS	26.62	1.20	3.28	1.14	9.66
KOTAK BANK	25.94	1.10	2.11	0.96	3.52
L&T	6.58	1.26	2.14	1.25	3.35
M&M	8.28	0.91	2.16	0.66	4.00
Maruti Suzuki	53.87	0.96	1.55	0.73	1.67
NTPC LTD	5.97	0.81	1.60	0.52	2.05
ONGC	-11.74	1.14	2.08	1.03	3.30
Powergrid	18.24	0.65	1.37	0.33	1.55
Reliance	15.86	1.07	2.08	0.91	3.44
SBI	-12.05	1.41	3.30	1.57	9.31
SUNPHARMA	-5.28	0.76	2.35	0.45	5.07
TATA MOTORS	5.11	1.12	2.02	1.00	3.11
TATA STEEL	6.69	1.47	2.23	1.70	3.27
TCS	16.03	0.48	2.03	0.18	3.96
VEDANTA LTD	25.10	1.70	2.81	2.27	5.66
YES BANK	22.82	1.71	3.35	2.30	8.92

### Inference

From the above table 1 specifies that, Bajaj Finance, Britannia, Maruti Suzuki, India Bulls and IndusIndare having on an average return per annum is more than 50% and Powergrid, NTPC and Hero Motorcorporation Ltd are having less risks when compared to other companies. By considering the CV, it is suggested for the investor to invest in Britannia, Coal Ltd and GAIL.

**Table-2: Ranking the companies based on Return excess to Beta**

Rank	COMPANY	Return	Beta	SD	Variance	Systematic Risk	Unsystematic Risk	(Ri-Rf)/B
1	BRITANNIA	67.66	0.57	1.65	2.71	0.26	2.46	106.85
2	BAJAJ FINANCE	60.82	0.93	3.33	11.10	0.68	10.42	58.37
3	Maruti Suzuki	53.88	0.97	1.55	2.42	0.74	1.68	48.93
4	INDIA BULLS	50.81	1.18	2.32	5.39	1.09	4.30	37.61
5	INDUSIND	43.86	1.19	1.76	3.08	1.11	1.97	31.48
6	HERO MOTOCORPORATION LTD	24.99	0.82	1.48	2.20	0.53	1.67	22.55
7	HCL TECH	17.41	0.51	2.22	4.91	0.21	4.70	21.33
8	TCS	16.03	0.49	2.04	4.16	0.19	3.97	19.56
9	HINDALCO	34.84	1.53	2.51	6.32	1.84	4.48	18.52
10	Powergrid	18.25	0.65	1.38	1.89	0.34	1.56	17.98
11	KOTAK BANK	25.95	1.11	2.12	4.49	0.97	3.53	17.55
12	HDFC	27.27	1.23	1.62	2.62	1.19	1.43	16.88
13	JSW STEELS	26.63	1.20	3.29	10.81	1.14	9.67	16.71
14	VEDANTA LTD	25.10	1.70	2.82	7.94	2.27	5.66	10.94
15	YES BANK	22.83	1.71	3.35	11.23	2.30	8.93	9.55
16	Reliance	15.87	1.08	2.09	4.36	0.92	3.45	8.68
17	BHARTI AIRTEL	12.72	0.86	1.86	3.47	0.58	2.90	7.27
18	GAIL	10.87	0.90	2.10	4.42	0.64	3.77	4.84
19	M&M	8.28	0.92	2.16	4.67	0.66	4.01	1.94
20	ASIAN PAINTS	7.22	0.97	3.00	9.01	0.73	8.27	0.75
21	TATA STEEL	6.69	1.47	2.23	4.98	1.71	3.28	0.13
22	L&T	6.59	1.26	2.15	4.62	1.26	3.36	0.07
23	NTPC LTD	5.98	0.81	1.61	2.58	0.52	2.05	-0.64

24	TATA MOTORS	5.11	1.13	2.03	4.12	1.00	3.11	-1.23
25	AXIS BANK	1.45	1.51	3.07	9.42	1.79	7.64	-3.35
26	COAL INDIA LTD	-0.44	0.78	1.76	3.11	0.48	2.63	-8.88
27	SBI	-12.05	1.42	3.30	10.90	1.58	9.32	-13.10
28	SUNPHARMA	-5.28	0.76	2.35	5.53	0.46	5.07	-15.43
29	INFOSYS	-3.19	0.63	2.53	6.41	0.31	6.10	-15.49
30	ONGC	-11.74	1.15	2.08	4.34	1.03	3.31	-15.92

Source: Author’s Calculation

Inference: From the above Table 2, the companies which have a good return are Britannia, Maruti Suzuki, Bajaj finance India Bulls and IndusInd so they are ranked on top whereas companies like ONGC, SBI, SUNPHARMA have been placed at the bottom because of less return.

**Table-3: Portfolio Construction by using William Sharpe’s Single Index Model**

COMPANY	(Ri-Rf)*B	(Ri-Rf)*B/USR	CUM	B^2/USR	CUM	CUTOFF
BRITANNIA	35.01	14.25	14.25	0.13	0.13	10.14375
BAJAJ FINANCE	50.56	4.85	19.10	0.08	0.22	12.83794
Maruti Suzuki	45.87	27.34	46.44	0.56	0.78	22.69428
INDIA BULLS	52.20	12.14	58.58	0.32	1.10	24.72663
INDUSIND	44.33	22.45	81.03	0.71	1.81	26.2896 C*
HERO MOTOCORPORATION LTD	15.16	9.07	90.09	0.40	2.21	25.85852
HCL TECH	5.58	1.19	91.28	0.06	2.27	25.78742
TCS	4.65	1.17	92.45	0.06	2.33	25.6838
HINDALCO	43.37	9.68	102.13	0.52	2.85	24.77608
Powergrid	7.68	4.93	107.06	0.27	3.13	24.35251
KOTAK BANK	21.54	6.10	113.16	0.35	3.47	23.85426
HDFC	25.56	17.84	131.00	1.06	4.53	22.58311
JSW STEELS	24.24	2.51	133.51	0.15	4.68	22.43515
VEDANTA LTD	31.63	5.59	139.10	0.51	5.19	21.52649
YES BANK	27.92	3.13	142.23	0.33	5.52	20.94854
Reliance	10.11	2.93	145.16	0.34	5.86	20.36665
BHARTI AIRTEL	5.32	1.84	147.00	0.25	6.11	19.91779
GAIL	3.95	1.05	148.04	0.22	6.33	19.48886
M&M	1.64	0.41	148.45	0.21	6.54	19.01525
ASIAN PAINTS	0.70	0.08	148.54	0.11	6.65	18.75507
TATA STEEL	0.28	0.09	148.62	0.66	7.31	17.31887
L&T	0.11	0.03	148.65	0.48	7.79	16.41174
NTPC LTD	-0.42	-0.21	148.45	0.32	8.11	15.82533
TATA MOTORS	-1.57	-0.50	147.94	0.41	8.52	15.11183
AXIS BANK	-7.61	-1.00	146.95	0.30	8.82	14.56761
COAL INDIA LTD	-5.43	-2.07	144.88	0.23	9.05	14.03851
SBI	-26.27	-2.82	142.06	0.22	9.26	13.48421
SUNPHARMA	-9.00	-1.77	140.29	0.12	9.38	13.17189
INFOSYS	-6.06	-0.99	139.29	0.06	9.44	13.00035
ONGC	-20.90	-6.32	132.98	0.40	9.84	11.96757

Inference: Table 3 represents the cutoff of 0 companies. The cutoff value goes on increasing from 10.14 to 26.28 and thereafter starts declining. Therefore, the value of 26.28 is considered as the “cut-off point(C\*)”. Therefore, the stocks which comes after the cut-off point will not be considered for the optimal portfolio construction.

