

ISSN: 2320-7272
Vol. VI, No. I, January-June 2018

JBIMS

Spectrum



Jamnalal Bajaj Institute of Management Studies
Department of Management Studies,
University of Mumbai

ISSN: 2320–7272

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Vol. VI, No. I, January – June 2018

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Printed by

MUMBAI UNIVERSITY PRESS

Address: CST Road, Kalina, Santacruz East, Mumbai, Maharashtra

Phone No.: 022 2654 3000, Website: www.mu.ac.in

From the Editor's Desk

Jamnalal Bajaj Institute of Management Studies (JBIMS) was founded in 1965 by the University of Mumbai. The philosophy which has inspired the vision and approach of JBIMS since its inception is that of cultivating management thinkers and innovators who are deeply entrenched and firmly rooted in the Indian soil. This has been underlying theme of JBIMS for 50 glorious years as it launched various educational, research and development activities for the advancement of management education. The institute has constantly focused on inculcating an action- oriented approach and driving the need to constantly innovate and reinvent in order to sustain in a dynamic business environment.

With a view to foster innovation and research, JBIMS has taken yet another leap forward with the Research Journal that will be published twice a year. Driven by mission of quality education and research, the Journal will attract the brightest of researchers and academicians to share and contribute their research and experience. This research journal aims to create greater collaboration and sharing of academic understanding. The Institute seeks to provide excellence in management education and research by way of this journal-JBIMS Spectrum. The Journal aims to become a wealth of world-class research and analysis across the entire spectrum of management education. By way of our alliances, we hope to create a rich compilation of management knowledge that will benefit our readers which comprises industrial stalwarts, researchers, academicians and the student fraternity.

We, thereby, invite all research scholars, academicians, management teachers, practicing managers and students to use this golden opportunity to take their research to the vast network associated with JBIMS and enable us to create a portal for the transfer of high-quality research-driven information.

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A STUDY OF COUNTERFEIT PRODUCTS MARKETING IN INDIA
– THE ILL-FACE OF GLOBALISATION

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ABSTRACT

Globalization has opened the gates of trade across the world, but with the advent of globalization, the market for imported products in India increased phenomenally, more so over the last two and half decades. In this context not only organized companies in the market have exploited the market by introducing products from our neighboring countries but also small unorganized companies have followed the steps. Some companies have even gone beyond by simply counterfeiting the originals here in India and giving them a ‘imported’ tag. Even the organized companies have gone in the path by procuring from the same foreign vendors and opening the gates for counterfeit, letting rampant infringement of Intellectual Property Rights in Indian market. This ill-face of globalization has negated the otherwise lucrative picture of business growth, by creating a huge opportunity of illegal counterfeit trade in Indian market. This research is primarily based on the study done on the home appliances business in India, where the researcher has explored in detail why companies make counterfeits, why retailers sell those counterfeits and why consumers buy counterfeits. This paper deals only with the dealers and consumers role in counterfeit marketing. The results have shown that counterfeit products marketing is flourishing and consumption in the market is primarily due to the dealers/retailers influence on the consumers. The researcher has explored the topic to scientifically understand consumer’s point of view in buying counterfeit and also to scientifically understand dealers’ point of view in stocking and selling counterfeit products in market and provide suggestive solutions to curb this counterfeit trade as the ill-face of globalization.

KEYWORDS: *Counterfeit, Intellectual Property Rights, Home appliances, Globalization*

INTRODUCTION

Despite the increasing interest of discussion in both academia and industry about strategies in brand management for marketing excellence, legal protection mechanisms of brands, Intellectual Property Rights (IPR) are seldom discussed in detail. However, the researcher argues that IPR including Trademarks, Patents, Copyrights, Design rights, are the most important aspects to consider in such discussions, more so with realization to tackle unfair competition. In a highly competitive business environment of India with many local players and growing number of multinational companies entering India, the space for one's own niche and positioning one's brand as distinct and superior is a concern most supreme for sustainability and future growth. In such a situation infringements of intellectual property becomes a big threat. The researcher has observed that Intellectual Property Right (IPR) although is a major component for marketing excellence in the present generation of Indian business more so since the advent of this new century, but IPR has not been considered with due seriousness in most business sectors in India. Until recently, the Indian home appliance business sector had a clear demarcation of organized players and un-organized local players. However, there has been a significant shift in the strategies adopted by both major national players and their smaller local counterparts since 2010. Previously, the smaller players focused mainly on niche appliances, such as irons, mixers, grinders, electric cookers, food processors and fans and were present mainly in the lower price bracket. The major players focused mainly on larger appliances. All this has been changing and a paradigm shift in the way both major and smaller appliance companies operate in the Indian market has been observed. The major companies in small home appliances business entered niche appliance categories in order to attain stronger volumes. The smaller local players, on the other hand, were aiming to increase their reach and penetration. They expanded aggressively in regions where they were yet to have a presence in order to increase their penetration. In addition, smaller local companies entered a number of appliance categories in which they were not present earlier, by directly importing these products from China, Thailand and South Korea and selling them in the Indian market. It has also been observed that a growing trend about the importance of branding and product based marketing among local regional players and they too are now investing in brand building activities. This probably can be their strategy to elevate themselves to be classified as an organized company from being considered as existing un-organized player in the business. In this bargain, it has been observed that rampant infringement of product design

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and trademarks are happening nationally and this is affecting the business revenues, market share and brand equity thereby companies are losing their competitive edge eventually. It is also observed from the market that not just the un-organized companies but also the bigger organized players are infringing their competitors' intellectual properties. As a part of the bigger research study, I have studied in detail the factors that influence organizations, dealers/retailers and consumers to participate and contribute to the practice of counterfeit trade as IPR infringements from the period of year 2014 to 2017. The study involved the understanding of why companies make counterfeits, why retailers sell those counterfeits and why consumers buy counterfeits. This particular paper is concerned with only that part of the research dealing with dealers/retailers and consumers attitude to participate and contribute to the practice of counterfeit trade and also suggestive solutions to curb this counterfeit trade as the ill-face of globalization.

NEED FOR THIS RESEARCH

Secondary research has revealed the small home appliance industry has Market Size of Rs.37000 Crores (*Average 2010-11 to 2014-15*), but it faces annual revenue loss of Rs.12000 Crores *approx. (Average 2010-11 to 2014-15)* due to IPR infringements. [*Source: ASSOCHAM*]. Also it has been observed that about 82% of the revenue loss in this industry is due to product design related counterfeits alone. Hence there is a very big need to research this issue and address the cause and suggest suitable solutions.

OPERATIONAL DEFINITIONS

- Counterfeiting means to make an imitation of something with an intent to deceive people. This imitation can be in the form of Trademark imitation including the Brand or the Product Design imitation, or the Product/Production Technology imitation.
- Intellectual Property Rights (IPR) consists of a bundle of rights in relation to a certain material object created by the intellectual capabilities of the original creator who only has

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the right to recreate it. IPR include the industrial rights of Trademarks, Copyrights, Patents, and Designs only for the scope of this research.

- Small Home appliances include home and kitchen appliance product categories like electric fans, electric irons, mixer-grinders, juicers, water filters, water heaters, induction heaters, electric rice cookers, electric kettles, room heaters, room coolers, electric lights.

RESEARCH OBJECTIVE

To understand consumer's point of view in buying counterfeit and also to understand dealers/retailer's point of view in stocking and selling counterfeit products in market.

HYPOTHESIS FORMING

To fulfill the research objective, I propose the following hypotheses:

H0₁: Consumers' choice of counterfeit appliances is independent of Consumer Demographics

H1₁: Consumers' choice of counterfeit appliances is dependent on Consumer Demographics

H0₂: Consumers' choice of counterfeit appliances is independent of Dealers' influence

H1₂: Consumers choice of counterfeit appliances is dependent on Dealers influence

H0₃: There is no relation between Consumers' realization of counterfeit appliances and Consumer Psychographics

H1₃: There is a significant relation between Consumers' realization of counterfeit appliances and Consumer Psychographics

H0₄: There is no relation between Consumers' realization of Counterfeit appliances and being aware of loss due to counterfeits

H1₄: There is a significant relation between Consumers' realization of Counterfeit appliances and being aware of loss due to counterfeits

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H0₅: Motivation for dealers in selling lesser known brands is independent of their knowledge of counterfeit

H1₅: Motivation for dealers in selling lesser known brands is dependent on their knowledge of counterfeit

RESEARCH METHODOLOGY

To systematically solve the research problem a detailed research methodology was planned for this study. The methodology proposed here for understanding how the research study would be carried out to obtain in depth information about the variables and their significance in studying counterfeit trade in the home appliance market of India.

Accordingly the research methods proposed for this study are:

- Exploratory research: To get insights into the core of the issue and understand how intellectual property of home appliance companies are being managed by the trade partners of the companies such as the home appliance dealers/retailers
- Causal research: To study the cause of market reactions among Consumers to the strategies implemented by the home appliance dealers/retailers in India.

SAMPLING

- **Purposive and Snowball sampling:** Since Dealers are extremely important as retail sales partners of home appliance companies in the market, they were selected on the basis of company database purposively and also to some extent by snowball reference. Accordingly home appliance dealers were approached across India and they were interviewed with specific questionnaire. 1007 Dealers of home appliances in India gave complete feedback out of the total 1080 approached. Hence Dealers sample for this research is 1007. Consumers are another extremely important entity to study in this research. For detailed and in depth result required to address the research problem,

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consumers were selected across India primarily through snow ball sampling approach and accordingly consumers in individual were interviewed and studied with a suitable questionnaire. 2003 Consumers gave complete feedback out of total 2150 approached. Hence Consumers sample for this research is 2003.

DATA COLLECTION

Primary Data

- Primary data was collected by interview based research survey in the field using a structured Questionnaire for key personnel in Companies, Design agencies, Dealers and Consumers as respondents from the chosen sample in India.

Secondary Data

- Secondary data was collected by Desk research method referring to published reports of ASSOCHAM, CII, NCAER, various Market research agencies

DATA ANALYSIS

Dependence of Consumers' choice of counterfeit appliance and Consumer Demographics

Chi square statistic	p value
15.5665	0.00008

Dependence of Consumers' choice of counterfeit appliance and Dealers' Influence

Chi square statistic	p value
28.9438	0.00001

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Relation between Consumers' realization of counterfeit appliances and Consumer Psychographics

Chi square statistic	p value
30.1117	0.000001

Relation between Consumers' realization of Counterfeit appliances and awareness of loss due to counterfeits

Chi square statistic	p value
11.7455	0.00061

Motivation for dealers in selling lesser known brands and their knowledge of counterfeits

Chi square statistic	p value
0.4628	0.49633

RESEARCH RESULTS

Sr. No:	Hypothesis	Test	Analysis	Result
1	<p>H₀: Consumers' choice of counterfeit appliances is independent of Consumer Demographics</p> <p>H₁: Consumers' choice of counterfeit appliances is dependent on Consumer Demographics</p>	Chi Square Test	$\chi^2 = 15.5665$ $p = 0.00008$	<p>H₁ accepted</p> <p>Consumers' choice of counterfeit appliances is dependent on Consumer Demographics</p>

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2	H0 ₂ : Consumers' choice of counterfeit appliances is independent of Dealers' influence	Chi Square Test	$\chi^2 = 28.9438$ $p = 0.00001$	H1 ₂ accepted
	H1 ₂ : Consumers' choice of counterfeit appliances is dependent on Dealers' influence			Consumers' choice of counterfeit appliances is dependent on Dealers' influence
3	H0 ₃ : There is no relation between Consumers' realization of counterfeit appliances and Consumer Psychographics	Chi Square Test	$\chi^2 = 30.1117$ $p = 0.000001$	H1 ₃ accepted
	H1 ₃ : There is a significant relation between Consumers' realization of counterfeit appliances and Consumer Psychographics			There is a significant relation between Consumers' realization of counterfeit appliances and Consumer Psychographics

Sr. No:	Hypothesis	Test	Analysis	Result
4	H0 ₄ : There is no relation between Consumers' realization of Counterfeit appliances and being aware of loss due to counterfeits	Chi Square Test	$\chi^2 = 11.7455$ $p = 0.00061$	H1 ₄ accepted
	H1 ₄ : There is a significant relation between Consumers' realization of Counterfeit appliances and being aware of loss due to counterfeits			There is a significant relation between Consumers' realization of Counterfeit appliances and being aware of loss due to counterfeits

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5	H0 ₅ : Motivation for dealers in selling lesser known brands is independent of their knowledge of counterfeit	Chi Square Test	$\chi^2 = 0.4628$ $p = 0.49633$	H0 ₅ accepted
	H1 ₅ : Motivation for dealers in selling lesser known brands is dependent on their knowledge of counterfeit			Motivation for dealers in selling lesser known brands is independent of their knowledge of counterfeit

CONCLUSION

From this research study, it became evident that there is a significant relation between Consumers purchase decision/choice of counterfeit appliance and Consumer Demographics. The research results clearly showed that 40 plus aged consumers comparatively chose less counterfeits than below 40, higher educated consumers chose more counterfeits, salaried and professionals chose more counterfeits, higher income consumers chose more counterfeits. There is a significant relation between Purchase/choice of counterfeit appliance and Dealer’s influence. Consumers’ choice of counterfeit appliance is dependent on Dealers’ influence. There is a significant relation between attitude/lifestyle as consumer Psychographics and their realization of counterfeit appliances. However the result shows there is a sizeable population who are unaware of counterfeit, indicating that in spite of being Design and Brand centric population of the present age, there is a need of educating consumers on ways of identifying counterfeits and protecting themselves from losses. There is a significant relation between Consumers’ realization of Counterfeit appliances and being aware of loss due to counterfeits. However the observed result shows that Consumers are least aware of the original manufacturers’ loss due to counterfeit but are well aware of their own losses with the view that counterfeit appliances do not give value for money. Motivation for dealers in selling lesser known or unknown brands is independent of their knowledge of counterfeit. This revealed the fact that dealers do not necessarily get interested in selling counterfeit appliances being aware of the counterfeit status, in most cases they are not aware that the lesser known or unknown product brand they are selling is a counterfeit or can be a counterfeit of the original products.

Without respect to IPR and regard to the injustice done to the original producers, we lose the basis of a responsible and sensitive consumer-society. IPR therefore needs to be carefully managed by companies, which can have great impact as marketing strategy to create superior

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brand image and earn competitive advantage in the market. This has to percolate down on the responsibility of the companies' trade partners as the dealers/retailers in the market and responsible sell products to the consumers to create a counterfeit free economy.

RESEARCHER'S RECOMMENDATIONS

I propose certain recommendations for organizations and policy makers to manage the problems of counterfeiting in India as enumerated below:

- 1) The Government has to take huge initiatives in popularizing the concepts of IPR in professional education and particularly in the field of business management, so that citizens become aware do not participate in the practice of counterfeit trade.
- 2) Anti-counterfeiting technologies to be increasingly promoted and put in to use to protect and authenticate products.
- 3) The originators in the country should be given all possible administrative and legal authorities for dealing with piracy and counterfeiting.
- 4) Properly regulated licensing may offer opportunities that deflect potential counterfeiters. Offering a licensing opportunity to a potential counterfeiter lowers the chances to counterfeiting, as long as the contract is properly designed and enforced.
- 5) Regulations need to be made on banning counterfeit home appliances with safety reasons for consumers as the prime objective since quality is greatly compromised in a counterfeit product.
- 6) There are laws against manufacturing counterfeits in this industry, but new regulations need to be made against sale of counterfeits by retailers as well.
- 7) Strict law for consumers to control them from buying counterfeits need to be made.
- 8) Government needs to run social campaigns for the common man, educating about negative impact of counterfeits on their own self and on the country's economy,
- 9) Along with the existing "Make in India" concept, Government should drive the idea of "zero tolerance towards counterfeits"

Organizations in this industry therefore have to consider a broad picture of innumerable benefits that IPR has for encouraging and securing innovations, brand names, corporate images, etc. and

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need to look at IPR as an internal management responsibility. The same policy needs to be circulated in the market to restrict or control dealers/retailers from practicing counterfeit trade. IPR is therefore the necessary part of the management system for organizations in India to realize, adapt and implement in its operations, which is the definite pathway to create a counterfeit free economy and erase counterfeiting trade which has emerged as the ill-face of globalization.

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BOLLYWOOD'S GLOBAL STRIDES: AN OVERVIEW

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ABSTRACT

Bollywood, a term that refers to Hindi Film Industry based in Bombay, now Mumbai has registered all round impressive growth as industry and business in last two decades of era of globalization. Since 2000 in acknowledgement of its potential for multiple growths it is made eligible for mainstream credit globally. Bollywood has attracted international film businesses, Hollywood Film Studios such as Sony, Disney, Warren Brothers etc. the known World's highest Revenue Earners, for collaborations. Bollywood films have registered their presence in big way in US, UK, Eastern Europe, Germany, East Asia etc. It has also witnessed actors such as Nargis Fakhri, Jacqueline Fernandez cross over to make name and fame, also the technicians, cinematographers musicians, hair and make-up stylists who form influx of international professionals.

In an interview in Mumbai (18th March 2006), Late Mr. Yash Chopra, Bollywood's most successful director and producer remarked, "The barriers have been broken and the doors have been opened"

This research paper attempts to understand the said phenomenon in light of various factors which promoted as well as restricted it.

KEYWORDS: Bollywood, Globalization, Technology, Revenue generation, Promotion

Bollywood's Global Strides: An Overview

INTRODUCTION

The last two decades have witnessed significant growth and progress in the Indian film industry, especially Bollywood. The slightly humorous name of the film industry in Bombay and related media, does not mean that it is a mere imitation of the film cluster in Los Angeles, USA (Lorenzen and Taeube, 2008). The history began nine decades ago, when the insecure film production converted into a faceted and huge economic empire. While stylistically, the dances and lip-synced songs, the symbolic and emotional drama, and the script contained in a typical 3-hour Bollywood movie can be alien to the audience of Hollywood, rather than being a “Third World” art cinema (Tyrell, 1999), Bollywood produces about 1100 films per year, twice the number that produced in USA, and make India as the largest film producer in the world (Lorenzen, 2009). Establishing itself as a highly qualified industry, the famous Bollywood cinema has progressed enormously in the infrastructure, finance, marketing and distribution. Through the widespread of Indian Diaspora and the growth of “Brand India”, Bollywood’s films are spread in the international market. It is a fact that in recent past, the international sales were higher than the domestic ones. Bollywood’s movies are classified in the top ten lists of the United Kingdom and the United States. The industry has progressed in all aspects of globalization, such as technology, goods, services, capitals and people (Pillania, R. k., 2008). Bollywood, with an estimated annual number of ticket sold globally of 3.6 billion in 2001, compared to Hollywood's 2.6 billion, is undoubtedly one of the most popular cultural industry in the world (Kripalani and Grover, 2002; Lorenzen and Taeube, 2008; Lorenzen, 2009).