**Table-4: Verifying the Model & Calculation of Portfolio Return**

Company	Price on 2 <sup>nd</sup> July 2018	Price on 15 <sup>th</sup> Feb 2019	Returns	Weights	Portfolio Return
BRITANNIA	3115.53	2860.85	-8.17453	0.2	-1.63491
BAJAJ FINANCE	2298.4	2607.15	13.43326	0.2	2.686652
Maruti Suzuki	8827.6	6925.53	-21.5469	0.2	-4.30937
INDIA BULLS	1157.7	638.95	-44.8087	0.2	-8.96173
INDUSIND	1945.55	1509.85	-22.3947	0.2	-4.47894
					<b>-16.6983</b>

Inference: Table 4 shows that there is a negative portfolio return. It means Sharpe's Single Index Model is not always suitable for Indian Capital Market.

## IX. CONCLUSION

The study was made to understand the efficiency of market with the help of Sharpe's Single Index Model and test whether it holds good or not. The study found that among 30 companies only five companies are suggestible for investment. But those five companies are giving a negative portfolio return and hence this model is not suitable for Indian Capital Market. As we have verified only for seven months we cannot say that it is not suitable for Indian Capital Market.

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**CONSUMER BEHAVIOUR TOWARDS IMPULSE GOODS IN CHIDAMBARAM TOWN**

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**ABSTRACT**

*Market remained in an infant during the last half of the 19<sup>th</sup> century and during the first two decades of the 20<sup>th</sup> century. Emphasis was in the growth of manufacturing enterprise because the market's demands generally exceed the available supply of products. In the present day world, every one recognize the importance of marketing. A nation's ability to develop effective distribution system in order to handle its raw material and the amount of its agricultural and industrial output largely decides its economic growth. The present study aims to find out the Consumer Behaviour towards Impulse Goods in Chidambaram Town. A samples of 200 respondents selected randomly were studied. Primary data were collected by using a structured interview scheduled. All the respondents were asked the some questions in the same fashion and they were informed the purpose of study. Percentage analysis and Chi-square analysis was applied. The findings and observations are the result and outcome of the interpretations made during the study of analysis.*

*Keywords: Consumer Behaviour, Impulse Goods and Demographic Variables*

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**INTRODUCTION**

Marketing develops a society and its economy. The need for marketing arises and grows as a society moves from the economy of self sufficiency to an economy built around division of labour, industrialization and urbanization. Marketing thus has become the central theme of modern business.

Goods are basically classified into three categories namely industrial goods, consumer goods and agricultural goods. Consumer goods, as the name implies, are the goods purchased and directly consumed by the consumer for their personal and families satisfaction. Consumer goods are electric, electronic goods, wave-ovens and so on. Non-durable goods are food, clothing and services like medical, legal and others.

Consumer behaviour is the study of human behaviour that includes all the steps in the decision-making process. Consumer behaviour is provided to be constantly volatile and fluctuating non-stable basis for forecasting the demand for consumer goods. It has been continuous in influencing both positively and negatively by various tangible and non-tangible factors like price, income, fashion and different promotional activities of competitors. Hence, a study of consumer behaviour is indispensable where various factors from which a consumer has to make a choice from a vast ocean of products.

**REVIEW OF LITERATURE**

The proliferation of promotional activity in many product categories may be training consumers to buy on promotion. If so, consumer expectations about future promotional activity are just as important to understanding consumer choice behaviour as consumer expectation of price — Fader & Mc Alister (Aug 2016).

Nicosis mode may be regarded as one of the leading buyer behaviour mode. The major work he produced, which is one of the first large scale review of findings and theories in the behaviour sciences, is relevant to buyer behaviour — Nicosia F.N. (2016).

He represents the consumer as purpose seeking to fulfill certain goals through buying behaviour and going and going through various division processes that help him, at length to approximate on optimum solution. The interaction of past experience and stored information with general pre disposition such as personality variables is discussed then and there and consumer will filter out information that is relevant to his current motives and is consistent with his/her stored knowledge and expectation.

The collection of purchase intentions data in marketing research has become a routine. However knowledge of the relationship between purchase intentions and actual purchase behaviour rudimentary is best. Developing knowledge of this relationship is especially important for new products, the area in which knowledge is least available.

Much of the routine collection of purchase intentions data in marketing research has been in connection with purchase prediction for frequently purchased and branded products. Generally, there is a positive association between intention and purchase. But studies on purchase intention and actual purchase established consumer durable products such as automobiles and appliances which have been less predictive of actual behaviour than desired — Linda F. Jamieson & Frank M. Bass (Aug 2017).

**OBJECTIVES OF THE STUDY**

1. To identify the consumer behaviour towards impulse goods.
2. To know the influencing factors in buying impulse goods.
3. To find out the influence of consumer demographic variables towards impulse goods.

**METHODOLOGY**

Consumers makes both planned & unplanned purchases, this study is interested in the consumers who make more or less unplanned purchases otherwise called consumer behaviour impulsive goods. Every consumer is considered as an consumer behaviour impulsive goods because one time or other the makes such as purchase. So the population of the study is vast which includes all people in their role as consumers. Sample size 200 convenience sample method was used in the study. For purpose of quality and time management, the study is focused to a group of consumers. It was decided to have a sample size of 200 consumers and the place of investigation may be such a place having wide facilities for making purchases of all types of goods. In this consideration the study was conducted at Chidambaram town.