STATEMENT OF THE RESEARCH

‘Bollywood’s global strides- An overview’ is an attempt to understand the concept of the word ‘Globalization’ and to study and research the elements of globalization with respect to Bollywood. This research aims to critically analyze the extravagant, commercially successful and popular cult Bollywood cinema.

PURPOSE AND SIGNIFICANCE OF THE STUDY

The purpose of this study is to identify and critically analyze the impact of globalization on Bollywood and the changes it has brought in the Bollywood style with respect to technology, promotion, script, target audience.

Bollywood's Global Strides: An Overview

RESEARCH DESIGN

The research method used for this research is qualitative. Qualitative analysis is employed to understand the elements of the film and arrive at conclusions. The researchers have attempted to employ Content analysis to study the various elements and cultivation theories, didacticism and social learning concepts provide a theoretical base for the study.

LIMITATIONS OF THE STUDY

Some of the limitations of this study are:

- The paper is based on secondary data.
- Authenticity of available data cannot be assured.

OBJECTIVES OF THE STUDY

This paper aims to achieve following objectives:

1. To trace the overall growth of Bollywood since 2000.
2. To discuss the factors that promoted or restricted the growth of Bollywood.
3. To analyze the impact of globalization on the traced growth of Bollywood.

GLOBALIZATION

Before moving further, it is vital to understand what Globalization is all about. "Globalization reflects a widespread perception that the world is rapidly being molded into a shared social space by economic and technological forces, and that developments in one region of the world can have profound consequences for the life chances of individuals or communities on the other side of the globe" (Held *et al.*1999). There are four aspects of globalization, according to Pillania (2008). They include the movements of goods, capital, technology and people across borders (p. 199). Scholte (2005) sees globalization as describing "a process of dispersing various objects and experiences to people at all inhabited parts of the earth" (p. 57). This definition is crucial to form the linkage between Globalization and Bollywood. Bollywood has been successfully dispersing Indian experiences as well as objects, movies in this respect, to the whole wide world. Bollywood has also welcomed objects and experiences from other world to India.

HISTORICAL BACKGROUND

Pre Globalization

Bollywood, a Mumbai based film industry of India, appeared in about 1912. The earlier cinema was influenced by the Indian freedom struggle against British colonialism, and therefore, cinema was engaged in defining a cultural identity from its very inception. With the advent of “talkies” in the early 1930s, the Indian film industry was able to free itself from the “shackles of foreign influence”. Many of the films were made in colloquial language and were rich in songs many of which were recorded separately and were played on the radio. By the end of colonialism, the Indian popular cinema emerged as “India’s sole model of national unity” with an emphasis on realism. The intense between modernism and tradition, evolved into film imagination. Directors like Raj Kapoor and Bimal Roy made movies in the 1950s and 1960s, depicting the underprivileged and marginalized world, depicting the Indian society as "unlawful and unjust". The films contained socio-political messages. In 1970 and 1980 decades, Hindi movies worked as catalysts for the homogenization of the nation. The underlying assumption was that the "angry young man" was the main common thing of these films.

During the 1990 decade, as a result liberalization of the Indian economy, the internationalization of production and distribution of Hindi films increased. With the launch of satellite television, Indian cinema began to work in a new media landscape and in this way the access to Bollywood and Hollywood films was facilitated. Furthermore, they were available for the viewers in their own homes. The distribution rights for a big budget film were nearly doubled in comparison with the India market. Furthermore, the rights of television and music created more revenues than the total production had cost, even before a ticket was sold. (Rao, S., 2007).

Post Globalization

In the end of the 1990s decade, India was expanded even more in the social media, via broadcasts on television, such as B4U (Bollywood-for-You) and a strong appearance in the online world that concerns every aspect of the Hindi film world. It also created a new radio station that used to play Hindi movie songs and cinemas and theatres are created, where these films were shown in various cities of the USA. It is obvious that the Hindi films, which acted as a dominant body during the meta-independence period of India, had a huge cultural and emotional value for the expatriate Indians, who grew up watching these movies. Moreover, the

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viewing of social ceremonies and socio cultural interactions helped the expatriate Indians who wished to maintain their cultural traditions in their country of residence. These movies born memories, feelings of nostalgia but also of the certainty that they are framed by their homeland, even from this distance (Punathambekar, A.,2005).

Both in the USA and the United Kingdom, weekly programs were started on TV that included film soundtracks, interviews of actors, trailers and more.

Newspapers, such as The New York Times and Washington Post publish regular reviews of these publications in New York, San Francisco, Toronto and they usually refer to film premieres of Bollywood. Other writers wrote that: "The West may have the biggest stalls in the world's media bazaar, but it is not the only player. Globalization isn't merely another word for Americanization and the recent expansion of the Indian entertainment and film industry proves it."

GLOBALIZATION AND BOLLYWOOD SCRIPT

Well-known for the frequent reconstruction and reorganization of Hollywood's films, Bollywood's label represents both the recognition of the debt of directors of Bombay in Hollywood for creative ideas, and a description that challenges the hegemony of Hollywood (Rao, S., 2010).

Since 2000 and later, some movies presented ideal situations, in which life was unreal, beautiful and without troubles. There is no similarity with the 1950 decade, when poor people who lived in Mumbai's slums were shown. Only when there are scenes of violence or terrorism, will the slums be shown. In the new Bollywood "era" the heroes are rich. If someone made a movie in which the main character was not rich, then the movie would have been called as an alternative movie. The dreamy Bollywood represented the aspect of materialism, e.g. expensive cars, motorcycles or well-known designers' clothes and speaking in English. Heroes had gained a comfortable life with a high income, because many of them were ambassadors of the brand of one or more products.

The globalization effect on the industry has resulted in western production standards, usage of English in the script or incorporation of some element of western-style plots. Bollywood has produced hits like Dilwale Dulhania Le Jayenge, Black (2004), Dhoom (2004), Dus (2005), Hum Tum (2004), Kal Ho Naa Ho (2003), Murder (2003), Salaam Namaste (2005) , Johnny

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Gaddar (2007) and Rock Star (2011) were top-grossers, dealing with the overseas Indian culture and shooting made abroad with foreign actors and singers.

Therwath's writing *'Shining Indians': Diaspora and Exemplarity in Bollywood* takes a detailed look at how the portrayal of Nonresident Indians (NRI), or Indians in diaspora, transformed during the years after liberalization. It was during this transition that NRI "ceased to be a symbol of the 'Other' and has become instead the prototype of the new Indian, globalized and modern, but always a nationalist at heart" (Therwath, 2010, p. 6).

GLOBAL REVENUE GENERATION

Economic Globalization: Liberalization of Film Financing

In May 1998 Bollywood was conferred official status as an industry, and so began the liberalization of that industry (Dudrah, 2006, p. 148). According to Ganti (2013), "until the advent of industry status and corporatization, the finance for filmmaking in India was predominantly connected to the vast unofficial or "black" economy" (p. 64). Prior to liberalization, Bollywood films were funded through unregulated networks of financiers, whose occupations varied and included both legitimate and criminal enterprise. There were two primary economic consequences to liberalization: filmmaking in India was professionalized and "began to appear and operate more in line with dominant understandings of professional organization and discipline" (Ganti, 2013, p. 65), and foreign capital and media companies themselves began to make their appearance (Dudrah, 2006, p. 151).

FDI Policy

Since the film industry was granted the status of an 'Industry' in 2001 then, the GOI has taken several initiatives to liberalize the film related foreign policy regulations. The GOI has allowed 100 percent FDI in the film sector broadly covering film production, exhibition and distribution, including related services and products. No prior approval and no entry level conditions except for certain post filing requirements, including notifying the Reserve Bank of India within 30 days of receipt of inward remittance in India and filing of certain documents within 30 days of allotment of shares.

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The GOI has also entered into film co-production treaties with several countries like Italy, United Kingdom, Germany, Brazil, France and New Zealand and is in the process of entering into more bilateral pacts with countries like Australia, China and Canada.

International film studios such as Warner Bros., Disney, Fox and DreamWorks have collaborated with local film production houses to develop Hindi and regional films.

Worldwide Revenue Generation

- In 2016 more than 2.2 billion movie tickets were sold in India, placing the country as the leading film market in the world. India has been the largest movie producer worldwide for the last few years, releasing more than a thousand films each year. Reportedly Dangal was able to collect Rs.139 crores gross within 2 days of its release worldwide. The film collected entirely close to the Rs.211-216 crores gross amount of collections in its three days run worldwide making it a movie of 200 crore club within 3 days of its release. China has contributed more than 60% total collections for the movie and around three times of what Dangal collected in India. Apart from China, Dangal also did well in Taiwan and Hong Kong earning more than Rs. 40 crores and Rs.4.46 crores respectively. The film reportedly raked in over Rs. 1,500 crore from that country, almost 50% more than what all overseas theatricals from India collected in 2016 – and nearly two and a half times the business (about Rs 600 crore) from India.
- As far as 'PK' is concerned, it was released in 22 International markets earning upto Rs. 854 crore worldwide. It did especially well in China earning about Rs 1.3 billion, becoming the first Indian movie to cross the 100 million yuan threshold. PK became the highest-grossing Indian film in China in just 72 hours. It managed to earn Rs 706 million in USA and Canada.
- Subsequent Bollywood blockbusters such as 3-Idiots, Dhoom-3, PK, Dangal and Bahubali-2 garnered larger revenue share from overseas theatricals.
- The highest-grossing Bollywood films released in 2017, by worldwide box office gross revenue, are as follows :

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Table No. 1

Highest worldwide gross in 2017

Rank	Title	Distributor	Worldwide gross
1	Tiger Zinda Hai	Yash Raj Films	544.69 crore (US\$85 million)
2	Golmaal Again	Reliance Entertainment	309.45 crore (US\$49 million)
3	Raees	Red Chillies Entertainment	308.88 crore (US\$48 million)
4	Judwaa 2	Fox Star Studios	227.59 crore (US\$36 million)
5	Toilet: Ek Prem Katha	Viacom 18 Motion Pictures	216.58 crore (US\$34 million)
6	Tubelight	Salman Khan Films	211.14 crore (US\$33 million)
7	Badrinath Ki Dulhania	Dharma Productions	200.34 crore (US\$31 million)
8	Jolly LLB 2	Fox Star Studios	197.33 crore (US\$31 million)
9	Secret Superstar	Aamir Khan Productions	193.35 crore (US\$30 million)

(Source-wikipedia)

INTERNATIONAL PRODUCTION HOUSES

On 20 October, 2005, Sony Pictures enlisted Sanjay Leela Bhansali to co-produce Saawariya. It was released worldwide in 2007 with about 1,000 prints, a number unheard of previously for an Indian film. Previously the number of prints on an average was 250. This was the first time that one of top six Hollywood studios produced an Indian film. (Kohli-Khandekar 2006.)

Business Insider India has come up with a list of 6 top-notch Hollywood production houses that are now operating in India: Viacom18, Sony, Fox Star Studios, UTV Motion Pictures, Warner Bros, Walt Disney Pictures

BOLLYWOOD TOURISM

The benefits of film tourism to host countries are well documented. Yash Raj Films did it for Switzerland, Zoya Akhtar's Zindagi Na Milegi Dobara put Spain on the radar of Indian tourists. Queen did a similar thing to Netherlands. These countries saw a significant boost in arrivals of Indian tourists to their respective countries.

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Eros International has already scheduled the shooting of its two films in Fiji after the government recently announced it would offer 47 per cent of the production cost for films being shot there. Tourism boards of many countries, such as Switzerland and UK, have offered benefits but the trend has taken off in a big way now. South Africa gives 30 per cent and Australia offers about 40 per cent, with additional incentives from individual states like Queensland.

Bollywood has been shooting at overseas location since 20th century. 1964 super hit 'Sangam' was the first movie to shoot in Europe. Later in 1989 some bits of a film by Yash Chopra 'Chandani' were shot in Switzerland. Following table depicts few of the milestone movies in terms of oversea locations.

Table No. 2
Movies with Overseas location

NAME OF MOVIES	OVERSEAS LOCATION
My Name Is Khan (2010)	San Francisco and Los Angeles.
Kites (2010)	Las Vegas, New Mexico, Maldives and Los Angeles.
Anjaana Anjaani (2010)	Los Angeles, Las Vegas and San Francisco.
Zindagi Na Milege Dobara (2011)	Costa Brava, Seville, and Pamplona.
Rockstar (2011)	Wenceslas Square, Charles Bridge, Old Town of Prague and at Dr. Beneš Square in Liberec.
Agent Vinod (2012)	Morocco, Russia, Latvia, UK, Pakistan and South Africa.
Jab Tak Hai Jaan (2012)	London
Ek Tha Tiger (2012)	Ireland, Turkey, Cuba and Thailand.
English Vinglish (2012)	New York
Cocktail (2012)	London
Dhoom 3 (2013)	Chicago, Switzerland.
Krrish 3 (2013)	Switzerland

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PK (2014)	Belgium
Happy Ending (2014)	California
Bang Bang (2014)	Czech Republic, Greece, UAE and Thailand.
Tamasha (2015)	Corsica
ABCD 2 (2015)	Las Vegas
Dilwale (2015)	Bulgaria

(Source-<https://www.msn.com/en-in/entertainment/dishoom/bollywood-travels-31-memorable-films-shot-outside-india/ss-BBuWrbq#image=32>)

INTERNATIONAL ACTORS IN BOLLYWOOD

Bollywood lures International actors. To name a few, it has Katrina Kaif, a British Indian actress, Jacqueline Fernandez is a Sri Lankan actress who won Miss Sri Lanka Universe in 2006, Nargis Fakhri is an American actress, Claudia is born in Poland, Elli Avram is Swedish Greek Actress, Mexican actress Barbara Mori, Amy Jackson, born in Isle of Ma, Giselli Monteiro, a Brazilian model, Yana Gupta, originally from Czechoslovakia, Rachel Shelley in Lagaan, Chris Patten in “Rang De Basanti” have entered Bollywood.

INDIAN ACTORS IN HOLLYWOOD

We have Bollywood actors who have also acted in Hollywood films Amitabh Bachchan. Big B acted in “The Great Gatsby” (2013), Mallika Sherawat in The Myth (2005), Hiss (2010), Politics of Love (2011), Freida Pinto made her debut in the Oscar-winning movie Slumdog Millionaire(2008), You Will Meet a Tall Dark Stranger (2010), Black Gold (2011), Rise of Planet of the Apes (2011),Immortals (2011), Aishwarya Rai Bachchan entered Hollywood through Bride and Prejudice (2004), The Mistress of Spices (2005), Provoked: A True Story (2006), The Last Legion (2007), The Pink Panther 2 (2009), Anil Kapoor- Slumdog Millionaire (2008), Mission Impossible – Ghost Protocol (2011), Om Puri- City of Joy (1992), ,Wolf (1994), The Ghost and the Darkness (1996), My Son the Fanatic (1997), East is East (1999), Charlie Wilson’s War (2007), The Hundred-Foot Journey (2014), Tabu- The Namesake (2006), Life of Pi (2012), Anupam Kher -Bend it Like Beckham (2002), Silver Linings Playbook (2012);

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Naseeruddin Shah- The Monsoon Wedding (2001), The League of Extraordinary Gentlemen (2003), The Great New Wonderful (2005); Irrfan Khan- The Namesake (2006), A Mighty Heart (2007), New York, I Love You (2008), Slumdog Millionaire (2008), The Amazing Spiderman (2012), Jurassic World (2015); Nargis Fakhri - Spy (2015);

Priyanka Chopra is the first Indian actress to star in an American show titled “Quantico” as the leading lady. She is the First Indian to enter the Royals list of W Magazine and crowned as Hollywood's New Royal now

GLOBAL PROMOTION

Pre-Globalization, Bollywood promotions were limited to a film's Muhurta or launch party, music release event and finally a full fanfare premier. The film industry had a simple marketing formula – sign in a superstar, ride on a masala recipe and success was there for the taking. If the film turned out to be a hit, it was followed up with a celebratory bash.

With promotion budget moving into crores of rupees, early promotion strategies, teaser releases, promotion on social media sites like Youtube, Google+, Facebook, Instagram, Twitter- hashtags; release of movies in different languages and overseas advertising, international premiere shows, Google live chats by actors, promotional events within and outside India live concerts Bollywood is leaving no stone unturned. A few examples- Ra.One: more than 40 crores were spent on just marketing, Chennai Express: released in the overseas market through cities like London, Dubai, Berlin and was translated into several regional languages. It was the first Indian film in Twitter history to trend at Worldwide No.1 with 2 separate hashtags #ChennaiExpress & #ChennaiExpressWeekend.

TECHNOLOGICAL ADVANCEMENTS

Until five years ago, producers were hesitant to employ latest film-making technologies. They instead spent millions on traditional techniques of expensive outdoor shoots and sets. This scenario changed when Hollywood bought their technology savvy films like “Tron” and “Avatar” to India. The number of studios handling VFX -visual effects that include mixes of live-action footage and computer-generated images increased. Indian films are utilizing globally available innovation, technology and creativity to develop fundamentally new projects. Another

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popular technology that is making its way into Bollywood is Facial Performance Capture. Movie *Kochdaiyan* which uses 3D motion capture in order to portray its main character. 3D technology, 4D tech and IMAX are also used by Bollywood. Sometimes strobe lights, fog, and wind effects are used as well. This is often done through IMAX or IMAX-like technologies such as MX4D.

CHALLENGES

Bollywood's global strides have to successfully win over the following challenges to establish itself globally.

Although Hollywood produces only a fraction of the number of films made all over the world, it garners a staggering 75% of total revenues. Also, 50% of earnings (expected to grow to 80%) come from the foreign markets whereas for Bollywood it is 20%. Hollywood has an overwhelming domination among the top grosser all over the world, almost all the top 50 movies are made in Hollywood.

Hollywood is full of enthusiasm for China. In 2005 it invested USD150m into the film business in China. The money mostly went into film making and building film retail infrastructure in China. This is because the Chinese film market remains, in spite of all its problems, an easier, more organized market if compared to India. (Kohli-Khandekar 2006)

In order to take advantage of Bollywood's complete potential and open global markets, production, distribution and retail need to function in unison with the market. (Kohli-Khandekar 2006). The time lag between censorship review and the actual release of movies is vast. As a result this lag, monetization of that movie is prolonged. While many filmmakers are trying to create new and progressive content, censorship boards demand numerous edits. Apart from this there are several operational level difficulties in licensing and clearances. Our bureaucracy lacks in single window provisions. If a foreign movie is to be filmed in India, the filmmakers have to take prior permissions from Ministry of Information and Broadcasting as well as Ministry of External Affairs. The producers also have to apply for location specific permissions. There is a lack of clarity among the foreign producers about Indian rules and regulations and vice-versa. To contribute to the challenges, Indian movies are exposed to the religious sensitivity. Speaking of recent incidents, when a religious group named "karni Sena" demanded ban on "Padmavati". As a result of these sensitivities, Malaysia became the first country to ban its release. These

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factors are the reasons Bollywood is still not a leading global film industry despite of large number of overseas releases every year.

CONCLUSION

A mixture of art, business and popular entertainment, Bollywood provides a host of insights into shifting ideals, fantasies, and pre-occupations like any cultural artifact, the movies can be approached in a variety of ways. It is evident that globalization has strengthened Bollywood. The rise of new distribution and exhibition technologies and the emergence of a global film market have caused Bollywood to export to USA and other attractive markets. Tourism, Promotional strategies, Technological advancements, Foreign production houses collaborations, International actors and Indian FDI policies regarding filmmaking are the factors that are contributing and supporting Bollywood's journey of growing global. Bollywood still has a long way to go.

The journey is well begun

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A study to understand the Return on Investment of Digital Media Expenditure, with respect to Indian banks

JBIMS Spectrum
Vol. VI, No. 1, January-June 2018
ISSN: 2320-7272
Page 029-048

A STUDY TO UNDERSTAND THE RETURN ON INVESTMENT OF DIGITAL MEDIA EXPENDITURE, WITH RESPECT TO INDIAN BANKS

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ABSTRACT

Purpose

To understand the effectiveness of spends on digital medium, so as to effect better decision making, by Indian banks.

Design/Methodology

At present digital advertising accounts for 16% of the total advertisement expenditure. Digital continues to be the fastest medium registering a 30% growth rate to reach Rs. 9,500 crores, while television remains the largest advertising medium, with a 45% share with 8% growth. Many banks are investing in the digital medium, to garner greater exposure and thereby new accounts. To understand the same, data of spends by key banks have been studied, from Top advertising agencies and the effect of such spending on website hits/fans/followers have been studied.

The advertisements on google are paid for via google adwords for search and display options. In case of facebook the ads are paid for likes/comments or direct hits to the websites. There is a pre-defined budget in each case and the advertisement is rolled. In case of facebook, more specific targeting options are available.

Sample size selection

The sample size is in-proportion to the budget spent. The details have been obtained from the agencies that handle the digital accounts of Indian banks. Similarly, the click-through-rates and thus cost-per-click are measured with the help of google analytics. The top private sector banks have been selected as marketing activities are more pronounced in these.

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Results:

The parameters measured, with the help of 'google analytics' tool : Impressions, CTR% (Click-through-rate%). The parameters are measured to get Cost/fan, Cost/follower, Interaction% & website hits.

The cost per click for a google ad in search works out to close to 1-2\$, while a facebook advertisement costs less than 0.5\$. It can go upwards as well, for other industries.

KEYWORDS: Indian banks and digital media, Social Media, CTR, Impressions, followers, ROI.

Type of paper: Technical paper.

INTRODUCTION

The objective of this paper is to understand the effectiveness of spends on digital medium, so as to effect better decision making, by Indian banks.

The study tries to understand the impact of economic efforts towards Ad spends on two media viz: facebook and Google, with respect to the banking industry, with the help of 'facebook insights' and 'google analytics'

As per RBI report, the value of internet banking in 2017 was at Rs.6 lac crores and the value of mobile banking transactions was Rs.18,969crores. Banking is a sector, which can benefit the most by harnessing the digital medium, reason being, it is a service industry and is the backbone of commerce in the country. With no physical goods to be moved from one place to another, the medium works very well for both the banks as well as for the customer. With-respect to the digital medium, social media and the all-pervading google network are places to showcase their products, as well as for carrying out transactions.

Thus the purpose is to ascertain where one should spend one's marketing finances to get best returns for one's economic efforts.

As we are all aware, there are two companies who have created our online world for us. These two companies will milk the benefits of advertisements in their created worlds...facebook and google.

The advertiser today is forced to go, where the consumer goes, hence the need to put up advertisements through google and facebook.

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Facebook ads are of broadly two types: (i) Ads in the newsfeed (ii) Stamp ads on the right .

The Stamp Ads on the right can take many forms, such as:

(i) Likes to the fan Page (ii) Clicks to the website. (iii) Sponsored post in the Newsfeed (Page-Post engagement) (iv) App engagement (v) App installs (vi) Video views (vii) Event responses (viii) Offer claims.

Google ads are: (i) Search ads (ii) Display ads (ii) Search and display for Youtube.

The above are replicated for mobile as well.

The overall targeting for the two companies varies as follows: In our study, we have gone for the basis ‘Stamp ads, leading to page likes, basis study by Steve Nanai, David Sargent, Alex Vandevere 2017.

In case of Google, we have gone for Google Display Network option.

The sub-set choice that is what type of facebook or google advertisement, is based on the industry and product in question and the secondary studies, learnings from books, blogs that point out the better options worth going for.

In this paper we will see how we have used demographic targeting for Product A, versus interests (keywords) for product B.

Facebook uses demographic targeting, while google does not.

Indian Media Scenario:

TV, Print and Digital account for 45%, 30%, 16% respectively, with Digital spends clearly growing rapidly, yet a far cry from TV and Print media.

TV reach in India is 62%, internet reach is 34%.

TV still has the highest reach, yet internet reach is growing at growing at 30%.

The young demographic of India is the key to the growth of the online medium in India.

Thus, the need to allocate a share of the marketing budget onto the online media.

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Clearly the marketer goes, where the consumer goes.

Indian Digital Media Scenario:

India is has the third largest population of Internet users in the world after US and China. The internet population in India is growing at a rate of 14% per annum. The table below provides data on the internet usage of the Top 3 countries in the world:

Ran k	Countr y	Intern et Users	1 Year Growt h (%)	Total Country Populatio n	1 Yr Populatio n Change (%)	Penetrati on (% of Pop. with Internet)	Country' s share of World Populatio n	Country 's share of World Internet Users
1	<i>China</i>	<i>73.8 Crs</i>	<i>4%</i>	<i>139 Crs</i>	<i>0.59%</i>	<i>53.2%</i>	<i>19.24%</i>	<i>19.0%</i>
2	<i>India</i>	<i>46.2Cr s</i>	<i>14%</i>	<i>129Crs</i>	<i>1.22%</i>	<i>35.6%</i>	<i>17.63%</i>	<i>11.89%</i>
3	<i>United States</i>	<i>29 Crs</i>	<i>7%</i>	<i>32.6 Crs</i>	<i>0.79%</i>	<i>89.01%</i>	<i>4.40%</i>	<i>7.5%</i>

World internet population is 3.885 billion

Data Source: Digital Insights, 2017

Among the various online media, social networking is the most used. The numbers of users in India are as follows:

- Facebook: 241 million (240 million users in USA)
- LinkedIn: 42 million
- Twitter : 27 million,

Internet penetration in India is 35%. Facebook penetration in India is 18%. Facebook penetration is usually half of the all-India internet penetration.

Mobile phone penetration in India, is 75% and 1/3rd of mobile users are Smart Phone users. 25% of India uses smart phones. (Internet penetration is 35%)-Data Source-Statista, 2017

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For the all-pervading Google, the avenues as mentioned earlier are Search, Display, YouTube, in-app advertisement on the sites that are in the GDN (Google Display Network)

Facebook Advertising:

Facebook offers a range of products that allow advertisers to reach people on Facebook.

When fb delivers ads, it does not share the user's information (information that personally identifies you, such as your name or contact information) with advertisers unless you give them permission to do so. Fb may provide advertisers with information where one's name and other personally identifying information have been removed from it, or combined it with other information so that it no longer personally identifies you. (*Steve Cartright, Digital Statistics, 2017*)

For example, fb may tell an advertiser how its ads perform or how many people viewed or clicked on their ads or install an app after seeing an ad.

For many ads fb serve, advertisers may choose their audience by location, demographics, likes, and any other information fb receive or infer about users. Here are some of the ways advertisers may target relevant ads:

Facebook provides 11 targeting factors for advertisers. Below is an outline of each of those factors:

1. Location - Facebook enables advertisers to target by country, state/province, city, and metropolitan areas. All advertisements are required to have a location selected.
2. Age - Age is a standard demographic factor. Most marketers that have a well-defined target-market will be able to select their age.
3. Birthday - These types of ads should be presented to people whose birthday it is.
4. Sex - Gender is another typical targeting filter for Facebook.
5. Activities, Favorite Books, TV Shows, Movies, and more. This will tell us, the kind of products one's customers would like? What's their job position within an organization?

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6. Education - While one can target based on their level of education, this is meant for targeting ads based on the schools/colleges that people went to. This is not a very useful parameter. It is more if an education institution wants to put up a reunion advertisement.
7. Workplaces - Often times one will know the companies that one's target market works at. If one is looking to get new clients or looking to spread awareness within specific organizations.
8. Relationship –If one wishes to target people that are about to get married? This is a tool for that. While this filter can be useful, one also needs to keep in mind that selecting any of these settings will remove all users that haven't selected a relationship status in their profile.
9. Interested In - This factor is useful if a user's sexual preferences are relevant to whatever one is advertising.
10. Languages - If the ad is in English but the user speaks Chinese, it's probably not a good idea to be displaying Chinese ads to them.
11. Connections - The connections fields enable the advertiser to include and exclude users based on pages, events, and applications that the users have joined and the advertiser happens to be the administrator of. If the advertiser has created a Page and doesn't want the ads to display to people who have already joined, this is a great way to avoid clicks.

Google Advertising:

Signing up for Google AdWords is free. One only pays when someone clicks the advertiser's ad to visit the advertiser's website, or calls you. In other words, only when the advertising is working, the advertiser pays.

Google targets basis keywords. Thus if there is a match between the keywords that a user is searching for or is repeatedly browsing for, then the advertisement appears in the area around, on the user's screen.

For deciding on the keywords, there is a Google Keyword Planner tool, which has been used in this study.

Keyword Planner is a workshop for building new Search Network campaigns or expanding existing ones. One can search for keywords and ad group ideas get historical statistics, see how a

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list of keywords might perform, and even create a new keyword list by multiplying several lists of keywords together. (*Journal of Digital Advertising, Bill Sobel, 2015*)

Keyword Planner has helped us choose competitive bids and budgets to use with campaigns.

The use of Keyword Planner for keyword research (The same has been followed as the basis of this paper)

The tool has been used to search for ideas or to find keywords for a new campaign or expand the keyword list for an existing campaign, keyword planner tool has been used.

To expand an existing campaign, Keyword Planner was used. To find more specific keywords that don't have a high search volume (which we like to call "long-tail" keywords), but might be more likely to lead to a conversion, the same tool has been used

Thus we have "shopped" from the list of keyword and ad group ideas and added the keywords we have liked to a draft "shopping cart" plan - the same way one might shop for shoes on an e-commerce site.

Got search volume for a list of keywords or group them into ad groups

We have also added our own keywords, from common sense and entered those keywords manually to get an idea of how popular those keywords have been. After that we tested the popularity of those keywords, by getting a search volume statistic for the same ie. volume of people searching. We have grouped our keywords into ad groups.

Got traffic forecasts for a list of keywords

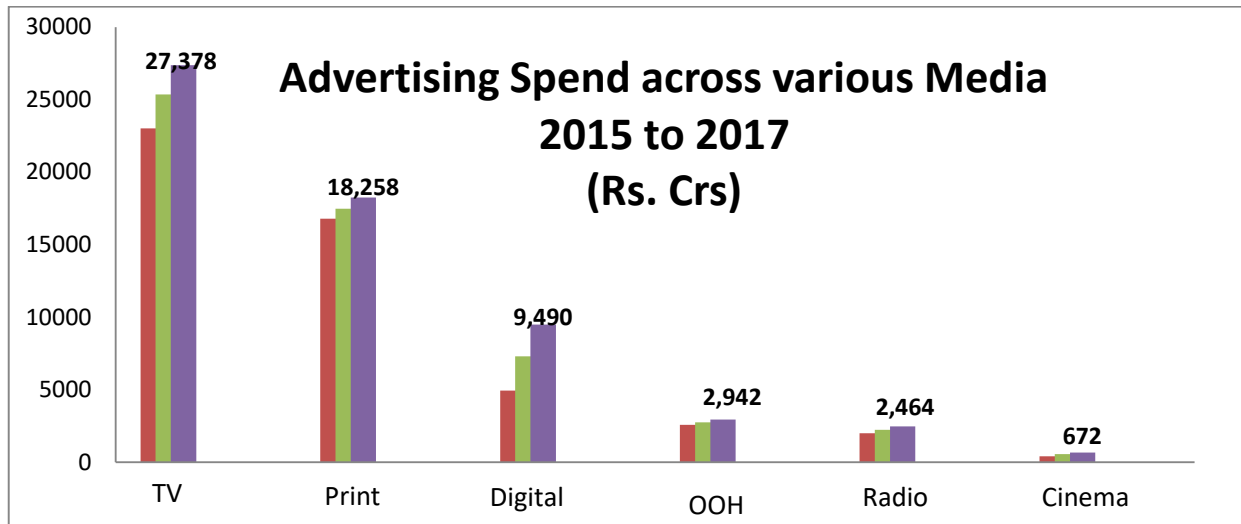
For the already existing list of keywords, one gets clicks and cost forecasts. These are forecasts that are specific to our AdWords account and the bid that we have selected.

Thus the dashboard relevant to has the following columns:

Ad group, Keywords, Avg. monthly searches for that keyword, Competition (High/Medium/Low), AverageCost-per-Click (CPC).

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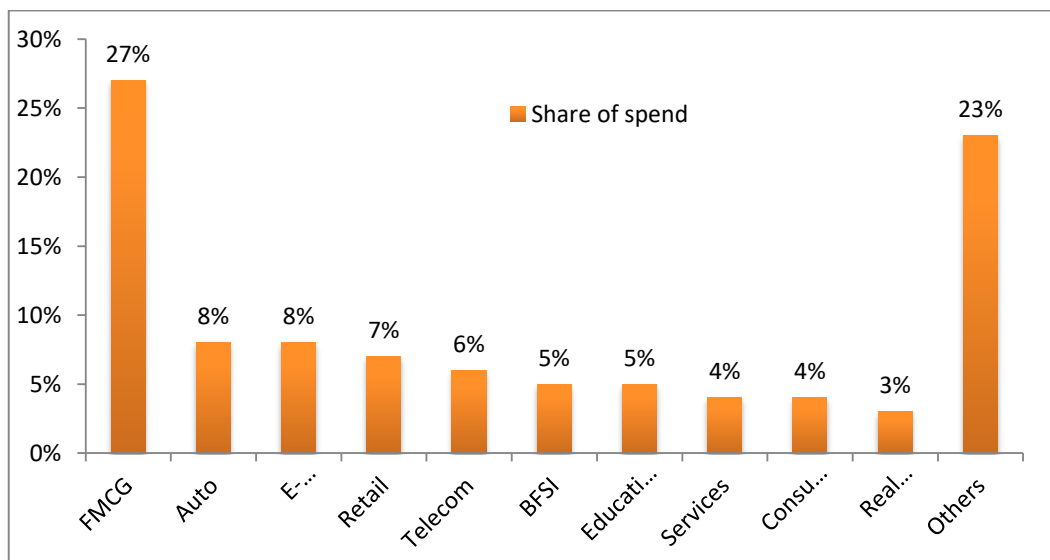
THEORETICAL FRAMEWORK



Data source: Statista 2017

The table above demonstrates the marketing spends across different media, for all industries put together. Though digital has only a 16% share, in the total adspend of Rs.61,204, it is growing at 30% y-o-y.

Share of Digital spend across, industries



Data source: The Admix 2017

Once it is decided, that, a certain proportion of the marketing budget, needs to be spent on the online medium, it becomes the marketer's dilemma, where to spend the same, online...facebook/twitter OR google [Search/Display]. Hence, the need for the study.

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This paper presents a real-time study that was conducted at one of the retail organizations in India- with a test budget for Social Media (facebook) as well as for Google ads.

LITERATURE REVIEW

Google AdWords was once the undisputed leader in online advertising medium, they constantly improved tools and techniques for their users to make the maximum of their return on ad spend. As the internet got more social and the focus shifted towards social media platforms, social connections, social shares, likes etc., advertisers were forced to think on where to spend their advertising money. (Andrew Lipsman, Graham Mudd, Mike Rich, *Journal of Advertising Research- the property of Warc LTD, 2017*)

While the potential of social media advertising of which the major part is formed by advertisement on Facebook followed by Twitter and other social media platforms like Youtube, LinkedIn, Foursquare etc. was somehow perceived by online advertisers but they were clear about whether to go for social media advertisement or not? Following could be some of the reasons for this dilemma:

The cost of initial testing was not available for these social media platforms so the advertisers have to do all the stuff themselves. Deciding on the cost per click to conversion and being profitable all have to be measured freshly. (Bernd W. Wirtz, Robert Piehler, Sebastian Ullrich, *Journal of Electronic Commerce Research, VOL 14, NO 1, 2017*)

The lack of proper analytics created another hindrance which created an environment where obstacles in the path of success weren't clearly identified hence it led to the entire abandonment of the social media advertising campaign. (Anne Linke and Ansgar Zerfass, *Journal of Communication Management, Vol. 17 No. 3, 2017*)

The exact process of generating leads to conversion was also not clear and without a clear cut strategy and data the time to see profits from a Facebook campaign could even take months – which was pretty much unacceptable to business owners for a fast paced business environment like internet. (Rowley, Jennifer, *Journal of Marketing Management. July 2017 Vol. 24 Issue 5/6, p517-540. 24p.*)

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Businesses and online advertisers didn't see the profit unless they pulled up their socks and tried the online advertising model on the following lines:

- Got the analytical data on their business niche for how many people are searching for the product you are offering, and what is the average order size and operational costs to make your order profitable.
- What was the actual Cost occurred to get a user land on your page?
- What were the conversion rates for your business niche and product offering?
- Got your actual cost per click (CPC) from Facebook and Google.
- How much of your business did you have to spend keeping in mind the conversion rates, operational costs, order size to determine the cost of a customer acquisition which made your business profitable.
- When more people liked your ads, your click cost decreased and so did the cost to acquire each fan. When more of your page fans liked your page posts, you got more visibility and loyalty from each fan. Likes on your Facebook page posts increased fans' desire to buy and increased the percentage of potential customers who actually bought.
- As things got more social, people shared and discussed the product, the cost per impression decreased. The social engagement flowed through people's news streams, every like and comment proved that your business or brand is fresh in customer's memory, gaining more attention (In this fast paced life where the average customer is bombarded with marketing message from around the world via different mediums getting even a few seconds of attention is a success and the advertiser is still relevant to them. This will ensure one gets more business.)
- The Peer- buying effect helps in buying decisions which effectively decreases the advertiser's cost per customer acquisition.
- The affinity with the brand and brand loyalty increases the chances of a customer buying more often from your business. This increases the lifetime value of the customer to the product and to the organization.
- The feedback, criticism, customer reviews about the advertiser's product gives an additional avenue to improve upon the mechanism, service delivery, customer service or

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product. This feedback mechanism is usually absent in any CPC program which does not have any social element in it.