**ANALYSIS AND DISCUSSIONS**

**Table-1: Showing the Chi-square test between Consumers Opinion about window display and Family Income**

Sl No	Opinion about window display	Family income				Total	%	df	chi-square value	Sig
		2001-5000	5001-10000	10001-15000	15000 above					
1	Highly influence of window display	11	29	34	34	113	56.5	6	10.29	0.113 NS
2	Medium influence of window display	6	11	20	42	79	39.5			
3	Low influence of window display	2	2	2	2	8	4.0			
Total		19	42	56	83	200	100			

NS – Not Significant

It is inferred from the obtained result that the calculated Chi-square value is less than the table value. It is not significant. Hence the null hypothesis is accepted. Therefore it is concluded that there is no association between consumers opinion about window display and Family Income

**Table-2: Showing the Chi-square test for consumers opinion about instore form and occupation**

Sl No	Opinion about instore form	Occupation			Total	%	df	chi-square value	Sig
		Student	Professional	Govt. employee					
1	highly influence of instore form	61	9	2	72	36	4	2.77	0.597 NS
2	medium influence of in store form	96	15	8	119	59.5			
3	Low influence of in store	6	2	1	9	4.5			
Total		163	26	11	200	100			

NS – Not Significant

It is observed from the obtained statistical result that the calculated Chi-square value is less than the table value. It is not significant (P>0.05). So the stated null hypothesis is accepted. Therefore it is concluded that there is no association between consumers opinion about instore form and occupation.

**Table-3: Showing the Chi-square test for consumers opinion about floor merchandising and education**

Sl No	Opinion about floor merchandising	Education			Total	%	df	chi-square value	Sig
		Graduates	PG/ Professional	M,Phi/Ph.D					
1	highly influence of floor merchandising	10	69	10	89	44.5	4	9.789	0.044 S
2	medium influence of floor merchandising	22	67	10	99	49.5			
3	Low influence of floor merchandising	1	7	4	12	6,0			
	Total	33	143	24	200	100			

S – Significant

Ho: There is no association between consumers opinion about floor merchandising and education.

It is observed from the obtained statistical result that the calculated Chi-square value is greater than the table value. It is significant ( $P > 0.05$ ). So the stated null hypothesis is rejected. Therefore it is concluded that there is an association between consumers opinion about floor merchandising and education.

### CONCLUSION

The present study aims to find out the consumer behaviour towards impulse goods. The researcher framed objectives and hypotheses on the basis of the above context. The research was carried out in 200 samples based randomly. A questionnaire constructed by R was used to collect the relevant data. After collecting the data they were analyzed using statistical tools such as Percentage analysis, ANOVA and Chi-square test. The result concluded that respondents have more awareness about impulse goods.

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**CONSUMERS OPINION ABOUT HATSUN AGRO PRODUCT LIMITED (WITH SPECIAL REFERENCE TO KRISHNAGIRI TOWN)**

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**ABSTRACT**

*Consumer behaviour is one of the most important phenomena in the purchase of any product. This is a relatively often-studied concept in marketing management. Whatever study has been conducted in marketing, the ultimate end is the consumer. The success of various brands and products depends on the consumers' choice. Naturally all the products are going to reach the consumer, and it is necessary that the consumer have to respond by way of purchasing. This paper aims at defining the concept of consumer behaviours in various perspectives. The present study aims to find out the Consumers Opinion about Hatsun Agro Product Limited (with Special Reference to Krishnagiri Town). A samples of 100 respondents selected randomly were studied. Primary data were collected by using a structured interview scheduled. Descriptive statistics and ANOVA, t-test, Chi-square and correlation analysis was applied. The findings and observations are the result and outcome of the interpretations made during the study of analysis.*

*Keywords: Consumer Opinion, Awareness and Demographic Variables*

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**INTRODUCTION**

The relevance and importance of understanding consumer behaviour is rooted in the modern marketing concept. In order to operationalise this concept, management attempts to solve some consumption problems of consumers. However no businessman possibly helps consumers solve their consumption problems unless he understands them and unless he makes an attempt to comprehend the buying processes and the factors influencing it.

Consumer behaviour is always dynamic. Therefore, it is necessary to study, analyze, and understand, and monitor this understanding to the marketing management so that effective decisions can be taken in respect of products, price, promotion and physical distribution. The profit position of a product hinges on the kind of predisposition - positive/negative - that a consumer has developed such a predisposition.

Besides, the Indian marketing conditions, in particular, the role of the Government and the steadily emerging consumer movement necessitates that marketers in India must understand consumer behaviour-their needs, aspirations, expectations and problems. It will be extremely useful in exploiting marketing opportunities and in meeting the challenges that the Indian market offers. Thus, in substance, it may be said that in the interest of effective marketing, marketers must develop and understand their consumers' behaviour, the buying motives, the buying processes, and the factors influencing the process.

**REVIEW OF LITERATURE**

A study of the purchase behaviour and price perception found that nearly 50% of consumer correctly identified the real status of the brand purchased, a proportion closely comparable to the percentage of consumers who could correctly recall the purchase price of the brand — Thomas C.O. Guinn Ronald and J. Faber (2015).

Analyzing the perceived risks related with brand loyalty, Sheth and Venkatesan have studied consumer decision making over time and explored risk reduction processes in terms of Information seeking, Pre purchase deliberation and brand loyalty — Jagdish .N Sheth and M. Venkatesan (Aug 2016).

Brody and Cunningham have suggested in their study that the personality variables such as income, Education, etc., should better identify brand choice for groups exhibiting successfully greater brand loyalty — Robert P. Brody and Scott M. Cunningham (2017).

**OBJECTIVES OF THE STUDY**

- 1) To know the consumers opinion about Hatsun Agro product limited.
- 2) To find out the consumers opinion about the proper service of Hatsun agro product limited.
- 3) To know the find out the quality of the Hatsun Agro product limited.

**METHODOLOGY**

Research design is purely and simply the framework or plan for a study that guides the collection and analysis of the data. The research design indicates the methods of research i.e. the method of gathering information and

the method of sampling. Primary data were collected by conducting direct interview using questionnaire. All the respondents were asked the same questions in the same fashion and they were informed the purpose of study. For this study the samples were drawn using random sample method. Sample size of the study that are selected from the sampling unit. Total estimated sample size is 100 consumers.

**ANALYSIS AND DISCUSSIONS**

**Table-1: Showing Mean, SD and F-ratio of respondents opinion about effectiveness of advertising programme for Hatsun Agro products on the basis of their education**

Education	N	Mean	S.D	F-ratio	LS
Schooling	22	131.09	9.67	11.134	0.01
+2	14	136.71	11.40		
Degree	30	126.90	9.69		
Master Degree	34	142.38	13.04		
Total	100	134.46	12.77		

**Hy:** Respondents differ in their opinion about effectiveness of advertising programme for Hatsun Agro products on the basis of their education.

The above table inferred the one-way ANOVA of respondents opinion about effectiveness of advertising programme for Hatsun Agro products on the basis of their education. The calculated F-value (11.134) is significant at 0.01 level. Hence, the stated hypothesis is accepted. Therefore, master degree respondents groups have high awareness about the advertising programme of Hatsun Agro products when compare with the other education groups.