Though the initial cost of acquisition of customer was higher for Facebook than Google AdWords but over a period of time due to the social values imbibed in Facebook the return on ad spend were much higher and they bought in added benefits like brand popularity, feedback on products, increased fan following. The benefits overweight so much for some brands like Fab – the online megastore that it allocated almost 75% of its online advertising spend to facebook and other social media campaign. (*Alex Vandevere, Journal of Adwords, 2017*)

Keeping in mind the above observations it would not be unfair to assume that though it takes time to cultivate social media and resource allocation to create fans and followers but if done correctly the returns on it would definitely pay over time.

The Variables

Dependent variable: Impressions, Clicks, fans, website hits.

Independent variables: Marketing spend on facebook, google, the type of audience selected for targeting the advertisements to.

Objectives

- To ascertain the level of Digital Media Activity of Public sector banks versus Private sector Banks.

Given the 34% Internet penetration, most industries, including the banking sector have to make their presence felt on this platform. Whether the banking industry is also trying to address it's customers here and which of these, viz Public sector or Private sector is more active, digitally helps can provide insightful information.

-To ascertain the results of Marketing efforts on 2 different platforms, viz facebook and google.

For any online marketing campaign, the immediate need is to get maximum, impressions, clicks, fans, likes to the page.

In case of Google, depending on the competitiveness of the keywords one is bidding for and the relevancy of that keyword to real conversions for one's company, AdWords may or may not

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work for your business. For the most part, Google AdWords is extremely effective for many kinds of businesses, as long as they don't waste their money on the wrong keywords, or write weak, low CTR ads.

The actual position of one's ad is determined by the ad rank (Maximum Bid times Quality Score). The highest ad rank gets the 1st ad position. The actual Cost-per-Click (CPC) will be determined by the ad rank of the next highest ad below you divided by your Quality Score. The only exception of this rule is when you are the only bidder or the lowest bid in the AdWords auction; then you pay your maximum bid per click! AdWords bidding heavily penalizes advertisers who bid with low quality scores. Conversely, those with high Quality Scores get higher ad ranks and lower CPC. (*Journal of Digital Advertising; Gwneth Karlson, 2017*)

Quality Score matters is representative of the relevance of your ads to users' search queries. Google is the top-dog search engine and they want to keep it that way, and Quality Score helps them ensure that the ads users are seeing are relevant to their search queries. (*Journal of Digital Scores, Evelyn Bennett, Yvonne Lark, Dorris Strymore, 2017*)

Quality Score, along with CPC bid, determines ad rank, and this is very important –The ad rank formula for the Google Search Network is as follows: $\text{Ad Rank} = \text{CPC bid} \times \text{Quality Score}$

With Quality Score as a factor in determining ad rank, small budgets can work to optimize accounts and can end up in top ad positions, even if the bid is lower than a competitors' bid with a lower Quality Score. Quality Score also affects ad placement on the Google Display Network. The ad rank formula for keyword-targeted ads is as follows:

$\text{Ad Rank} = \text{Display Network bid} \times \text{Quality Score}$

Ultimately, Quality Score affects the account health and success. If the keyword-level Quality Score is too low, the keyword might not even be able to enter an auction, meaning your ad won't show and get to compete for a searcher's business. If the Quality Score is low, the ad rank will be low, likely meaning less traffic to your site and a lower IMPACT OF MARKETING EFFORTS (*Jason Frith, International Journal of Information Management. April 2017, Vol. 34 Issue 2, p65-73. 9p.*)

-To ascertain further the preferred space on a particular platform, viz. advertisements in the Newsfeed versus stamp ads.

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The search for Return on Investment needs to be carried out further and fine-tuned, so that, even when a platform has been erode-in on, on that particular platform, the space that gives the best returns, needs to be known.

-To ascertain the demographic profile, while targeting for maximizing returns.

There is a need to find a match between the audience that is available and the audience that is of interest to the marketer. Facebook population is largely Male, and is very young, i.e. more than 50% is below, 24 years of age. However, there is no shortage of a higher demographic, i.e the remaining 50% is above 24 years of age. It is necessary to understand, that though this demographic is present, the level of response elicited by them and the effect of selection of such demographic to the return on investment.

Hypotheses

Hypothesis:

Maximizing the impact of Marketing efforts on marketing money spent on online advertisements is the factor that measures the success of a campaign. Most important is the choice of the platform chosen, to display the advertisements.

Hypothesis 1: There is no significant difference in the digital spends for Public sector and Private sector banks (H1).

The Public sector banks, viz, SBI, Bank of Baroda, Union Bank, have a natural popularity and greater number of likes on social media. Among the private sector banks, the larger ones, viz. ICIC, Axis, HDFC have greater marketing activity and thus the digital media spends are higher for these private sector banks, as recorded from the agencies visited, viz, Rediffusion Y & R, Publicis, Chaitra Leo Burnett, Euro RSCG and FCB Ulka.

Due to media privacy and the contract between the agencies and their clients, detailed values were available only broadly and not for an individual bank, per se. Thus z-test comparing two means was carried out and the Null hypothesis accepted or rejected.

Hypothesis 2: There is no difference in the results of marketing efforts on fb and google. (H2)

Masked data from agencies have been collected of the no. of fans achieved on the bank's facebook page after a facebook advertisement campaign and the number of website hits obtained after a googleadwords campaign.

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This too is a case of z-test comparing 2 sample means and thereby rejecting or accepting the Null Hypothesis.

Hypothesis 3: There is no significant difference in the Returns that Newsfeed ad generates versus stamp ads on Facebook (H3).

Within a particular platform, it is imperative to know, which one works the best. Basis the amount spent and the fans obtained, this efficacy for every dollar spent is ascertained. The campaign had a mix of both types of advertisements, viz the Newsfeed advertisements and the stamp ads. The responses from the agencies have been recorded and analyzed.

Hypothesis 4: The audience selection in terms of age groups has no effect on the efficacy of a facebook campaign (H4)

The demographic profile of facebook in India is largely male, i.e. 74% of the population is male. The predominant age-group is 18-24 years.

Age Groups	13-17	18-24	25-34	35-44	45-54	55-64	65+	Total
Million Users	26	100	73	26	10	4	2	241
% split	11%	41%	30%	11%	4%	2%	1%	100%

Data Source: TNW, Sep 2017.

However, since very little or no banking activity is carried out by this age-group, a more relevant age-group, i.e. 25-34 and 35-44 has been selected to display the advertisement to.

RESEARCH METHODOLOGY

Marketing spends on facebook and google have been measured.

Marketing activities were carried out on the 2 said platforms for three bank brands

	Platform	Amount spent (Rs.)	Measuring IMPACT OF MARKETING EFFORTS by
Brand A	Facebook	Rs.2,50,000	Cost per fan =Budget spent/No. of fans added
Brand B	Facebook	Rs.2,50,000	Cost per fan =Budget spent/No. of fans added
Brand C	Facebook	Rs.2,50,000	Cost per fan =Budget spent/No. of fans added

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	Platform	Amount spent (Rs.)	Measuring IMPACT OF MARKETING EFFORTS by
Brand A	Google	Rs.2,50,000	Cost per click =Budget spent/No. of clicks
Brand B	Google	Rs.2,50,000	Cost per click =Budget spent/No. of clicks
Brand C	Google	Rs.2,50,000	Cost per click =Budget spent/No. of clicks

All the three brands, A, B and C are Private sector banks. Duration of spend: 2 weeks

For facebook: The data of likes added onto the fanpage, during the time period, when the ad was run, was measured. For google: Google banner ads were used. The no. of clicks on the displayed advertisement were measured through the Google adwords dashboard.

Sample size

The sample size is in-proportion to the budget spent. The more we spend, the more fans we can get onto the page./ More clicks on the Display area in case of google adwords.

	Fans Due to advertisements	No. of clicks due to advertisements
Facebook	10,657	
Google Adwords		3,563

Targeting used: The Targeting is brand specific:

‘Pvt. Sector Bank’: Advertised on fb

Facebook ads are of broadly three types: (i) Ads in the newsfeed (ii) Stamp ads on the right. For ‘Pvt. Sector Bank’, **facebook Newsfeedads** were used, wherein, relevant targeting was used. The targeting parameters for ‘Pvt Sector Bank’ on facebook were:
 1-4. *Location (Country, State, City, Zip):* India. A filter was put on the cities, because, only those fans would of use to us, who had a store (of the product in question). 5. *Age:* 34-54 years. 6. *Gender:* Male (Going with the brand-audience fit, being skewed towards Males.) 7. *Employment status:* Employed. 8. *Connections:* People who are not already connected to my page 9. *Budget per day:* Lifetime Budget i.e a lump sum amount of Rs.2,50,000 for the entire duration of the campaign. 10. *Schedule:* Set a start date and an end date.

‘Pvt. Sector Bank’: Advertised on google

For ‘Pvt. Sector Bank’, google display option was used. Google ads are : (i) Search ads (ii) Display ads (ii) Search and display for Youtube. Basis the relevance-match for the brand, we narrowed down on google display network.

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Clusters of keywords i.e. Adgroups were formed as above, with each cluster containing 50-60 keywords in each Adgroup. Google makes a match of the keywords and shows the advertisement among the websites on the Google Display Network (GDN).

The overall targeting for the two companies varies as follows:

Facebook uses demographic targeting, while google uses keyword match.

Research design: Different sets of audiences were exposed to different treatments i.e.facebook and Google ads.

The CPC was the parameter used to judge the impact of the investment (CPC for google ads and Cost per fan for fb ads.)

DATA ANALYSIS AND INTERPRETATION OF RESULTS

Table-1: Role of various parameters in the success of an online campaign.

Parameters of study	Google (N=3,563)	Facebook (N=10,657)
1.Spend of Private sector banks versus Public sector banks on Digital Media	--	--
<i>Statistical value Z</i>		0.001
2.Digital Media efforts of fbVs Google (Positive), basis CPC and Cost-per fan	70.16	23.45
<i>Statistical value Z</i>	--	0.021
3. Facebook Newsfeed Versus Facebook Stamp ads		
<i>Statistical value Z</i>	--	0.013
4.The effect of audience selection on the efficacy of the facebook campaign (Positive)	--	0.011

---Not applicable, because parameters for google efficacy and fb efficacy were separately tested.

Table-2.Inferential analysis and testing of hypotheses

Hypotheses	Results	Comments
There is no significant difference in the digital spends for Public sector and Private sector banks (H1) .	Z VALUE Cal is 4.21 > tabulated value of -1.96	Since Z VALUE is in the rejection region and p value is less than 0.05, the Null Hypothesis has to be rejected, Private sector banks, are spending more than Public sector banks on Digital Media.

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There is no difference in the results of marketing efforts on facebook and google. (H2).	Z VALUE Cal is 8.702 > tabulated value of -1.96	Since Z VALUE is in the rejection region and p value is less than 0.05, the Null Hypothesis has to be rejected.. The results are better with facebook than google adwords.
There is no significant difference in the Returns that Newsfeed ad generates versus stamp ads on facebook (H3).	Z VALUE Cal is -11.021 >tabulated value of 1.96	Since Z VALUE is in the rejection region and p value is less than 0.05, the Null Hypothesis has to be rejected, the results are better with in the newsfeed than the stamp ads
The audience selection has no effect on the efficacy of a facebook campaign (H4)	Z VALUE is 4.623>tabulated value of 1.96	Since Z VALUE is in the rejection region and p value is less than 0.05, the relevant audience selection does increase the number of fans to the page.

Table-3: ANOVA Result

Here, we are comparing Banks A, B and C, in terms of the effectiveness of their digital spends.

Hypothesis: There is no significant difference in the returns acquired from digital spends by Banks A, B and C.

ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Bank A	Between Groups	54.618	101	21.539	1.064	.081
	Within Groups	57.448	19	20.238		
	Total	112.066	120			
Bank B	Between Groups	90.819	92	403.606	9.090	.092
	Within Groups	78.525	28	44.400		
	Total	169.344	120			
Bank C	Between Groups	51.989	96	1772.330	12.906	.077
	Within Groups	69.740	24	41.307		
	Total	121.729	120			

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Thus, we accept the Null hypothesis, i.e, there is no significant difference in the digital media spend returns earned by the various banks. Since the agency has masked the names of the banks, due to data privacy concerns, it is difficult to ascertain which has fared better.

The Banks A, B and C are private sector banks. Thus the overall outcome of spend on facebook is similar for all three and so is the outcome of the spend on google adwords.

However, in terms of spends, it is the private sector banks that spend more than public sector banks. Definition of Interaction%: $[\text{Likes} + (\text{Comments} \times 2) + (\text{Shares} \times 3) / \text{No. of posts} / \text{No. of fans}] \times 100$

This formula has been devised by logical thinking, based on the efforts one would take in order to show support towards a post.

A Share requires greater effort. Only a brand espouser would do that. Hence a weight of 3. A comment requires a relatively less effort than a share but more effort than a like. Hence a Comment is weighted as 2 and a 'Like' is weighted as 1.

The above is also a function of the number of fans a page has. To enable an apple-to-apple comparison, the number of fans has been incorporated as the denominator.

Also, the engagement% is day-wise. If a page has put more posts/day, the total number of likes/comments/shares would be more on that day. Hence the No. of posts is incorporated in the denominator.

Table-4: Cluster of relevant keywords, that the person in question is likely to click on:

Ad Group	Digital banking	Mobile banking	Home Loan	Car Loan	Credit/Debit Card	Fixed Deposits	Social Media Banking
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Clusters of keywords i.e. Adgroups were formed as above, with each cluster containing 50-60 keywords in each Adgroup, as mentioned in the methodology.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873 ^a	.929	.819	.217

Coefficients	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
Model						

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(Constant)	.022	.011		7.124	.000
Audience targeting	.531	.013	.711	8.906	.000

Dependent Variable: Audience selected on facebook

Group Statistics:					Bartlett's Test for
Facebook and Google			Std.	Std. Error	Equality of Variances-
	Platform	Mean	Deviation	Mean	Value
The digital spends for Public sector and Private sector banks	Fb	1.53	.323	.023	0.893
	Google	1.31	.498	.014	0.929
The results of marketing efforts on fb and google	Fb	1.85	.712	.027	0.967
	Google	--	--	--	--
The Returns that Newsfeed ad generates versus stamp ads on facebook.	Fb	1.64	.602	.021	0.892
	Google	--	--	--	--
Audience targeting used	Fb	1.79	.611	.031	0.907
	Google	--	--	--	--

CONCLUSION:

With rising internet penetration at 34% and growing and more than 30% y-o-y, Indian Banking Industry like other industries is also ensuring it's visibility. There are two broad platforms for Digital Media expenditure, viz, the all-pervading google and facebook, the most widely used social media platform, i.e. facebook.

Expenditure by private sector banks is more than that of the public sector banks on both these platforms.

Between the two platforms, the returns are better on facebook, due to precise demographic targeting. The amount spent on each platform was Rs.2,50,000 (*Data gathered from an agency*)

The number of clicks obtained on adwords due to the amount spent is Rs. 3,563, thereby giving an average cost of Rs.70.17, i.e. more than 1US\$ per click. The number of facebook fans obtained for a particular private bank's page is 10,657, which gives a cost of Rs.23.46, i.e. less than 1 dollar, about 35 cents per fan. The various z-tests, for each of the Null Hypothesis, have

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resulted in rejecting the Null hypothesis, thereby affirming that the Returns are better of facebook, vs google, the returns are better in the Newsfeed, than the stamp ads on fb and the audience selection does play a role in better targeting and thereby getting more fans, to the bank's page.

LIMITATION OF THE STUDY

The study has been carried out for one particular industry i.e Retail Banking. The results can be similar or can be different for different industries. The cost will be lesser for utility related industries, such as travel or hotel and higher for online shopping industries. However, there are many players and the level of competition increases, the cost can go up to more than 1US\$ per click/fan. The industries that could give different results from the above are: Airline/Travel industries, hotels, online companies. These depend more on google campaigns. Similar Pilot marketing spends can be made to ascertain the road ahead, for other industries

MANAGERIAL IMPLICATIONS OF THE PAPER:

While a lot has been read and written about Social media and it's usefulness to a marketer, a live study, wherein marketing money has been spent, to ascertain the reality, has been put forth in this paper. One hopes that it is of use to those investing in marketing campaigns, at the same time, opens avenues for experimenting with parameters enlisted with respect to each individual's industry specific variables.

WILL TATA NANO CARS HAVE ANY FUTURE?

Dr. Ashok Shripadrao Kurtkoti
Retired Professor
MITSOB
MIT World Peace
Pune

ABSTRACT

Tata Nano car was Ratan Tata's dream project. Tata Nano car was very innovative product and caught attention and admiration by many major car manufacturers all over the world during Geneva conference. It created a blue ocean strategy by creating a new market place in an uncontested space. The path of Tata Nano car was not an easy one and had problems of shifting the plant at Singur in West Bengal to Sanad, near Ahmedabad due to geo-political reasons. With a strong faith and creditability built by Tata Motors, their suppliers agreed to move to Sanad. In 2009, much awaited Tata Nano car was launched and there was very good response to car booking. This showed the customers' confidence in owning Tata Nano car. The good initial response to the car went down due to the poor performance and the initial Rupees one lac offer being escalated over a period of time. The consumers did not see value for money. In order to know consumer confidence a market survey of Tata Nano was carried out. The results of survey indicate that there was no significant difference in affordability and maneuverability, maneuverability and car décor, driving comfort and safety, after sales service and driving comfort and car décor, There was significant difference between maneuverability and other factors like car decor, driving comfort and after sales service Tata Motors dealers felt that now the Tata Nano car customers have a very low image and do not foresee any value for money due to higher price being offered now for Tata Nano cars. The Gen X model of Nano was launched by Tata Motors. This car was an eco-friendly innovative design with electric and compressed air model versions. Tata Nano Gen X will revive and will set a new trend if these designs are aggressively advertised and promoted by Tata Motors Ltd.