**Table-2: Showing Mean, SD and F-ratio of respondents opinion about effectiveness of advertising programme for Hatsun Agro products on the basis of their occupation**

Occupation	N	Mean	S.D	F-ratio	LS
Employed	35	140.11	11.82	4.294	0.05
Business Man	19	136.11	14.71		
Agriculturist	9	129.44	10.99		
Professional	12	132.50	7.93		
Others	25	128.04	11.87		
Total	100	134.46	12.77		

**Hy:** Respondents differ in their opinion about effectiveness of advertising programme for Hatsun Agro products on the basis of their occupation.

The above table inferred the one-way ANOVA of respondents opinion about effectiveness of advertising programme for Hatsun Agro products on the basis of their occupation. The calculated F-value (4.294) is significant at 0.05 level. Hence, the stated hypothesis is accepted. Therefore, employed people groups have high aware of opinion about effectiveness of advertising programme for Hatsun Agro products when compare with the other occupation groups.

**Table-3: Showing the Chi-square test for the brand of milk used on the basis of their income**

Income	Aroyka	Avain	Heritage	Rusi	Private Vendor	Others	Total
Below 10,000	11	3	4	0	11	3	32
10,0001 to 15,000	19	2	0	0	4	6	31
15,001 to 20,000	4	2	2	0	0	2	10
20,001 - above	6	6	0	2	9	4	27
Total	40	13	6	2	24	15	100

Calculated Chi-square Value	Degrees of freedom	Level of Significance
31.44	15	NS

**Hy:** There is an association between the brand of milk used on the basis of their income.

The result reveals that the calculated chi-square value (31.44), which is not significant. Hence the stated hypothesis is rejected. So it is concluded that there is no association between the brand of milk used on the basis of their income.



**Table-4: Showing the Simple correlation between assessing the effectiveness of advertising programme on the demographic characters**

<b>Demographic variable</b>	<b>r value</b>
Age	0.309**
Sex	0.070
Education	0.266**
Occupation	-0.374**
Income	0.199*
Children	-0.235*
Visit	0.371**

\*\* Significant at 0.01 level

\* Significant at 0.05 level

The above table shows significant correlation between assessing the effectiveness of advertising programme for Hatsun Agro products on the demographic characters. Result shows that there is a positive and significant correlation between age, sex, education, income and visit effectiveness advertisement. But there is a negative and significant correlation between children and effectiveness advertisement.

**CONCLUSION**

The title of the study was A Study on Consumers Opinion about Hatsun Agro Product Limited (with Special Reference to Krishnagiri Town). For this study the researcher selected Krishnagiri Town. 100 samples were selected for the study. The samples were selected according to the convenience of the researcher. To know the consumers’ preference certain objectives and hypotheses were formulated by the researcher. To test the hypotheses certain statistical tools such as One-way ANOVA, Chi-square test, t-test, Percentage analysis and correlation analysis were used. From the analysis certain findings, suggestions and conclusions were drawn and are presented at the end of the report. It is concluded from this research findings most of the consumers prefer Hatsun Agro products because of its quality and taste. Further the consumers are more aware of price and packaging. So the company should try to improve these factors they can improve their sales.

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**EMPOWERMENT OF WOMEN ENTREPRENEURSBY FACILITATING ACCESS TO FINANCIALSERVICES WITH REFERENCE TO KARNATAKA STATE**

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**ABSTRACT**

*Business is seen as a strong realistic and attainable aim when it is set up by an individual. The whole purpose of starting a new enterprise would be to achieve an objective, against all odds. In such sphere of productive efforts men and women equally submit to the prerequisites of much need atmosphere to carry on activities related to one’s business. Again, Women are generally relegated to the background; hence both social as well as economic development is slower. An entrepreneurial activity among women is a positive symbol for their overall development. Many women start business out of their own will, accepts challenging and well defined role to meet her personal needs and become independent. Women entrepreneur are mainly hospitality, catering, educational services, consultation, public relations, beauty parlour, tutoring, nursing. As of now there are plenty of schemes of Government both at the Central as well at the state level, which provide financial assistance for the women by encouraging setting up business enterprise and becoming economically independent. Similarly, Small Industries Development Bank of India (SIDBI) has implemented special schemes for women entrepreneurs. There are numerous facilities provided by the Government of Karnataka to empower women start-ups by providing financial assistance, training facilities, marketing and trading assistance which are constituted for this purpose. The paper aims to understand the working of the various institutions set up for entrepreneurial activity in Karnataka. The data of the financial support provided is collated for past 5years, evaluated and analyzed. Suitable conclusions are drawn on the researches which will help researchers in future.*

**INTRODUCTION**

Business is about doing right type of profitable work to ensemble the requirement of the society and that of an individual. Over the years entrepreneurs have sprung up who take the concept to another platform, develop design, structures, and process, bring in technology, set up a concrete business and make a name in the associated sector. The Government of India as well as commercial banks has introduced certain schemes for women entrepreneurs. Such as Annapurna Scheme, Stree Shakti Package For Women Entrepreneurs, Bharatiya Mahila Bank Business Loan, Dena Shakti Scheme, Udyogini Scheme for women, Cent Kalyani Scheme, Mahila Udyam Nidhi Scheme, Mudra Yojana Scheme For Women wanting to start small new enterprises like beauty parlors, tailoring units, tuition centres & Orient Mahila Vikas Yojana Scheme.

Presently we can see that the Mudra Yojana scheme the data shows that there is varied interest rate and tenure being followed by the commercial banks in India. The following schedule depicts the details of loan facility offered by few banks

<b>MUDRA LOAN BANK</b>	<b>INTEREST RATE</b>	<b>TENURE</b>
HDFC bank	12.75% to 20%	1-5 years
HDBFS	15.95% to 18.95%	1-3 years
Tata Capital	13.49% to 19.50%	1-5 years
Kotak Mahindra Bank	11.5% to 18%	1-5 years

Source: bankbazaar.com

**REVIEW OF LITERATURE**

According to Dr. C. Eugene Franco & Sharmi Selvakumar (2016), there should be a continuous attempt to inspire, encourage, motivate and co-operate women entrepreneurs. An Awareness programme should be conducted on a mass scale with the intention of creating awareness among women about the various areas to conduct business.

According to Uma SN and Ramesh HN (2018), SHGs and individual entrepreneurs should be provided with more loans from the government and introduce extensive entrepreneurial development program. Finance should be made available to women entrepreneurs at a low rate of interest

**OBJECTIVES OF THE STUDY**

- To study the various centres set up the Government of Karnataka to support Women Entrepreneurs.
- To analyse the present status of the financial schemes and asses the benefits received by the Women Entrepreneurs.