KEY WORDS

Tata Nano Car, safety, Ratan Tata .consumers

INTRODUCTION

In 2003, Ratan Tata saw an young couple travelling with two small children on a two wheeler. He was quite disturbed and he thought that why not make a small car for this target

Will Tata Nano Cars have any future?

market? Ratan Tata thought of this game changer in the Indian automobile industry by designing an affordable car at a price of Rupees One Lac for a middle class family. Tata Nano car was called as best frugal design car by Renault Nissan with 0.60 litre, 2 cylinder 624 cc engine. In 2008, this news of Nano built big hype around the world. In 2009, Tata Nano car team travelled around the world and promoted this car. In 2009, many analysts thought that this innovative design will meet the expectation of consumers at the bottom of the pyramid. Tata Nano team claimed that the success of the car project was mainly due to two reasons. The first reason was that they decided the end product price of Rupees One lac first and the second reason was that they negotiated the prices of auto components with all vendors keeping in mind the final price. This success story did not give the desired results. In 2008, the Nano project could not start in time due to great opposition by farmers in Singur, West Bengal. The pricing pressure started building up and Tata motors could not hold the initial promise of Rupees one lac. In 2009, there was heavy competition from used car market and Maruti old cars were reduced by about 20 percent just before Tata Nano car launch. In 2009, after Nano car was launched in the Indian car market, there were a few teething troubles like the problem of not taking higher speeds at highways and found to be more useful in city driving only. Many customers who wanted to buy Nano car shifted their buying decision to, an used Maruti 800. The competitive advantage and early move advantage was lost. The Tata Motors was constantly working on upgrading the present Nano car designs. The Gen X was launched which had features like eco-friendly innovative designs like electric cars and compressed air models. A market survey was carried out at initial stage in 2011 of Tata Nano cars and in 2017, Tata Motors dealers were contacted and the results are highlighted in this research paper.

THEORETICAL FRAMEWORK

In order to study the topic it was decided by the researcher to study both primary and secondary data. A market survey was carried out to determine customer satisfaction of Tata Nano car customers in Pune city. The questionnaire designed for carrying out customer satisfaction was framed on the following seven attributes.

- 1) Affordability.
- 2) Safety.
- 3) Driving Comforts..
- 4) Maneuverability
- 5) Car interior décor.
- 6) Waiting period.
- 7) After sales service

Measurement of Customer Satisfaction

The consumers' satisfaction of the relative importance of these attributes was measured. The results of 'satisfaction - importance' analysis would give additional information for the companies themselves for improving their performance. The questionnaire measuring the

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consumers' satisfaction and importance should use the scale of 1 to 5. The points of the individual indices add up according to the algorithm of the method to a final figure with, within the continuation of 1 and 5, expresses the overall satisfaction of the Tata Nano car customers. (Rekettye,G, Ordosdy,B & Terszty'anszky.T,2003)³

One hypothesis was framed and hypothesis testing was done. For every attribute under the study gap were found out and analysis was done using Single factor ANOVA. Further analysis was done using Tukey test. The secondary data was studied by going through the necessary published books, journals, magazines, newspapers, research articles and research papers and by visiting various web-sites.

LITERATURE REVIEW

1. The Nano, known as Ratan Tata's dream project, was aimed at giving mobility to millions and getting families off their bikes and into cars. This project was considered to be a game changer in four wheeler segment. The Nano's won the 2010 Auto car of the Year Award, could never be questioned and Ratan Tata's emotional connect with his project conceived for the Greater Good is quite understandable." Conceived on the promise of price, buyers simply won't pay a premium for a car that wears the Nano badge. This left no scope for Tata Motors to produce it profitably," said Cyrus Mistry. With the addition of a host of features on the GenX Nano launched recently including an automatic version, Tata Motors seems to have taken a permanent departure from the mini car's earlier image, of costing just about Rupees one lakh.

2. Tata Motors Company was also working on bigger engines that could generate better power and cater to the consumers who would look for an upgrade as part of a natural progression. The Nano could be seen with an engine size of 800-1,000cc that would bring it at par with current high-sellers such as the Maruti Alto and Hyundai Eon. Both Maruti Suzuki and Hyundai came out with bigger engines for the Alto and Eon, earlier primarily powered by 800cc engine. Both models now come with a 1,000cc engine.

3. Presently, the Nano is powered by a 624cc petrol engine that generates peak power of 37.5bhp. In comparison, the Maruti Alto 800 generates peak power of 48bhp while the Hyundai Eon 800 produces maximum power of 56bhp. Girish Wagh, senior vice-president at Tata Motors, said: "If you talk to customers, having a bigger and more powerful engine will be a requirement but for a smart city car, we have prioritised the needs of the buyer. Launch of the GenX Nano is not the final destination. You will have more things happening as we go ahead in this journey." For finding a solution to the rural buyer, the Nano was positioned as a mini city car, where driving conditions are congested and parking options too few.

4. The company has been promoting the Nano as a second vehicle in households, much on the lines of the scooter, which is often the second two-wheeler in the family after a motorcycle. This positioning is likely to gradually change as the company strives to make the Nano a regular car, with enough power to carry five adults in comfort over long distances. "

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Having automatics in our traffic condition is a significant requirement," added Wagh. He mentioned that work was also on for a diesel-powered Nano, for which a completely new engine was in the works. However, with changing preference of the buyer, coupled with other hurdles such as controlling of noise, vibration and harshness, the company put the project on the back burner. "Developing a diesel engine for the Nano was not in favour of the economics of the car," added Wagh. Tata Motors were thinking of innovative and environment friendly car by adding a compressed natural gas variant to the Nano .

5. Satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations (Kotler, P, 2003)

6. Customer satisfaction is the customer's fulfillment response to a consumption experience, or some part of it (Buttle.F, 2004)

7. Customer satisfaction is an ambiguous and abstract concept and the actual manifestation of the state of satisfaction will vary from person to person and product /service to product/service. The state of satisfaction depends on a number of both psychological and physical variables which co-relate with satisfaction behaviours such as return and recommend rate. The levels of satisfaction can also vary depending on other options the customer may have and other products against which the customer can compare the organisation's products. (Kotler.P, 2003)

8.Measurement of Customer Satisfaction

The consumers' satisfaction of the relative importance of these attributes was measured. The results of 'satisfaction - importance' analysis would give additional information for the companies themselves for improving their performance. The questionnaire measuring the consumers' satisfaction and importance should use the scale of 1 to 5. The points of the individual indices add up according to the algorithm of the method to a final figure with, within the continuation of 1 and 5, expresses the overall satisfaction of the Tata Nano car customers. (Rekettye, G, Ordosdy,B & Terszty'anszky,T ,2003) ⁹

RESEARCH METHOD

Objectives

- 1. To study customer satisfaction of Tata Nano car customers in Pune city.**
- 2. To carry out gap analysis.**
- 3. To study future of Tata Nano cars.**
- 4. To get feedback on performance of the present and new Tata Nano car models from Tata Motor dealers.**

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Statement of the problem.

The customers carry a very poor image as a cheap car as they do not see any value addition and even the low price car image was wiped off due to present prices of Tata Nano car versions. Can Tata Nano car regain customer confidence and market share by revitalising Nano brand by Gen X Nano .

Hypothesis

Null H₀: Tata Nano car customers were not satisfied with the performance of the car

$$(\mu_1 - \mu_2 = 0)$$

Alternate H₁: Tata Nano car customers were satisfied with the performance of the car

$$(\mu_1 - \mu_2 \neq 0)$$

Scope of the study

The research was limited to Pune city.

Period of study In January 2011 & July to October, 2017

Research Instrument were questionnaire (in January , 2011) and personal interview of Tata Nano dealers in October, 2017.

Method of data collection both primary and secondary data was collected.

Customer Satisfaction Survey

In order to determine the customer satisfaction, one hundred twenty five numbers of respondents were approached. Out of one hundred twenty five customers one hundred five customers' responded and 20 Tata Nano dealers personal interviews were carried out. The sample size =125

The questionnaire designed for carrying out customer satisfaction was framed on the following seven attributes

1. Affordability
2. Safety
3. Driving Comforts
4. Maneuverability
5. Car interior décor
6. Waiting period

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7. After sales service.

DATA ANALYSIS AND RESULT

For every attribute under the study ,gap was found out.

The detailed analysis is given in table1

Table 1: Paired Samples Test Results

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Affordability (I) - Affordability (S)	-0.500	0.771	.105	.290	.710	4.766	53	.000
Pair 2 Safety (I) - Safety (S)	1.111	0.965	.131	0.848	1.374	8.463	53	.000
Pair 3 Driving comfort (I) - Driving comfort (S)	1.000	0.801	.109	0.781	1.219	9.175	53	.000
Pair 4 Maneuverability (I) - Maneuverability (S)	0.704	0.944	0.129	0.446	0.961	5.476	53	.000
Pair 5 Car décor (I) - Car décor (S)	-1.000	0.727	0.99	0.802	1.198	10.110	53	.000
Pair 6 Waiting period (I) - Waiting period (S)	1.500	1.023	.139	1.221	1.779	10.772	53	.000
Pair 7 AFS (I) - AFS (S)	1.093	.622	.085	.923	1.262	12.898	53	.000

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For all the attributes under study there was significant difference between importance and satisfaction.

Further analysis was done using Single factor ANOVA. The ANOVA table is as shown in Table 2.

Table 2: ANOVA table

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Affordability diff	54	27	0.500	0.5943
Safety diff	54	60	1.111	0.9308
Driving comfort diff	54	54	1.000	0.6415
Maneuverability diff	54	38	0.704	0.8917
Car décor diff	54	54	1.000	0.5283
Waiting period diff	54	81	1.500	1.0472
AFS diff	54	59	1.093	0.3875

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	32.8042	6	5.4674	7.622	0.0000	2.1230
Within Groups	266.1296	371	0.7173			
Total	298.9339	377				

There was significant difference in means of different attributes.

Further analysis was done using Tukey test.

$$T = q_0 \sqrt{\frac{MSE}{n_i}} = 0.4859$$

where ,

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n=number of treatments/group.

Steps involved were

1. Calculate an analysis of variance (e.g., One-way between-subjects ANOVA).
2. Select two means and note the relevant variables (Means, Mean Square Within, and number per condition/group)
3. Calculate Tukey's test for each mean comparison
4. Check to see if Tukey's score is statistically significant with Tukey's probability/critical value table taking into account appropriate df_{within} and number of treatments

The test statistics expressed in the form of table 3 and figure 1 was as follows,

Table 3: Test statistics

Attribute		Affordability diff	Safety diff	Driving comfort diff	Maneuverability diff	Car decor diff	Waiting period diff	AFS diff
		0.500	1.111	1.000	0.704	1.000	1.500	1.093
Affordability diff	0.500		0.611	0.500	0.204	0.500	1.000	0.593
Safety diff	1.111			0.111	0.407	0.111	0.389	0.019
Driving comfort diff	1.000				0.296	0.000	0.500	0.093
Maneuverability diff	0.704					0.296	0.796	0.389
Car décor diff	1.000						0.500	0.093
Waiting period diff	1.500							0.407
After Sales Service diff	1.093							

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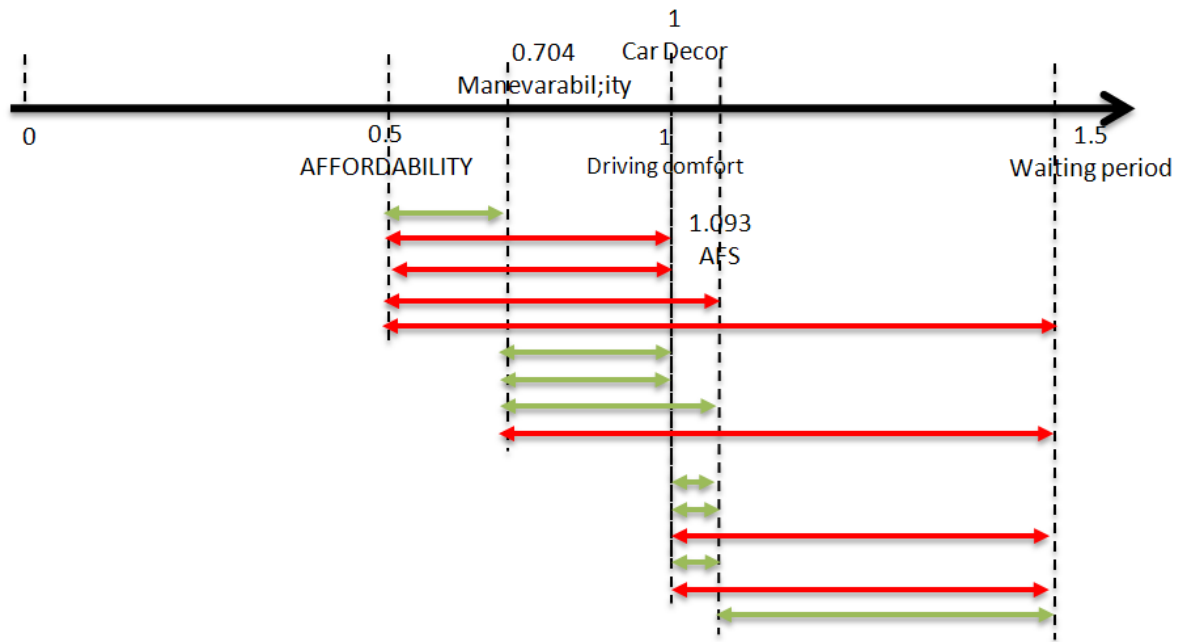


Figure 1: test statistics

Data analysis of statistics showed that,

- 1) There was highest significant gap in waiting period.
- 2) Least significant gap was in affordability and waiting period.
- 3) There was no significant difference in affordability and maneuverability
- 4) There was no significant difference between maneuverability and car décor, driving comfort and safety
- 5) There is was significant difference between after sales service and driving comfort and car décor
- 6) There was significant difference between maneuverability and other factors like car décor, Driving comfort and after Sales Service⁶

Hypothesis testing

The Null hypothesis H_0 : 'Tata Nano car customers were not satisfied with the performance of the car in Pune city' was rejected. Hence alternate hypothesis was accepted.

We concluded that 'Tata Nano car customers were satisfied with the performance of the car in Pune city'

Responses from Tata Motors dealers

1. Tata Motors dealers have shown full confidence in Tata Motors future designs
2. The author came to know from Tata motors dealers that they made 48 changes in Indica car to solve initial teething problems. Even Mr Ratan Tata was involved and used to get a feedback and based on customer complaints these changes were made.
3. Tata Motors dealers stated due to that initial long waiting period and shifting of the project, the company has lost the early mover advantage.

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4. The eco- bill the state to state price war was now over and all dealers have common playing field.friendly innovative designs like electric car and compressed air models of Tata Nano will revive and will set a new trend if these designs were promoted aggersively by Tata Motors.
5. The dealers were very happy with passing of GST bill. They further stated that with the passing of GST

Limitations of study

A real future of Tata Nano Car can be found out by carrying out a detailed all India survey.

Scope for further study

A detailed market survey can be carried out in Maharashtra as well as on all India basis to come out with detailed action plan on the research topic

CONCLUSION

Tata Motors to aggressively market Gen X model with new innovative and eco-friendly designs . This will be a future game changer and if these product variations will put the company in the driver's seat and can gain competitive advantage.

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**A GENDER BASED STUDY ON IMPACT OF PERSONALITY TRAITS ON
PLACEMENTS OF MANAGEMENT STUDENTS**

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ABSTRACT

Personality represents a stable set of characteristics responsible for a person's identity. One popular and widely used personality trait model is Five Factor Model. These five factors can be named extraversion, agreeableness, conscientiousness, neuroticism (or its opposite pole, emotional stability), and intellect or openness to experience. There has been an ample amount of literature associating personality traits with various parameters like job performance, leadership, entrepreneurial abilities, academics etc. this paper attempts to understand the relationship between personality traits and placements of management students. A primary study was conducted to exact the impact of big five personality traits on salary obtained during in-campus placements by management students of Mumbai region. Further exploration of the gender differences in salary distribution with respect to personality traits reveal that big five personality traits predicted salary difference in male students but not in females.

INTRODUCTION

Personality traits are of significant importance in our daily lives. Our behaviour is highly influenced by our personality. Research in this area reveal that personality traits are often major predictors of behavior. They describe a very stable set of characteristics which are revealed in day to day life. A popular model to study personality is Five Factor Model which says that personality can be conceptualized by five traits which are; openness to experience,

conscientiousness, extraversion, agreeableness and neuroticism. The model is widely used to understand personality. There is rich literature on five factor model which supports the link between big five traits and behavioral outcomes like job performance, academic performance, leadership and job satisfaction among others.

Personality and Personality Traits

Personality represents a stable set of characteristics responsible for a person's identity. Mostly the dimensions of personality are outside our control but they strongly influence our attitudes, expectations and assumptions about others, thus influencing our behaviour. Personality traits can be defined as the structures and propensities inside a person that explains characteristic, patterns of thought, emotion and behavior. These traits captures what people are like and ability captures what people can do. These traits are recurring regularities and trends in a person (Colquitt, 2009). Personality factors are of extreme importance in today's competitive organizational world. Often an unsuitable kind of personality proves alarming and causes undesirable tensions and worries in organization.

One popular and widely used personality trait model is Five Factor Model (FFM). Various Researchers have studied hundreds of American English adjectives used to describe personality traits. Analysis identifies five factors that account for nearly all of the variability of the complete word list. These five factors can be named extraversion, agreeableness, conscientiousness, neuroticism (or its opposite pole, emotional stability), and intellect or openness to experience. (John et al, 2008).

Extraversion (Extrovert vs. Introvert Individuals)

Extraversion includes traits like being sociable, talkative, gregarious, assertive, active, ambitious and expressive (Barrick & Mount, 1991). They have a strong desire for praise, social recognition, status and power. Extraversion is associated with adjective traits such as talkative, sociable, passionate, bold, and dominant (Colquitt, 2009).

Agreeableness (Agreeable Vs. Disagreeable Individuals)

Agreeableness include personality traits such as being courteous, trusting, flexible, cooperative, soft hearted, forgiving, good natured, and tolerant (Barrick& Mount, 1991).

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Agreeableness has adjectives such as kind, cooperative, sympathetic, helpful, courteous, and warm (Colquitt, 2009).

Conscientiousness (Conscientious Vs. Unconscientious Individuals)

Conscientiousness personality type includes traits such as being hardworking, thorough, organized, responsible, careful, and persevering (Barrick & Mount, 1991). Conscientiousness is associated with trait like being dependable, organized, reliable, ambitious, and hardworking (Colquitt, 2009).

Emotional stability (Emotionally Stable vs. Neurotic Individuals)

Neuroticism (polar opposite of emotional stability) includes traits like being anxious, depressed, emotional, angry, embarrassed, worried, and insecure (Barrick& Mount, 1991). Neurotic individuals are limited in social skills and avoids situations that demand for taking control. Neuroticism has to do with traits like bring nervous, moody, emotional, insecure, and unstable. (Colquitt, 2009). Neuroticism (polar opposite of emotional stability) means the tendency to experience negative feelings.

Openness to Experience (open vs. closed individuals)

Openness to experience include traits like being imaginative, curious, original, intelligent, broad minded and artistically sensitive (Barrick& Mount, 1991). Openness has to do with curious, imaginative, creative, complex, refined, sophisticated (Colquitt, 2009). Openness to Experience describes a personality trait that differentiates imaginative, creative people from down-to-earth, conventional people.

LITERATURE REVIEW

Extensive research has been done in the last decade on big five personality traits, psychological well-being facets and their impact on certain kind of attitudes and work related behaviour. The research on psychological well-being have common consensus and authors have linked psychological well-being and performance positively however there is ambiguity in linking individual personality traits with psychological well-being and performance. The research findings of various national and international papers on personality traits and psychological well-being are summarized below.