**ENTREPRENEURSHIP IN KARNATAKA**

Initiatives taken by the Government of Karnataka to set up Entrepreneurship in Karnataka over the years by setting up Organizationsthat comes under the Skill Development, Entrepreneurship and Livelihood Department. As on today the centres constituted by the Government for motivating, training and funding the business set up by the women. The list of these centres are given below

1. Entrepreneurship Development and Incubation Centre
2. Industrial Training Institutes and Multi Skill Development Centre
3. Karnataka Skill Development Authority
4. Commissionerate of Industrial Training and Employment
5. Commissionerate for Entrepreneurship and Livelihood
6. Rural Development and Self Employment Training Institute,
7. Centre for Entrepreneurship Development of Karnataka,
8. Government Tool Room & Training Centre
9. SANJEEVINI
10. Karnataka German Multi Skill Development Corporation, Sir. M. Visvesvaraya National Construction Academy, Bharat Ratna Mokshagundam Visvesvaraya National Training Facility for skill for All Society
11. Karnataka Vocational Training and Skill Development Corporation

**PRESENT STATUS OF GOVERNMENT SPONSORED SCHEMES FOR WOMEN ENTREPRENEURS**

The State Government Sponsored Schemes Implemented by KSWDC (Karnataka State Women Development Corporation (KSWDC)is as follows:

**1. Udyogini Scheme**

The government of Karnataka under Karnataka State Women Development Corporation (KSWDC) has launched the Udyogini scheme in Karnataka under which it aims to promote self-employment by providing subsidy loans. It is a schemewhich provides Interest-free loans to women both of rural as well as urban sectors. Under the scheme an evaluation is carried out with a motive of supporting the women. The entrepreneurs belonging to SC/STcaste will get a loan of Rs. 1.00 lakh to maximum of Rs.3.00 lakhs. Subsidy is 50% of the loan amount, Income limit of the family should be below Rs. 2.00 lakhs.Also those women belonging to special category like being widow, GM (Gsgeneral Category) categorya maximum unit funds of one lakh is provided. Subsidy for special category Women is 30% or maximum Rs.10,000/- and subsidy for general category is 20% of maximum Rs.7,500/-.

**Progress of Udyogine Scheme**

( in lakhs)

Year	Target		Achievement	
	Physical	Financial	Physical	Financial
<b>2014-2015</b>	<b>11598</b>	1030.00	11994	1030.00
<b>2015-2016</b>	15000	1100.00	12433	1100.00
<b>2016-2017</b>	13824	2084.00	13824	2163.00
<b>2017-2018</b>	3578	2000.00	3433	1950.00
<b>2018-2019</b>	2295	2530.00	573	632.50

Source: Economic Survey of Karnataka 2018-2019

During 2016-17, a grant of Rs.1500.00 lakhs was provided and an additional grant of Rs.514.00 lakhs under SCSP/TSP and balance grant under KSFC (SCSP/TSP) for 2015-16 amounting to Rs.79.00 lakhs and for 2016-17 amounting to Rs.70.00 lakhs totally an amount of Rs.2163.00lakhs has been spent. It is particularly true of women who were deserted by their husbands, for widows and physically.

**2. Women Training Programme**

Women under difficult circumstances are provided with skill development training to take up self-employment in various fields as per their need and interest. For Women who are willing to set up small business are provided with necessary training on project report preparation, general accounting, materials management and marketing. Widows, destitute women, physically handicapped and SC/ST Women are given preference and no income limit is fixed. For others, annual family income limit is Rs. 40,000.

**Women training Programme ( in lakhs)**

Year	Target		Achievement	
	Physical	Financial	Physical	Financial
2014-2015	3600	360.00	2776	171.22
2015-2016	5650	360.00	5650	360.00
2016-2017	4160	416.00	7688	416.00
2017-2018	4160	416.00	2846	312.00
2018-2019	5000	500.00	1190	119.00

Source: Economic Survey of Karnataka 2018-2019

**3. Saranya (Self Employment Scheme for the Destitute Women)**

The scheme came into existence in the year 2010 and since then many women got empowered with this scheme. The loan facility, along with interest free loan and the benefit of 5 years repayment are the major highlights to this scheme. Under the scheme the beneficiary is given the loan of Rs. 50,000 to start her own venture. The scheme gives subsidy in the loan amount up-to 50% of the loan amount. The balance 50% the government will reimburse. The women entrepreneurs can avail loan beyond Rs.50,000 wherein the beneficiary has to pay 10% of the expense from the private funds. The loan beyond Rs.50,000 carries 3% interest rate.

**4. Marketing assistance Scheme**

To encourage women entrepreneurs and Stree Shakthi Self Help Groups, exhibitions are organized at District and Taluk levels to sell the products produced by women entrepreneurs and women groups. Efficient and upcoming women entrepreneurs are encouraged to take part in the State and National fairs and exhibitions which will give them a base to exhibit their creations and designs. During the year 2018-19 no budget has been earmarked. However a request has been sent to the Government to release Rs.100lakhs under marketing assistance out of funds earmarked for women welfare programme.

**Progress of Marketing Assistance scheme: ( in lakhs)**

Year	Target		Achievement	
	Physical	Financial	Physical	Financial
2014-2015	3975	110.00	2908	86.67
2015-2016	3150	86.00	2965	76.00
2016-2017	3150	85.50	2805	85.50
2017-2018	3150	100.00	5150	100.00
2018-2019	A release of Rs. 100.00 lakhs grant is expected from the Government			

Source: Economic Survey of Karnataka 2018-2019

**5. Micro Credit/ Stree Shakti Scheme**

The Government of Karnataka has also It is intended to provide interest free loan of Rs. 1.00 lakhs to Rs. 2.00 lakh to Stree Shakthi SHGs to establish their own entrepreneurship or smaller unit for taking up the viable economic activities. The scheme has earmarked plans to rural women and ensures rural women getting all facilities which they deserve. In Karnataka more than 21 lakhs women are empowered by Stree Shakti Scheme. Till date the self-help groups (SHG) have gathered Rs. 1118.05 crores and has bank loan availed of Rs. 1305.98 crores and has internal lending of Rs. 3215.88 crores among themselves for various empowerment tasks.

**Progress Under Micro Credit Scheme: ( in lakhs)**

Year	Target		Achievement	
	Physical	Financial	Physical	Financial
2014-2015	4960	330.00	5263	330.00

2015-2016	250 (Groups)	500.00	250 Groups	500.00
2016-2017	500 (Groups)	1000.00	419 Groups	838.00
**2017-2018	350 (Groups)	1000.00	291 Groups	578.00
*2018-2019	250 (Groups)	500.00	62 Groups	124.00

Source: Economic Survey of Karnataka 2018-2019

\*Upto November 2018.

\*\* As per Government Order, during the year 2017-18, out of Rs One thousand lakhs allotted for this scheme. Similarly, Rs Three Hundred lakhs has been expended for initiation and implementation of scheme.

## 6. Samrudhi Scheme

Karnataka Government has set up another scheme which has been in operations from the year 2016-17. Under this Scheme an amount of Rs. Ten thousand is being given to women entrepreneurs who are street vendors. Simultaneously, under this Scheme a financial assistance of Rs. 50,000 that is Rs. 25,000 loan amount and Rs. 25,000 as subsidy is given to women who are HIV infected, to take up any of the income generating activities.