Literature review on Personality Traits

John Oliver P., Laura P. Naumann, and Christopher J. Soto in 2008 wrote a chapter on Big Five trait taxonomy in Handbook of personality. This chapter provides a broad overview of the Big Five/FFM structure. It summarizes the history of the model, reviews research on the development of the Big Five, its predictive validity, and also discusses a variety of conceptual and measurement issues. According to the authors, personality psychology lacked a descriptive model or taxonomy of its subject matter. After decades of research, the field is now approaching consensus on a general taxonomy of personality dimensions, the “Big Five” personality traits. The five dimensions Conscientiousness, Extraversion, Neuroticism, Agreeableness and Openness to experience do not represent one particular theoretical model or perspective. They are derived from various researches and analyses of language terms which people use to describe themselves and others. (John et al, 2008)

An Extremely brief measure of the Big-Five personality dimensions was developed by a group of researchers. A 10 item instrument was developed to measure personality in terms of Big 5 personality traits namely Neuroticism, Extroversion, Openness to experience, Agreeableness and Conscientiousness. (*Gosling et, al 2003*)

A short five-factor personality inventory developed from the International Personality Item Pool (IPIP) was implemented as an online questionnaire and completed by 2,448 participants. Following factor analyses, a revised version was created with acceptable reliability and factor univocal scales. As preliminary evidence of construct validity, support was found for 25 hypothesized links with self-reports of relevant behaviours and demographic variables. In a replication using a different recruiting strategy to test for differences due to motivational factors, similar results were obtained. This set of scales appears to provide acceptable measures of the Five-Factor Model for use in internet-mediated research. (Buchanan et al, 2005)

Personality (Big Five) is stable over a period of four-year. The average personality changes seen are small and do not vary substantially across age groups. Intra-individual personality change is generally unrelated to experiencing adverse life events and is unlikely to be economically meaningful. Like other non-cognitive traits, personality can be modeled as a stable input into many economic decisions. (*Cobb-Clark Deborah and Stefanie Schurer 2011*)

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Different theories make different predictions about how mean levels of personality traits change in adulthood. The biological view of the Five-factor theory proposes the plaster hypothesis: All personality traits stop changing by age 30. In contrast, contextualist perspectives propose that changes should be more varied and should persist throughout adulthood. A study compared these perspectives in a large sample of adults ($N = 132,515$) aged 21–60 who completed a Big Five personality measure on the Internet. Conscientiousness and Agreeableness increased throughout early and middle adulthood at varying rates; Neuroticism declined among women but did not change among men. The variety in patterns of change suggests that the Big Five traits are complex phenomena subject to a variety of developmental influences. (Srivastava, John, Gosling & Potter, 2003)

A study proposes that the Big Five reflect motivational responses to specific types of situations. Specifically, it conceptualizes Extraversion as reward sensitivity in social situations, Agreeableness as motivation to cooperate versus compete when resources are scarce, Conscientiousness as motivation to pursue goals despite obstacles or distractions, Neuroticism as punishment sensitivity in response to social exclusion, and Openness to Experience as reward sensitivity while engaged in cognitive activity. (Denissen & Penke 2008)

Another study compared the usefulness of personality self-ratings versus observer ratings for predicting behavior. It shows that self-ratings are more accurate for traits with low evaluativeness (e.g., Extraversion, Neuroticism) than for traits with high evaluativeness (e.g., intellect), whereas observer ratings are more accurate for traits with high observability (e.g., Extraversion) than for traits with low observability (e.g. Neuroticism). (Vazire, Simine. 2012)

Costa et al (2001) conducted a study on a sample ($N=23031$) from 26 different cultures. Women reported themselves to be higher in Neuroticism, Agreeableness, Warmth, and Openness to Feelings, whereas men were higher in Assertiveness and Openness to Ideas. Secondary analyses of Revised NEO Personality Inventory data from 26 cultures ($N = 23,031$) suggest that gender differences are small relative to individual variation within genders; differences are replicated across cultures for both college-age and adult samples, and differences are broadly consistent with gender stereotypes: Women reported themselves to be higher in Neuroticism, Agreeableness, Warmth, and Openness to Feelings, whereas men were higher in Assertiveness and Openness to Ideas. Contrary to predictions from evolutionary

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theory, the magnitude of gender differences varied across cultures. Contrary to predictions from the social role model, gender differences were most pronounced in European and American cultures in which traditional sex roles are minimized. Possible explanations for this surprising finding are discussed, including the attribution of masculine and feminine behaviours to roles rather than traits in traditional cultures. This study shows some consistent gender differences in the Big Five domains and more-specific facet traits across twenty-six cultures. Interestingly, however, gender differences in personality tended to be larger in cultures with smaller gender differences in social status. (Costa et al, 2001)

This paper investigates gender differences in personality traits, both at the level of the Big Five and at the sublevel of two aspects within each Big Five domain. Replicating previous findings, women reported higher Big Five Extraversion, Agreeableness, and Neuroticism scores than men. However, more extensive gender differences were found at the level of the aspects, with significant gender differences appearing in both aspects of every Big Five trait. For Extraversion, Openness, and Conscientiousness, the gender differences were found to diverge at the aspect level, rendering them either small or undetectable at the Big Five level. These findings clarify the nature of gender differences in personality and highlight the utility of measuring personality at the aspect level. (Weisberg et al, 2011)

The personality profiles of 200 students pursuing MBA course was compared in the study. Cattell's 16 PF Questionnaire was used to study the personality differences among students with respect to their academic background and gender. The study attempted to examine the significant difference in personality of Male and female students with B.Com and engineering degree. Results showed that there were no significant differences among students in the personality profiles based on academic background. However, Research suggested significant gender based differences in some measures of personality. (NagArjuna and Sireesha Mamidenna, 2008)

A research conducted to determine the association between big five personality traits and gender indicated that the gender difference between the personality factors is significant only for Agreeableness and Conscientiousness. (Fatemi and Asghari, 2012).

In a high-powered research (N = 14,348), a group of researches replicated the findings that Women report higher levels of Agreeableness, Conscientiousness, Extraversion and Neuroticism. (Vianello et al, 2013)

Literature review on Personality traits and Earnings

A research was done to investigate the influence of personality dimensions on wage settings. It was found that emotional stability is positively associated with the wage of both women and men, while agreeableness is significantly associated with lower wages for women. Men are rewarded for autonomy as tenure increases, while conscientiousness tends to be rewarded at the beginning of an employment relationship. The economic returns of the personality factors in wage determination vary between educational groups. (Nyhus & Pons, 2005)

Another research examined the role of personality in predicting salary. Longitudinal data from a sample of recent college graduates was used to examine the effects of ability (general mental ability and emotional intelligence) and personality (Big Five and proactive personality) on extrinsic (i.e., salary) and intrinsic (i.e., perceived job and career success) indicators of career success. Results from regression analyses indicated that gender, extroversion, and agreeableness were the strongest predictors of salary. Emotional stability and proactive personality predicted perceived job success, while extroversion was significantly related to perceived career success. Neither of the ability measures significantly predicted the indicators of extrinsic or intrinsic career success. (Rode et al, 2008)

Using the Big Five taxonomy of personality traits, a study examined whether non-cognitive traits are related to economic success over the life course. Examining Health and Retirement Study survey data linked to Social Security records on over 10,000 adults age 50 and over, the relationship of personality traits to economic outcomes was investigated. It was argued that more conscientious and emotionally stable (i.e., less neurotic) adults have higher lifetime earnings. One standard deviation increase in conscientiousness is associated with a 9% increase in lifetime earnings. A one standard deviation increase in emotional stability is associated with a 5% increase in lifetime earnings. The other three Big Five factors did not show significant relationships to lifetime earnings. Duckworth & Weir (2010)

In this study, it was investigated whether personality traits contribute towards a better understanding of the reasons for the gender wage gap. Using a sample of Dutch employees, it was found that 11.5% of the observed gender wage gap could be ascribed to differences in the personality trait scores (mainly in agreeableness and intellect). (Nyhus & Pons, 2012)

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Most of the B-Schools in India are facing problems in placing their students. Recruiters claim that the reason for this is the absence of required skill-sets in the students. The challenge is in identifying the skills or personality traits which lead to good placements. In this study, ten personality traits from OCEAN inventory were short-listed and the objective was to find out if there is a correlation between them and CGPA (academic achievement) and Salary Obtained during placements. The study, which was carried out in a reputed B-school in Bangalore (India), revealed that out of these 10 traits, only confidence has a correlation with salary. The traits which have correlation with CGPA are self-motivation and confidence. Another aspect that was studied was the efficacy of a program called personality enhancement program- which forces students to learn from activities like public speaking, presentations etc. It was found that this program helps students to build their confidence levels and confidence is impacting, both, CGPA as well as salary. The study also found that there is no correlation between CGPA and Salary. (Choudhury & Sinha, 2015)

Another research estimated the effects of personality traits and IQ on lifetime earnings of the high achieving men and women. Personality traits and IQ affect the levels of earnings, especially in the prime working years. They also affect educational sorting and thus command an indirect effect on lifetime earnings. Furthermore, there is a significant interaction between education and traits in producing earnings. Therefore, the treatment effect of schooling is a function of personality traits. Psychological traits are rewarded directly in the marketplace for men, but not for women of this group. Men gain from traits such as Conscientiousness, Extraversion, and IQ. Women with up to a Bachelor's degree are able to gain from Extraversion by matching to higher earning partners. (Gensowski, 2014)

GAP ANALYSIS AND IDENTIFICATION OF VARIABLES

From the literature review it can be concluded that there is ambiguity in determining relationship between personality traits and placement performance. Different authors have different opinions regarding the same 5 factors of personality. Keeping literature review as base, following variables are identified for study. As the research is about study of link between personality traits and performance with respect to gender, the given variables are identified.

A gender based study on impact of personality traits on Placements of Management Students

Independent variables	Moderating variable	Dependent variables
Personality traits: 1. Emotional stability 2. Extroversion 3. Openness to experience 4. Agreeableness 5. Conscientiousness	Gender 1. Male 2. Female	Placement performance 1. Amount of CTC/package received after in-campus placements

TABLE 1: Independent and Dependent Variables

As the aim is to study the effect of personality on placement performance of business management students, package received after placements is identified as a dependent variables. The Independents variables i.e. personality traits are the big five personality traits. The Big Five personality traits are: *Neuroticism (inverse of emotional stability)* which means the degree to which a person can be depressed, anxious, angry and emotionally insecure. *Extroversion* means the degree to which a person can be talkative, active, sociable, and assertive. *Openness to experience* stands for the degree to which an individual can be open to new experiences and intellectually curious. *Agreeableness* is the extent to which a person can be flexible, good natured, trusting, and liked by others. *Conscientiousness* is the degree to which a person can be a planner, a dependable, responsible and organized person.

RESEARCH METHODOLOGY

Descriptive & Exploratory research is done to measure personality traits through a survey questionnaire. The survey makes use of Goldberg's measurement scale, the IPIP (International Personality Item Pool) Big-Five factor markers (Goldberg, 1999). The study makes use of the 50-item version consisting of 10 items for each of the Big-Five personality factors: Extraversion (E), Agreeableness (A), Conscientiousness (C), Emotional Stability (ES), and Openness (O). The IPIP items with a 5-point, Likert-type scale ranging from 1 (very inaccurate) to 5 (very accurate) were administered as in the original instrument. The Cronbach's alpha is 0.929 which means the questionnaire has high internal consistency, hence the questionnaire is reliable.

Stratified random sampling was used. The survey was randomly forwarded to management students of selected institutes. A total sample of 706 students (478 male and 228 female) was

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taken from seven different management institutes from University of Mumbai. These are students pursuing full time MBA course. Considering self-rating of their personality traits, the median score on each trait was categorized as high or low, and these scores tested for association with placement package.

OBJECTIVES

Based on the literature review and gap analysis, following are the objectives of study.

1. *To analyze the personality traits of management students.*

Personality profiling of students in order to understand their trait composition.

2. *To understand the relationship between personality traits and placement performance (Amount of CTC/package received after in-campus placements).*

Since there is no clear relationship between personality traits and package received post placements, there is a need to study these variables together to understand their relationship with each other.

3. *To understand the effect of gender on relationship between personality traits and placement performance (Amount of CTC/package received after in-campus placements)*

Further objective of research is to see the moderating effect of gender on test variables.

RESULTS

The data obtained through survey questionnaire was tested for descriptive as well as inferential analysis. The results are as follows.

	Frequency	Percent
Male	478	67.7
Valid Female	228	32.3
Total	706	100.0

Table 2: Gender of respondents

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Around 67% of respondents were male. Generally, MBA institutes have more male students than female.

	Category	Frequency	Percent
Extraversion	High	439	62.2
	Low	267	37.8
	Total	706	100.0
Agreeableness	High	475	67.3
	Low	231	32.7
	Total	706	100.0
Conscientiousness	High	422	59.8
	Low	284	40.2
	Total	706	100.0
Emotional Stability	High	279	39.5
	Low	427	60.5
	Total	706	100.0
Openness to experiences	High	375	53.1
	Low	331	46.9
	Total	706	100.0

Table 3: personality traits of respondents

Table 6 demonstrates the difference in traits exhibited by sample students. Most of students were high in extraversion, agreeableness, conscientiousness and openness and low in emotional stability.

N	Mean	Std. Error of Mean	Median	Mode	Std. Deviation	Variance
199	8.95	.422	7.00	3	5.956	35.478
Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis	Range	Minimum	Maximum
.866	.172	-.198	.343	26	3	29

Table 4: Descriptive Statistics of CTC in Rs. (Lakhs per annum)

Out of total 706 respondents, 199 disclosed the salary package they received post placements. Those who did not respond were either not placed or they did not wish to disclose the salary.

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The package range was 3 to 29 lakhs per annum (The respondents were from different management institutes).

Inferential analysis (Testing of hypothesis)

Distribution of CTC & Gender

Null Hypothesis: The distribution of CTC in Rs. (Lakhs per annum) is same across categories of gender.

Mann-Whitney Test

Ranks

	Gender	N	Mean Rank	Sum of Ranks
CTC in Rs. (Lakhs per annum)	Male	143	96.42	13788.50
	Female	56	109.13	6111.50
	Total	199		

Test Statistics^a

	CTC in Rs. (Lakhs per annum)
Mann-Whitney U	3492.500
Wilcoxon W	13788.500
Z	-1.410
Asymp. Sig. (2-tailed)	.158

a. Grouping Variable: Gender

Decision: there is no significant difference in distribution of salaries for male and female students.

Gender based difference in CTC according to personality traits

1. The distribution of CTC in Rs. (Lakhs per annum) across categories of extraversion for male and female students.

Mann-Whitney Test

Ranks

Gender	Extraversion	N	Mean Rank	Sum of Ranks
Male	High	99	77.13	7635.50
	Low	44	60.47	2660.50
	Total	143		
Female	High	34	29.26	995.00
	Low	22	27.32	601.00
	Total	56		

Test Statistics^a

Gender	CTC in Rs. (Lakhs per annum)	
Male	Mann-Whitney U	1670.500
	Wilcoxon W	2660.500
	Z	-2.239
	Asymp. Sig. (2-tailed)	.025
Female	Mann-Whitney U	348.000
	Wilcoxon W	601.000
	Z	-.439
	Asymp. Sig. (2-tailed)	.661

a. Grouping Variable: Extraversion

It can be interpreted that the difference in CTC across categories of extraversion was significant for male students, however, for female students it was not significant. Hence it can be concluded that Male students with high extraversion received better package post placement.

2. The distribution of CTC in Rs. (Lakhs per annum) across categories of agreeableness for male and female students.

Mann-Whitney Test

Ranks

Gender	Agreeableness	N	Mean Rank	Sum of Ranks
Male	High	94	81.80	7689.00
	Low	49	53.20	2607.00
	Total	143		
Female	High	40	29.29	1171.50
	Low	16	26.53	424.50
	Total	56		

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Test Statistics^a

Gender		CTC in Rs. (Lakhs per annum)
Male	Mann-Whitney U	1382.000
	Wilcoxon W	2607.000
	Z	-3.951
	Asymp. Sig. (2-tailed)	.000
Female	Mann-Whitney U	288.500
	Wilcoxon W	424.500
	Z	-.575
	Asymp. Sig. (2-tailed)	.565

a. Grouping Variable: Agreeableness

It can be interpreted that the difference in CTC across categories of agreeableness was significant for male students, however, for female students it was not significant. Hence it can be concluded that Male students with high agreeableness received better package post placement.

3. The distribution of CTC in Rs. (Lakhs per annum) across categories of conscientiousness for male and female students.

Mann-Whitney Test

Ranks

Gender	Conscientiousness	N	Mean Rank	Sum of Ranks
Male	High	98	78.30	7673.50
	Low	45	58.28	2622.50
	Total	143		
Female	High	34	29.38	999.00
	Low	22	27.14	597.00
	Total	56		

Test Statistics^a

Gender		CTC in Rs. (Lakhs per annum)
Male	Mann-Whitney U	1587.500
	Wilcoxon W	2622.500
	Z	-2.707
	Asymp. Sig. (2-tailed)	.007
Female	Mann-Whitney U	344.000
	Wilcoxon W	597.000
	Z	-.507
	Asymp. Sig. (2-tailed)	.612

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a. Grouping Variable: Conscientiousness

It can be interpreted that the difference in CTC across categories of conscientiousness was significant for male students, however, for female students it was not significant. Hence it can be concluded that Male students with high conscientiousness received better package post placement.

4. The distribution of CTC in Rs. (Lakhs per annum) across categories of emotional stability for male and female students.

Mann-Whitney Test

Ranks

Gender	Emotional Stability	N	Mean Rank	Sum of Ranks
Male	High	68	84.06	5716.00
	Low	75	61.07	4580.00
	Total	143		
Female	High	12	27.33	328.00
	Low	44	28.82	1268.00
	Total	56		

Test Statistics^a

Gender	CTC in Rs. (Lakhs per annum)	
Male	Mann-Whitney U	1730.000
	Wilcoxon W	4580.000
	Z	-3.343
	Asymp. Sig. (2-tailed)	.001
Female	Mann-Whitney U	250.000
	Wilcoxon W	328.000
	Z	-.281
	Asymp. Sig. (2-tailed)	.778

a. Grouping Variable: Emotional Stability

It can be interpreted that the difference in CTC across categories of emotional stability was significant for male students, however, for female students it was not significant. Hence it can be concluded that Male students with high emotional stability received better package post placement.