**Progress Under Samrudhi scheme: ( in lakhs)**

Year	Target		Achievement	
	Physical	Financial	Physical	Financial
2016 - 2017	10000	1000.00	8273	827.30
2017-2018	10520	1052.00	7890	789.00
2018 - 2019	5000	500.00	1250	125.00

\*Upto November 2018.

\*\* As per Government Order, Rs. 49.51 lakhs have been re-appropriated from Samrudhi Scheme to Chetanascheme.

## 7. Interest subsidy Scheme to Women entrepreneurs (KSFC)

The Karnataka State Financial Corporation has been supporting women throughout the firm's inception. Under this Scheme Women entrepreneurs are eligible to obtain loan of Rs.5,00,000 to Rs. 200lakhs from KSFC. The funds are mainly provided to start small and medium industries and services sectors which carry interest at the rate of 14%. The women borrowers will get the benefit; out of the total of 14% around 10% interest share will be paid by Karnataka State Women's Development Corporation. This 10% interest amount will be paid up to 5 years after sanctioning of loan by KSFC. A total of 12 months leisure period is fixed for repaying principal amount. The interest part of KSWDC will be adjusted only after 4% of interest has been paid by the beneficiary.

**Progress under Interest Subsidy Scheme to Women Entrepreneurs: (in lakhs)**

Year	Target		Achievement	
	Physical	Financial	Physical	Financial
2015-2016	-	-	168	35.62
2016- 2017	-	180.00	357	180.00
2017-2018	-	3500.00	771	3500.00
*2018 - 2019	-	3294.00	771	1647.00

## 8. Micro Finance for Women through Self Help Groups

This scheme has been set up for the women belonging to Vishwakarma Communities. The government has seen that micro credit finance facilities are provided for small and marginal business through self-help groups. The advantage of this scheme is that it helps the women entrepreneurs to initiate small business activities like local vendors dealing with selling Flowers, Vegetable and Fruit shop and other business activities. The scheme has financial assistance to the extent of Rs. Ten Thousand Loan facility which is given at the rate of 4% per annum. Similarly, 30% subsidy is being provided with a maximum amount of Rs. Five Thousand. The loan is repayable in 34 equal installments with 2 months grace period for 3 years.

**Progress Under Micro Finance for Women through Self-help Groups: ( in lakhs)**

Year	Target		Achievement		Percentage	
	Financial	Physical	Financial	Physical	Financial	Physical
2017-2018	150.00	1000	88.20	588	59	59
2018 - 2019	45	300	-	-	-	-

Source: Economic Survey of Karnataka 2018-2019

**8.State Resource Center (SRC)**

Counselling centres are established at district level to guide the Women regarding various government Schemes to help Women to take up self-employment along with publicity of KSWDC Schemes. These centres conduct sensitization-training programs to create awareness among the officers of different departments, college students and elected representatives, regarding gender sensitization, equality and other relevant subjects.

**9. Saviruchi**

Saviruchi scheme has been implemented from the year 2017-18. It was launched on 27-02-2018 to encourage district Sreeshakthi Federations across the state. Each Sreeshakthi Federation is provided with Rs. Ten lakh interest free loan for setting up the business and expanding the same.

**10. Kayaka Yojane: Zero interest / subsidized loan scheme for women SHGs in Karnataka**

It is a zero interest (interest free) / subsidized loan scheme for women self-help groups (SHGs) in the state. The loan can be used by the Self-help groups for their skills development. The loan starting from Rs. 1 lakh to Rs.10 lakh will be given under the scheme. The primary objective of the scheme is to empower women entrepreneurs who have started their venture in the state & has also been generating new jobs for the public. The following are the benefits of the scheme:

The interest charged on the loans is Zero% upto Rs. Five lakh. There is also a provision where in loans is given at 4% interest rate if a women avails such loans between Rs. Five lakh to Rs. Ten lakh respectively. Around 3,000 Self Help Groups will be offered loans under the scheme in the first phase. The Scheme has been implemented from the month of January, 2019.

**11. For Startups****a) Fund for women: Idea2POC (idea to proof of concept)**

The Karnataka government announced a \$1.5 million (Rs 10 crore) Idea2POC (idea to proof of concept) fund for the up-liftment of women and their business venture across Karnataka state. The departments of IT, BT & tourism has launched this prestigious scheme. The scheme clearly states that it will allocate Rupees Fifty lakhs to the enterprising business woman who is an innovator and has scarce financial resources to fund their venture

**b) Karnataka Information Technology Venture Capital Fund (KITVEN Fund)** is a fund created and has been in operating in Karnataka. The State & Central Government financial institutions backed Venture Capital Fund (VCF) has been operating in the State of Karnataka since 1999. The Fund have been mobilized in the form of subscription from prestigious and premier institutions like Karnataka State Industrial and Infrastructure Development Corporation Limited, KSIIDC, Karnataka State Financial Corporation, KSFC, Small Industries Development Bank of India, SIDBI, Karnataka Bio-technology & Information Technology Services (KBITS).

**CONCLUSION**

Entrepreneurship is flourishing as there is a huge population of women entrepreneurs taking benefit of the schemes across the state. Each of these schemes is unique with definite objectives and a steady funding process. Interest chargeable is generally low and affordable. If we glance at the budget 2019 the Finance Minister Piyush Goyal's has put a proposal to provide 3 per cent tax benefit to the women who own Micro, Small and Medium Entrepreneurs (MSMEs). This move will ensure better opportunities for women who own enterprises in MSME sector across India. All in all if there is constant and continuous support from the Government and commercial banks the scarcity in funding can be obliterated,

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**RECENT TRENDS IN BLOCKCHAIN TECHNOLOGY: A STUDY**

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**ABSTRACT**

*Blockchain Technology has various benefits like decentralization, pertinacity, obscurity and auditability. There's a good spectrum of blockchain applications starting from cryptocurrency, monetary services, risk management, internet of things (IoT) to public and social services. Recently, cryptocurrency has attracted intensive attentions from each business and academia. Bitcoin that's usually known as the primary cryptocurrency has enjoyed a large success with the capital market reaching ten billion bucks in 2016. The blockchain is that the core mechanism for the Bitcoin. Despite the actual fact that the blockchain technology has nice potential for the development of the future web systems, it's facing variety of technical challenges. The actual fact that the blockchain technology has nice potential for the development of the long run web systems, it's facing variety of technical challenges. Later, the Bitcoin network is restricted to a rate of seven transactions per second, that is incapable of dealing with high-frequency trading. Specifically, this paper provides the blockchain taxonomy, introduces typical blockchain accord, reviews blockchain applications and discusses technical challenges still as recent advances in confronting the challenges.*

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**INTRODUCTION**

Recently, cryptocurrency has attracted intensive attentions from each business and domain. Bitcoin that's usually known as the primary cryptocurrency has enjoyed a large success with the capital market reaching ten billion bucks in 2016 (coin desk, 2016). The blockchain is that the core mechanism for the Bitcoin. Blockchain was 1st planned in 2008 and enforced in 2009 (Nakamoto, 2008). Blockchain can be regarded as a public ledger, during which all committed transactions are hold on in an exceedingly chain of blocks. This chain continuously grows once new blocks are appended thereto. The blockchain technology has the key characteristics, like decentralization, perseverance, obscurity and auditability.

Blockchain will add a decentralized setting that is enabled by integrating many core technologies like science hash, digital signature (based on uneven cryptography) and distributed consensus mechanism. With blockchain technology, a group action will occur in a decentralized fashion. As a result, blockchain will greatly save the price and improve the potency.

Although Bitcoin is that the most celebrated application blockchain application, blockchain is applied into numerous applications way on the far side cryptocurrencies. Since it permits payments to be finished with none bank or any go-between, blockchain is employed in varied monetary services like digital assets, payment and on-line payment (Peters et al., 2015; Foroglou and Tsilidou, 2015). To boot, blockchain technology is becoming one of the foremost promising technologies for the subsequent generation of internet interaction systems, like smart contracts (Kosba et al., 2016), public services (Akins et al., 2013), internet of things (IoT) (Zhang and wen, 2015), reputation systems (Sharples and Domingue, 2015) and security services (Noyes, 2016a).

Despite the actual fact that the blockchain technology has great potential for the development of the long run web systems, it's facing variety of technical challenges. Firstly, measurability may be a large concern. Bitcoin block size is limited to 1 MB now and a block is mined about every ten min. later, the Bitcoin network is restricted to a rate of 7 transactions per second that is incapable of handling high-frequency trading. However, larger blocks mean larger cupboard space and slower propagation in the network. This will cause centralization bit by bit as users would love to maintain such an oversized blockchain. thus the exchange between block size and security has become a challenge. Secondly, it's been proved that miners can do larger revenue than their fair proportion through selfish mining strategy (Eyal and Sirer, 2014). Miners hide their mined blocks for additional revenue within the future in that method, branches will occur frequently; this hinders blockchain development. thus some solutions need to be imply to repair this drawback. Moreover, it's been shown that privacy outflow may also happen in blockchain even once users solely create transactions with their public key and personal key (Biryukov et al., 2014). User's real ip address may even be tracked moreover; current consensus algorithms like proof of work (PoW) or proof of stake (PoS) are facing some serious issues. For instance, POW wastes an excessive amount of electricity energy whereas the development that the rich get richer may seem within the PoS consensus method. These challenges must be self-addressed within the blockchain technology development.



**OBJECTIVES**

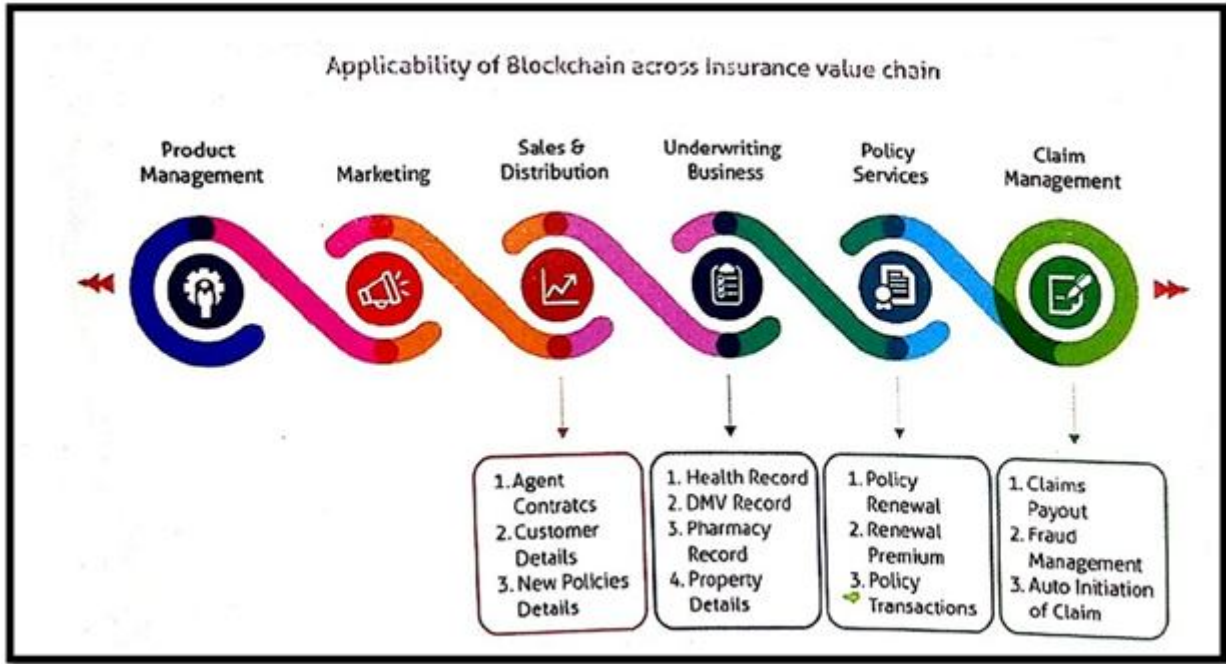
- To perceive the blockchain technology
- To check the assorted applications of the blockchain in various fields.

**Major Blockchain Applications**

- a) Cryptocurrency:** Use of blockchain in cryptocurrency is well-known. Blockchain originated from a Bitcoin cryptocurrency the utilization of blockchain in cryptocurrency is already been explored to an oversized extent and as per web site web coinmarketcap.com quite 1500 sorts of cryptocurrencies are existing as of currently. To ride on the revolution several of the central banks round the world started adopting blockchain technology to develop digital version of their own fiat currency to leverage the advantages of the underlying blockchain technology. Even Federal Reserve Bank of Republic of India is gazing the chance of introducing a financial institution digital currency that is tentatively named as Hindu deity when the Hindu deity of wealth.
- b) Banking and Finance:** As per the report “Applications of Blockchain Technology to Banking and financial Sector in India” published by Institute for Development and analysis in Banking Technology in 2017, “Blockchain Technology has the potential to deal with sure limitations of the present processes by modernizing, streamlining and simplifying the normal style of the monetary business infrastructure with a shared material of common data. The benefit brought by Blockchain Technology is broadly classified into cost savings, efficiency, and transparency”. The trendy national economy with a permission-based or private blockchain system can improve efficiencies by taking aboard all the beneficiaries to make a banking ecosystem to reap the mutual advantages in terms of moving money and assets in real-time to settle markets transactions.