5. The distribution of CTC in Rs. (Lakhs per annum) across categories of Openness for male and female students.

Mann-Whitney Test

Ranks

Gender	Openness	N	Mean Rank	Sum of Ranks
Male	High	83	75.18	6240.00
	Low	60	67.60	4056.00
	Total	143		
Female	High	26	28.27	735.00
	Low	30	28.70	861.00
	Total	56		

Test Statistics^a

Gender	CTC in Rs. (Lakhs per annum)	
Male	Mann-Whitney U	2226.000
	Wilcoxon W	4056.000
	Z	-1.089
	Asymp. Sig. (2-tailed)	.276
Female	Mann-Whitney U	384.000
	Wilcoxon W	735.000
	Z	-.099
	Asymp. Sig. (2-tailed)	.921

a. Grouping Variable: Openness

It can be interpreted that the difference in CTC across categories of openness was not significant for male students as well as female students. Hence it can be concluded that openness had no impact on package received post placements.

From the data analysis, it can be concluded that male students with high Agreeableness, high conscientiousness or high Emotional Stability received better salary package. Female students' difference in salary package cannot be attributed to any personality trait.

Four out of five personality traits positively influenced amount of CTC namely Extraversion Conscientiousness, Agreeableness and emotional stability. Openness seemed to have no impact on salary.

CONCLUSION

The literature comparing salary with personality traits strongly supported the association of emotional stability, conscientiousness. [Nyhus & Pons (2005), Duckworth & Weir (2010)]. Previous Research advocated that emotional stability is positively associated with the salary of both women and men, conscientiousness tends to be rewarded at the beginning of an employment relationship. It was argued by a research that more conscientious and emotionally stable adults have higher lifetime earnings. The other three Big Five factors did not show significant relationships to lifetime earnings. Various Studies considering gender wage gap attributed gender based differences in wages to different traits. [Nyhus & Pons, (2012), Gensowski, (2014)]. Research concluded that Men gain from traits such as Conscientiousness, Extraversion whereas Women gain from Extraversion.

The primary research partially supports the literature. On the other hand, it brings out different perspectives also. Hence it can be concluded that the personality traits of male management students have significant impact on the salaries they receive during in campus placements. However, this difference is not valid for females. Personality traits have no significant impact on salaries of female students.

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**ANALYSIS OF THE INTER ORGANIZATIONAL COMPETENCIES EFFECT ON
SUPPLY CHAIN EFFECTIVENESS**

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ABSTRACT

This research paper introduces the concept of Inter-organizational competencies (IOC) and analyses its effect on supply chain effectiveness.

INTRODUCTION

A supply chain is a system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer.

SCM is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage. It represents a conscious effort by the supply chain firms to develop and run supply chains in the most effective and efficient ways possible. Supply chain activities cover everything from product development, sourcing, production, and logistics, as well as the information systems needed to coordinate these activities.

REVIEW OF LITERATURE

Supply chain management is used by most of the organizations worldwide; therefore a large number of studies have been done to explore this field. Moreover, its interlinking with the quality management perspective is still very limited. It is worth mentioning here that, in the

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present competitive world, the dynamics of market does not allow any deviation in quality of end product. Therefore, the importance of quality management is universally espoused by the researchers and practicing managers working in this area. It has been found that the focused approaches in evaluating quality management issues within inter and intra organization supply chain contexts are indispensable. In this context the quality of supply chain itself can provide a path breaking solution at different levels of supply chain management. Moreover, this concept may be applied to address the problems such as product recall, delay in delivery of products etc. regardless of type of industry.

From the review of literature it is seen that there is dependency between Supply Chain Integration (SCI) and Inter-Organizational Competencies (IOC). Hence the present study is carried out to assess its impact on impact on Supply Chain Effectiveness

OBJECTIVE

To understand the dependency between Supply Chain Integration (SCI) and Inter-Organizational Competencies (IOC).

RESEARCH DESIGN

The researcher has adopted the research design which is exploratory and descriptive in nature, accordingly to achieve the research objectives the researcher has designed and prepared the questionnaire to collect the primary data. The researcher also adopted secondary method of data collection.

METHODS OF DATA COLLECTION & DATA ANALYSIS TECHNIQUES

This research study is mainly of survey type with select FMCG Companies that are in Mumbai and nearby Mumbai, having interest for a Distribution at National or Regional Level. The data is collected using both the primary and secondary methods of data collection.

The researcher has personally visited 50 companies and collected the primary data. The secondary data has been collected through the journal review, literature review and through the internet web-sites to support the study.

ANALYSIS AND INTERPRETATION OF DATA

Analysis and Interpretation of Data is the process by which sense and meaning are made of the data gathered in research, and by which the emergent knowledge is applied to research problems.

Suitable statistical techniques to find out statistical parameters like mean, standard deviation, coefficient of correlation and exploratory factor analysis are used to draw inferences after testing the hypothesis.

Kaiser-Meyer-Olkin test is used for measuring validity of sampling adequacy. Bartlett's test is used for sphericity. Factor analysis is also done.

Descriptive analysis of data will include: Measures of central tendency (Mean/Median/Mode), Measures of dispersion (Standard deviation) and Graphical representation.

Inferential analysis of data will include: Multiple regression equation (simultaneous equation), Statistical testing using T,Z and F test, correlation analysis, coefficient of determination (R^2), adjusted (R^2), coefficient ' α ' for reliability test for internal consistency. Z test is carried out for individual regression coefficients. ANOVA-F test is carried out for overall significance of regression model.

Data is tested for multicollinearity, autocorrelation and heteroscedasticity.

RESULTS & DISCUSSION

Inter-Organizational Competencies:

These are core competencies. These Core competencies are the collective learning in the organization, especially how to coordinate the diverse production skills and integrate multiple streams of technologies. Core competence is communication, involvement and a deep commitment to working across organizational boundaries. It involves many levels of people and all functions. Competencies need to be nurtured and protected.

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In the present study we identify/ measure these competencies considering presence of different components in an organization like Close partnership with suppliers and customers, Subcontracting, Third Party Logistics, Just In Time supply etc., these are further classified into five different factors using factor analysis. Relevant primary data is collected through structured questionnaire. Details of factor analysis are given below.

The factors responsible for the inter organizational competencies are grouped in as the following factor groups:

- IOC1 (Third Party Logistics, Subcontracting, Plan strategically)
- IOC2 (Close partnership with customers, Just In Time supply, Close partnership with suppliers)
- IOC3 (Supply Chain Benchmarking, Few suppliers, Vertical integration)
- IOC4 (Holding safety stock, Many suppliers, Use of external Consultants)
- IOC5 (E-procurement, Electronic Data Interchange, Outsourcing)

In IOC1, all factors were important but Third Party Logistics & Plan Strategically are more important than Subcontracting.

In IOC2, all factors were important but Close partnership with suppliers is more important than Close partnership with customers and Just In Time supply.

In IOC3, all factors Supply Chain Benchmarking, Vertical integration and few suppliers are equally important for inter-organizational competency.

In IOC4, all factors Many suppliers, Holding safety stock and Use of external consultants are equally important for inter-organizational competency.

In IOC5, all the factors E-procurement, Electronic Data Interchange and Outsourcing are equally important for the inter-organizational competencies.

Supply Chain Integration:

Supply chain integration is a close alignment and coordination within a supply chain, often with the use of shared management information systems. A supply chain is made up of all parties

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involved in fulfilling a purchase, including raw materials, manufacturing the product, transporting completed items and supporting services. Supply chain refers to all inputs required to produce a product and fulfill a purchase. For example, a company that assembles computers would need to purchase components such as circuit boards. The circuit board company would need to purchase materials to produce them, including wire and silicon. All of these materials and components form part of the company's supply chain of materials needed to produce the end result of a working computer. Once the computer is built, a trucking company may take it to a wholesaler warehouse, and then it may be delivered to a retail store for sale or shipped directly to an end user. Every step - from sourcing of raw materials to final delivery to the customer - is considered part of the supply chain of the computer.

There are several different levels of supply chain integration. Generally, the first step in integration would be to select specific vendors to provide specific inputs, and develop an agreement for them to provide a set amount of inputs during the year at a set cost. This ensures the company has the materials it needs to produce its expected output of computers during the year. Our computer company might sign a contract with a large supplier of circuit boards, for example, that requires it to deliver a specific quantity at specific times during the year and sets a price that will be in effect during the contract.

The factors responsible for the benefits derived from currently used Supply Chain systems through integration are grouped in as the following factor groups:

- SCI1 (Increased coordination with customers, Increased sales, Increased coordination with suppliers, More accurate costing)
- SCI2 (Better operational efficiency, Resource planning, Reduced inventory level)
- SCI3 (Forecasting, Cost saving, Reduced lead-time in production)
- SCI4 (Better quantity of information, Better quality of information, Flexibility)
- SCI5 (Increased coordination between departments)

In SCI1, all the factors Increased coordination with customers Increased sales, and Increased coordination with suppliers are more important than More accurate costing to realize the benefits from the current supply chain systems of the organization.

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In SCI2, all the factors Better operational efficiency, Resource planning and Reduced inventory level are all equally more important to realize the benefits from the current supply chain systems of the organization.

In SCI3, all the factors Forecasting , Cost saving and Reduced lead-time in production are all equally more important to realize the benefits from the current supply chain systems of the organization.

In SCI4, all the factors Better quality and quantity of information and flexibility are all equally more important to realize the benefits from the current supply chain systems of the organization.

In SCI5, the factor Increased coordination between departments is important to realize the benefits from the current supply chain systems of the organization.

Based on the individual competencies and supply chain integration the researcher has tested the following hypothesis:

Null hypothesis

Inter-organizational competencies (IOC) are **insignificantly** related to the level of supply chain integration (SCI) of the focal firm.

Alternative hypothesis:

Inter-organizational competencies (IOC) are **significantly** related the level of supply chain integration (SCI) of the focal firm.

To test above null hypothesis we use chi-square test of association to check significance of relation.

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FINDINGS

Results of chi-square test for Inter-organizational competencies (IOC) and supply chain integration (SCI)

Variable for inter-organizational competencies (IOC)	Variable for supply chain integration (SCI)	Pearson Chi-Square value	Degree of freedom (df)	p value	Result Significant or insignificant	Null hypothesis retained or rejected
IOC	SCI	0.649	3	0.885	insignificant	Retained

INTERPRETATION

From the above table it is seen that for variable **Inter-organizational competencies (IOC) and supply chain integration (SCI)**, p values are 0.885. This value is greater than 0.05 (critical p value for 5% level of significance) at a given degrees of freedom. Hence null hypothesis that Inter-organizational competencies (IOC) are **insignificantly** related to the level of supply chain integration (SCI) of the focal firm is retained in this case.

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**CHALLENGES TO INCLUSIVE GROWTH: OUTSOURCING SECTOR IN REVERSE
GLOBALIZATION ERA**

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ABSTRACT

India's Outsourcing Sector is a Multi-Billion industry in India and plays a vital role in the economy as it provides employment to millions, contributes substantially to India's GDP and exports. Low cost technology, inexpensive labour has made India the world's top sourcing destination. However, rapid technological change, protectionist measures such as Brexit, nationalist sentiments of President Trump, inward looking policies and rise of right wing parties in the European region has resulted in stress for this sector and reducing the growth rate of the sector. Uncertainty in the economic environment also causes currency fluctuations impacting revenues of companies in this sector. Slowdown in this sector results into massive unemployment hampering inclusive growth of the Indian Economy. To counter this, companies would require a shift from old ways of doing business, update capabilities to cater to shifting customer demands, focus on collaborations among others. Companies need to shift from being a technological company to a solution driven company. This paper analysis the growth of outsourcing sector in India, contribution of this sector to the Indian Economy, the challenges it faces due to reverse globalization and how it can evolve to deal with the same.

Challenges to Inclusive Growth: Outsourcing Sector in Reverse Globalization Era

KEY WORDS: Outsourcing Sector, Reverse Globalization Era, Challenges, Opportunities, Competitive Advantage, India

INTRODUCTION

India's Outsourcing Sector is a \$150 Billion industry as of 2017 (Source: Economic Times, 2017) and provides employment to 3.5 million employees (Source: Nearshore Americas, 2016). This sector contributes to 7.7% (Source: Indian Brand Equity Foundation) of India's GDP and results in 8 – 10% of India's exports (Source: Economic Times, 2016). Low cost technology, inexpensive labour has made India the world's top sourcing destination in 2016-17 with a share of 55%. Indian IT & ITeS companies have set up over 1,000 global delivery centers in over 200 cities around the world (Source: Indian Brand Equity Foundation).

However, rapid technological change and changes in the global economic environment (Brexit, Coming of Trump, changes in immigration and visa norms and the rise of right wing parties in number of European countries) has resulted into stress in this sector— with the growth rate of the sector falling to 10% for 2016-17 from 12% for 2014-15. While the Brexit vote hobbled some outsourcers' plans, a more serious issue is possible changes to visa regulations in the US, the largest market for these companies. Proposed legislation called the Protect and Grow American Jobs Act wants to increase the salary of H-1B visa holders from \$60,000 to \$100,000 annually and remove an exemption for those holding a master's degree. US President Donald Trump and Senator Jeff Sessions, have promised to crack down on job losses in the US. (Source: Indian Brand Equity Foundation)

Uncertainty in the business environment also causes currency fluctuations, which impact the earning of sectors that earn in dollars. The British pound revenues make for 10-15 per cent of the overall revenues in the case of TCS, Tech Mahindra and Wipro. For Infosys, GBP revenue makes for 6.7 per cent of the overall revenue. With pound depreciating sharply post Brexit, dollar revenues of Indian IT companies have been under pressure.

As this sector is a major provider of employment; any slowdown in this sector results into massive unemployment which further strains the development and inclusive growth of the Indian Economy. Companies in this sector such as Infosys, TCS, Wipro, etc. are now facing difficulties

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in renewing their existing contracts from the overseas clients and are additionally finding it difficult to get visas for their employees. For example, in August 2016, Infosys suffered a jolt when a contract from the Royal Bank of Scotland was nixed following the Brexit referendum resulting in some 3,000 jobs being lost.

In order to sustain and scale their businesses in the current global challenges, the Outsourcing Sector will now need to evolve to deal with and overcome these challenges. This would require a shift from an old way of doing business, updating capabilities to cater to shifting customer demands, updating skills, focus on collaborations along others.

THEORETICAL FRAMEWORK

The idea of outsourcing is not new. In 1700s manufacturers started shifting the manufacture of goods to countries with cheaper labor during the Industrial Revolution, following the precepts of Adam Smith in his book 'The Wealth of Nations'. As land, sea, and later, air routes developed between the 15th and 21st centuries, more nations started to outsource trade to other nations. Though the outsourcing of manufacturing is an old story, outsourcing services is a relatively new phenomenon. It is impossible to know when exactly the Indian outsourcing industry was born. According to Mr. Karnik's book 'The Coalition of Competitors', GE was the first organization to outsource \$10 millions of I.T. software work to India in 1989. (Manu Joseph, 2012)

Services outsourcing to India started rapidly accelerated in the '90s. Some of the earliest players in the Indian outsourcing market were Texas Instruments, American Express, Swissair, British Airways and GE, who started captive units in India. Over the years, the industry has built robust processes to offer world class IT software and technology-related services. Advances in technology and communication have allowed transnational companies to rapidly globalize at a very low cost. Developments in telephony, fiber optics and satellite communications made Internet-based communication and transfer of data possible, paving the path for outsourcing to India. The cost of managing workers in a distant location had fallen drastically, and the need to outsource became stronger.

Indian companies are enhancing their global service delivery capabilities through a combination of greenfield initiatives, cross-border mergers and acquisitions, partnerships and alliances with

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local players. Global software giants like Microsoft, Oracle, SAP and many others have established captive development centers in India over the years. Indian authorities have made efforts to further strengthen the information security environment in the country, and special initiatives have been taken to enhance the legal framework. Many companies in India have already aligned their internal processes and practices to international standards such as ISO, CMM, Six Sigma, etc. which have helped establish India as a credible outsourcing destination.

The IT & BPO sector has been a key beneficiary in India's growth, with the cost of international connectivity declining rapidly and quality of service improving significantly. India's National Association of Software and Service Companies (NASSCOM) has played a critical role in outsourcing by acting as a coordinating body for the industry. According to NASSCOM, the major reasons behind India's success in ITES/ BPO industry are: abundant, skilled, English-speaking manpower, high-end telecom facilities and infrastructure, better focus on maintaining quality and performance standards, fast turnaround times, ability to offer 24x7 services based on the country's unique geographic location, friendly tax structure, which places the ITES/BPO industry on par with IT services companies and proactive and positive policy environment which encourages ITES/BPO investments and simplifies rules and procedures.

Over the years, BPO has become the second largest segment in Indian IT/ ITES industry and also the fastest growing. The scope of process outsourcing has widened over the past few years to also include KPO (Knowledge Process Outsourcing) operations. Customer Care is the largest contributor in the BPO segments. The last few years have witnessed the industry evolve from executing projects at the lowest end of the value chain, to one where Indian players are aggressively bidding for and winning large-scale turnaround projects. As per studies by NASSCOM, the four main components of the industry have been IT services, BPO, Engineering Services and Hardware. Also, Banking and Finance & Accounting Services, Telecom, Manufacturing are among the top 4 verticals for both export and domestic market. While hardware dominates the domestic market, IT services tops in the overall industry.

Today, Indian companies offer a wide variety of outsourced services ranging from medical transcription, customer care, medical billing services, database marketing to Web sales/ marketing, accounting, tax processing, transaction document management, telesales/ telemarketing, HR hiring and biotech research. Outsourcing to India has been a satisfactory and

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profitable experience for most companies around the world. Indian outsourcing vendors have continuously adapted to internal and external challenges and the credit for this goes to Indian outsourcing companies and the successive enabling governments. Outsourcing in India has faced adversities due to the state of the world economy and the ongoing recession, but it is surely here to stay.

LITERATURE REVIEW

As per Oursource2India, an Indian organization providing outsourcing solutions suggests that the main benefits of outsourcing are access to skilled people, increase in-house efficiency, better customer service, focus on core activities, ability to run business 24*7 and cost advantage. (Source: <https://www.oursource2india.com>)

Similarly, Mohapatra, S & Das, S (2013) indicated that technological innovation, focus on core businesses, cost reduction and strategic benefits emerged as the main factors influencing business process outsourcing in the Banking Sector in India.

Jain, R & Natrajan, R (2011) suggest that factors such as improvements in operational efficiency and customer services, focus on core competencies, ability to access new technologies, skills and resources/capabilities and cost cutting contribute to shape the decisions makers' perception towards the benefits of outsourcing. However, operational and business-related benefits of outsourcing are more important than financial and cost-related benefits. Further, data-related risks are seen to be more serious than other risks of outsourcing such as risk of increased management complexities, risk of losing process control, risk of vendor lock-ins and/or over-reliance on the vendor(s) and the complexities in vendor relationship management. The study also highlights that the regulatory and policy restrictions are major roadblocks for the outsourcing sector along with infrastructural inadequacy, lack of a matured vendor market and the scale of operations.