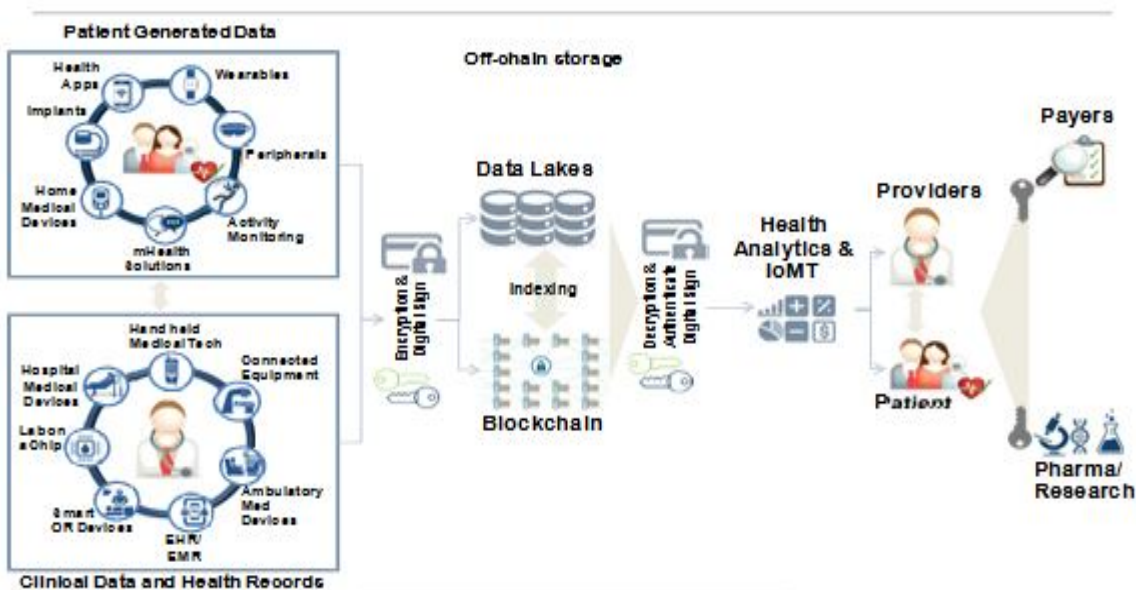


c). **Insurance:** The use of blockchain technology has significant potential for entire insurance value chain. Certain insurance products can be automated through smart contracts, which will pay out against the insurable event without the policy holder having to make a claim or the insurer having to administer the claim has significant attractions resulting in significantly lowering the cost of claims processing by reducing fraud opportunities. Blockchain has the potential to eliminate error, negligence and detect fraud by providing a decentralized digital repository to independently verify the authenticity of customers, policies and claims with a complete audit trail feature. This prevents duplicate transactions and provides a verifiable public record of all transactions.



d). **Health Care:** The storage and sharing of health information presents an enormous challenge, including some important risks to privacy, and fantastic opportunities, including the potential to develop a practical understanding the health of unique individuals instead of generic humanity. Blockchain technology may revolutionize medical research and individual care by diving into this space and promising a new era of research and discovery propelled by analysis of aggregated longitudinal health information from individuals in the context of that from the population at large, and by a new ability for researchers to access data they need to gain new insights.

**Blockchain Technology-Promising Use Cases for Healthcare Industry**



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**CONCLUSION**

Blockchain is considered one among the rising technologies, which continues to be in evolving stage the subsequent wave of blockchain includes various innovation like hyper ledger fabric, smart contracts etc., that addressed the earlier limitation of Bitcoin blockchain. In the initial years of introduction of blockchain technology, it had been largely adopted by cryptocurrencies. The sensible application of blockchain is limitless and researchers are still exploring the ways in which to completely exploit the potential of this technology. Watching the pace of adoption of blockchain it seems that it'll presently reach the critical mass, which is able to build the speed of adoption becomes independent and creates any growth.

**BLOCKCHAIN GLOSSARY**

**Blockchain:** A blockchain could be a peer-to-peer digital ledger of transactions that may be in public or in private distributed to any or all users (and so is claimed to be suburbanized and distributed). Blockchain technology uses cryptography and a agreement mechanism to verify transactions, that ensures the legitimacy of a transaction, prevents double- payment, and permits for high-value transactions in a very trustless surroundings. A blockchain offers transparency and eliminates the necessity for intermediaries or third-party directors.

**DISTRIBUTED LEDGER TECHNOLOGY (DLT)**

though it's usually used as a word for blockchain, DLT typically refers to the distributed, suburbanized ledger facet of blockchain technology: With DLT, a ledger are often maintained, secured, and authenticated by relying on a network of computers (decentralized) instead of one, centralized authority. As a result, copies of the ledger are often unbroken and maintained by several people or organizations (distributed) and no copy is that the master or lead copy.

**PROOF OF WORK**

One among 2 common consensus validation mechanisms for confirming blockchain transactions. With proof-of-work validation, network participants (known as miners) compete to feature the sub sequent transaction block to a blockchain by solving a posh scientific discipline puzzle, thereby validating previous transactions within the process and earning transaction fees for his or her work.

**MINING**

The method performed by users (known as miners) to validate transactions on blockchain that use the proof-of-work mechanism for validation. **Virtual currency:** A digital illustration of value that are often digitally listed and functions as a unit of account or store of value. Virtual currency may are available in the shape of digital tokens or coins, that are issued by a virtual organization (such as the DAO) or different capital raising entity, and should carry sure rights, like the right to resell the token or receive a refund (see below Regulation of ICOs and different Blockchain Investments). Virtual currency isn't fiat currency (which refers to currency that's recognized as tender by a government however is not backed by a physical commodity like gold or silver (for example, the USA dollar)).

**VIRTUAL CURRENCY EXCHANGE**

A person or associate entity that exchanges virtual currency for fiat currency, funds, or other forms of virtual currency, sometimes for a fee. Exchanges may additionally host secondary market trading of virtual currency.

**Cryptocurrency:** Virtual currency that's secured by cryptography instead of a central computer user popular sample of cryptocurrencies include Bitcoin, Ethereum, Ripple, and Litecoin. Cryptocurrencies are a unit valuable used to transact on the underlying blockchain.

**TOKEN**

Cryptocurrency that's programmed or built on a blockchain to own a variety of uses additionally to, or in role of, serving as currency each on and off the platform. All virtual currencies and tokens have capital gains potential, notably if there is a rising demand for the applications and functionalities related to a selected virtual currency or token.

**Utility token:** A token that's designed primarily to offer the owner access associated rights to use a system (like shopping for tokens at an arcade or tickets at a carnival). Utility tokens sometimes offer access and functionality features, providing owners with access to a blockchain network and functionalities within that network.

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Fox, S. (1984). Empowerment as a catalyst for change: an example for the food industry. *Supply Chain Management*, 2(3), 29–33.

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