Javalgi et al (2013) highlight that India's competitive advantage lies in deep technical strengths in information technology, science, and engineering; world-class universities that have attracted the best and brightest students and faculty; large English speaking population and an enduring democracy. However, this advantage may be eroded due to factors such as political indifference towards foreign investors, corruption, inflation, bureaucracy, competition from other nations etc.

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The paper suggests that in order to sustain this competitive edge, the sector must invest in training professional workforce, create a climate for entrepreneurship and innovation to develop quality vendor market, diversify the exposure in different markets to capitalize on the existing opportunities, regulatory environment favoring the sector, outsourcing vendor(s) need to take steps to move from the current position (i.e. supplier of business process outsourcing services) to a role of knowledge leader by providing advanced value added services to global clients, attract foreign direct investment (FDI) from suppliers of high-end knowledge-based services, develop R&D Capabilities and create a culture of ethical behavior.

Panda (2012) highlight that factors that provide the Indian Outsourcing Sector a competitive advantage include availability of high-qualified and amiable English speaking work force, easy access to high-skilled manpower associated with low cost structure, experience of players in the sector, stable call centres working in late shifts with suitable time-zone differences, improvements in telecom and power sectors in India among others. However; the substandard education system especially in semi urban and rural areas, BPO sector not being seen as a very lucrative career (due to factors like non-transparent management policies, job stagnation, lack of a long-term career prospects and poor work personal life balance due to work in shifts), lack of infrastructural facilities in tier-II and III cities etc. have emerged as weaknesses of the BPO sector in India. In order to grow, the outsourcing sector must try and capitalize on the potential of the smaller towns and villages, incorporate innovative HR strategies to retain their employee

RESEARCH PROBLEM

This paper analysis the growth trends of the outsourcing industry in India, contribution of this sector, the challenges it faces due to de-globalization and how it can evolve to deal with the same.

RESEARCH OBJECTIVES

The objectives of this paper are as follows:

- To analyze the contribution of the Outsourcing Sector to India's GDP, employment and exports.
- To understand the challenges being faced by the Outsourcing Sector.
- To highlight the strategies this sector can adopt to sustain and grow.

RESEARCH METHODOLOGY

Data Collection Method: Secondary and well as Primary sources of data were used in order to collect information. Secondary data has been taken from data available on the journals, reports and internet. Primary Data for this research includes Qualitative data that has been collected from the Management in this sector through Personal Interviews. (Please refer to Appendix 1)

Sampling Plan: Data has been collected from managers of organizations through personal interviews. For the purpose of the study, non-probability sampling method has been adopted, as not all consumers and businesses had an equal chance of selection as sample. Additionally, Convenience Sampling has been used.

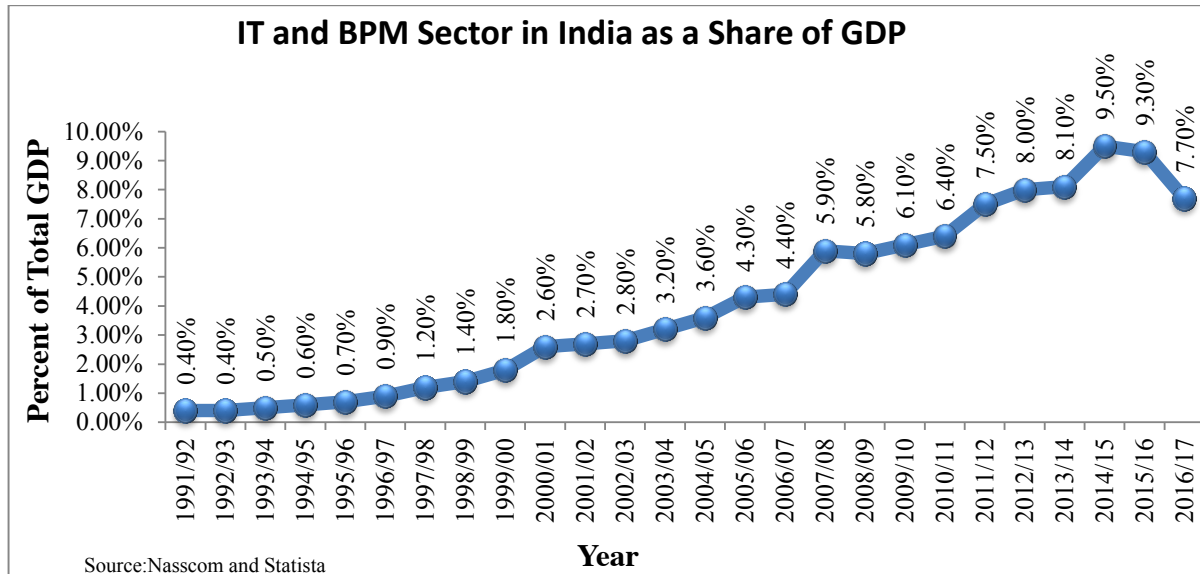
Analytical Tools Adopted: For the export related data and to calculate the volatility for a portfolio of currency, correlation models have been used. Additionally, for the volatility for a portfolio of currency, based on the correlation of the currency pairs the covariance is calculated by multiplying returns of any two currency period over a given time period with the correlation of the two currency pairs. Based on the summation of bordered covariance, the variance was calculated. Square root of Variance is Standard Deviation that is the Volatility for a period of time for foreign currency revenue of any industry, company etc.

DATA ANALYSIS AND RESULT

Contribution of the Outsourcing Industry to India's GDP

The contribution of Indian IT and ITES sector colloquially known as the outsourcing sector had been on a steady rise since the financial crisis of 2008. Its contribution to the Indian GDP was steadily rising up until 2014-15 when it was just shy of 50 basis points in order to be contributing 10% of the entire GDP. The sectors contribution to the Indian GDP has declined since then to a five-year low of 7.7% in fiscal year 2017. The decline can be attributed to the fact that the sector's growth had declined for the first time in the calendar year 2016. In 2017 it was expected to grow at a modest 8.39% hence this has led to a decline in its contribution to GDP. This can also be associated with the fact that the Indian IT and ITES sector is majorly driven by exports and due to uncertainties surrounding H1B Policies in USA, uncertainties due to rise of right wing parties in Europe the exports have been growing at a declining pace.

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A detailed analysis of the contribution of IT and ITES sector to India's GDP since the liberalization shows that the trend has been on a rise. Since 1991/92 its contribution has only increased steadily and there has not been a significant reduction in its contribution to GDP since then till 2015/16 (except for a 10 bps decline in 2008/09). This points the fact that the sector as a whole has been growing rapidly or at par with the overall GDP, thereby increasing its contribution to the GDP every year or maintaining its contribution as in the previous year. The sector has also proven to be resilient amidst the global financial crisis. We can divide the entire IT and ITES sector into four phases based on its contribution to the Indian GDP: -

- Phase 1(1991 to 2000):** This was the period that was just after the economic reforms in India. After the liberalization policy, a lot of changes took place in the Indian economy including, relaxation in trade barriers, liberalization, allowing of partial foreign investment etc. This led to opening up of various companies and organization in this sector thereby having a competitive industry in India. A lot of foreign inflows started coming to India and MNC's were introduced in India. This was the phase we saw "Offshore Model", "Onsite Model", and "Global Delivery Model" being introduced and hence we see that the sector's contribution increased from mere 40 bps in 1991/92 to 260 bps by the end of the year 2000/01.
- Phase 2 (2000 to 2010):** The boom phase for the sector and the period where the sectors contribution to the GDP increased by almost two and half folds (2.5 times). This was despite the fact the period saw a global financial meltdown in the year 2008/09. The sector remained resilient and grew at a quite rapid pace due to a lot of favorable government policies including

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setting up of Software Technology Parks, passing of Special Economic Act (2005), Information Technology Act passed (2000). This was also the time we saw migration to the computers by banks, large institutions etc. from manual work and hence we saw a lot of companies developing software's, providing back end services, BPO services to many institutions within and outside the nation. The IT and ITES sector earned good amount of foreign exchange (from USD 3.15 Billion in 2000 to almost USD 50 Billion in 2010) due to this reason. According to the study by Nasscom, the major drivers behind the huge demand of service back offices were cost-arbitrage, access to skills, quality which were readily supplied by the Indian IT firms via cheap and highly skilled labour with a business partnership model with huge growth and upside potential. These incentivized the western economies to invest heavily in business alliances with Indian IT-ITES firms to achieve global competitiveness in terms of cost and innovative service delivery mechanisms.



Source: Offshoring research Network; Duke University Fuqua School of Business; 2006, cited in Nasscom 2007 India Leadership Forum Key Observations

• **Phase 3 (2010-2015):** The bloom period for the sector continued and its contribution in five years' time increased by 1.5 times to 9.5% the highest since 1991/92. This was due to start of new concepts like online retailing, cloud computing and e-commerce thereby requiring more back end work and easy sharing of data was also available hence the sector's contribution did increase in this phase too. This was also the phase when reverse outsourcing or serving clients in their own country developed. However, the pace of increase in contribution to the GDP declined as compared to phase 2.

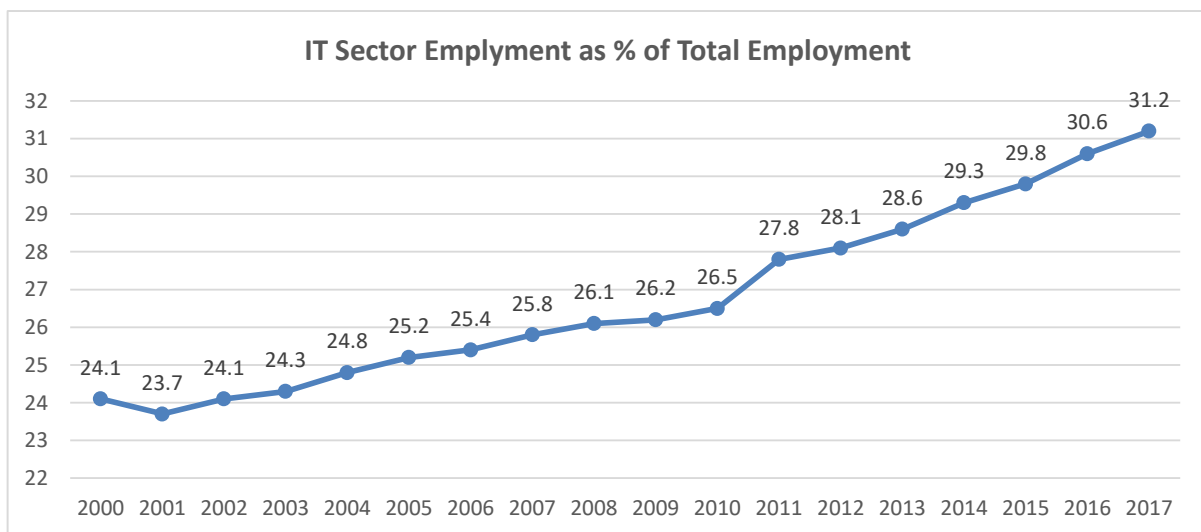
• **Phase 4 (Post 2015):** The downfall for the sector started becoming evident as its importance in the Indian GDP for the first time declined for two consecutive years (2015-16 and 2016-17). The

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sector's contribution to GDP has declined by almost 200 bps since the peak achieved in 2014-15. This is more due to the reverse globalization trend seen over the globe. Factors like near shoring of services, inward looking government policies, policies restricting free movement of labor across globe has led to a situation that Indian companies cannot have Indians working at foreign locations and hiring domestic labor in western countries increases their cost (the concept of reverse outsourcing looks to be back firing). Also due to uncertainties surrounding the economy the foreign exchange market has also turned volatile leading to high hedging cost for Indian IT and ITES sector.

Contribution of the Outsourcing Sector to India's Employment

Indian IT-ITES sector poses as a one of the biggest recruiters in the Indian economy. It has consistently risen as major employer and has the biggest pool of skilled labor of the Indian workforce. Although it has grown to a very strong position, the current scenario doesn't seem to appealing as the major players are now resorting to automation and robotics to revitalize its business by shifting towards software platforms and chased digital contacts.



Source: International Labour Organization

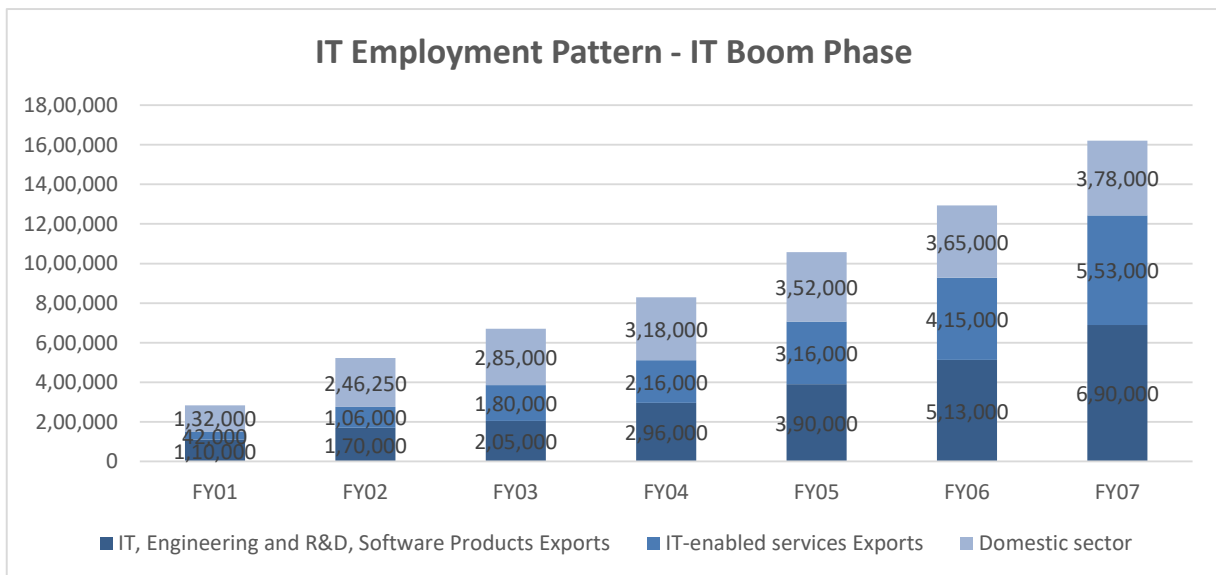
The IT Boom Phase from 2001 to 2007 saw a CAGR of 28.25% in employment in the IT-ITES sector. As seen from the chart below, the major propelling factor was the 'IT, Engineering and

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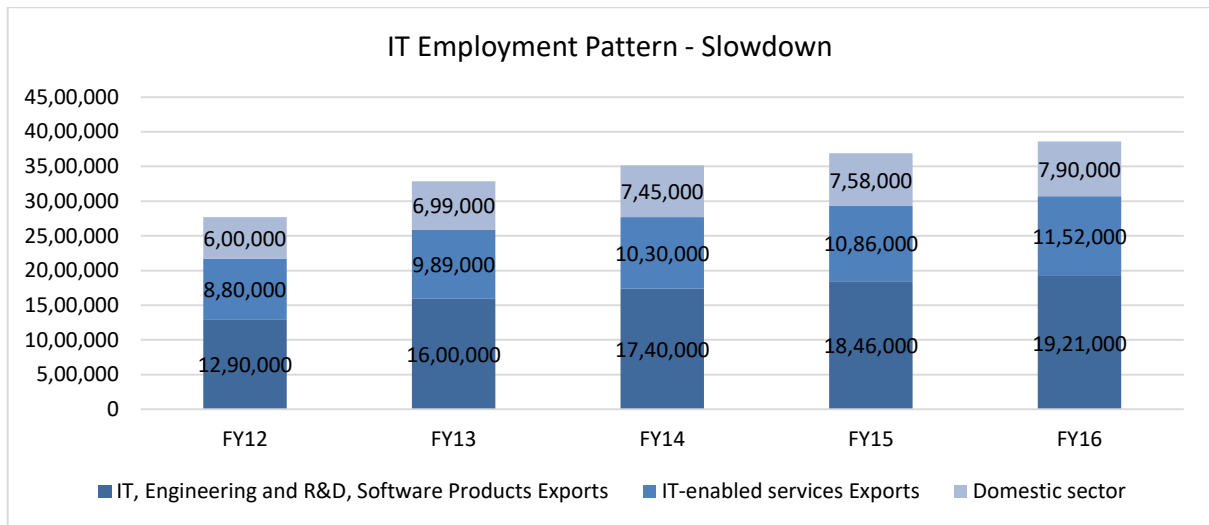
R&D, Software Products Exports’, but the highest growth was attributed to the ‘IT-enabled service exports’, with the ‘Domestic Sector’ providing a firm and gradual base.

The Slowdown phase is characterized by a saturated rate of growth in employment which has been due to the slowdown in the sector due to intense competition from the Southeast Asian countries followed by the shift to the automated space of service delivery.

The biggest impact was felt by professionals in ‘IT-enabled services Exports’ whose strength grew by just 5.53% (CAGR). There has been a thin silver lining to this scenario where international IT-ITES firms are conceptualizing a model of virtual agents wherein they can recruit professionals from anywhere in the world to work as mobile agents of the company. This provides the Indian jobseeker with a wider net of potential recruiters with newer employment and growth horizons



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Indian IT firms laid off over 56000 employees in 2017, with the figures mirroring that of 2008 crisis if not worse. Forced attrition rates moved from and historical 1% to 6% in 2017 coupled with a massive 50-70% drop in campus recruitments. The big 4 Indian IT companies hired 43% less in FY17 vis-à-vis FY16 while Nasscom expects a further drop of 20%. On the supply side, graduates are less attracted to the IT sector fearing restricted scope of personal growth, visa issues (e.g.: H-1B crisis in the US) and a muted business environment.

Contribution of Outsourcing Industry to India's Exports

BPO and its importance in India's Exports

India's service exports are slowly increasing their share in total exports of the nation. They constituted 33% of total exports in the fiscal year 2012-13, this has steadily increase and as of the end of fiscal year 2016-17 they form nearly 37% of total exports. The increment might not seem to be a large one but comparing it with the fiscal year 2000 when the contribution of entire service sector was merely 1/5 (22.92%) of total exports it can be concluded that post that the service sector's importance in total exports has increased rapidly. The balance of payment data as published in the year 2000 also points out to an important fact, IT and ITES exports were not considered an important component of service exports so to be published separately among service exports category. Today IT and ITES has become the single largest contributor to service exports i.e. 59.50% of total service exports. In the years of 2000 and around service sector only contributed 1/5th of total exports but today IT and ITES individually contributes about 1/5th of total exports. This implies that IT and ITES sector today has become a driving force of exports in

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India and any slowdown can hit the foreign exchange earnings of India. Today, about 75% of the total revenue generated by IT and ITES sector is from exports of services, of which about 98.7% of the earnings are in non-domestic currencies.

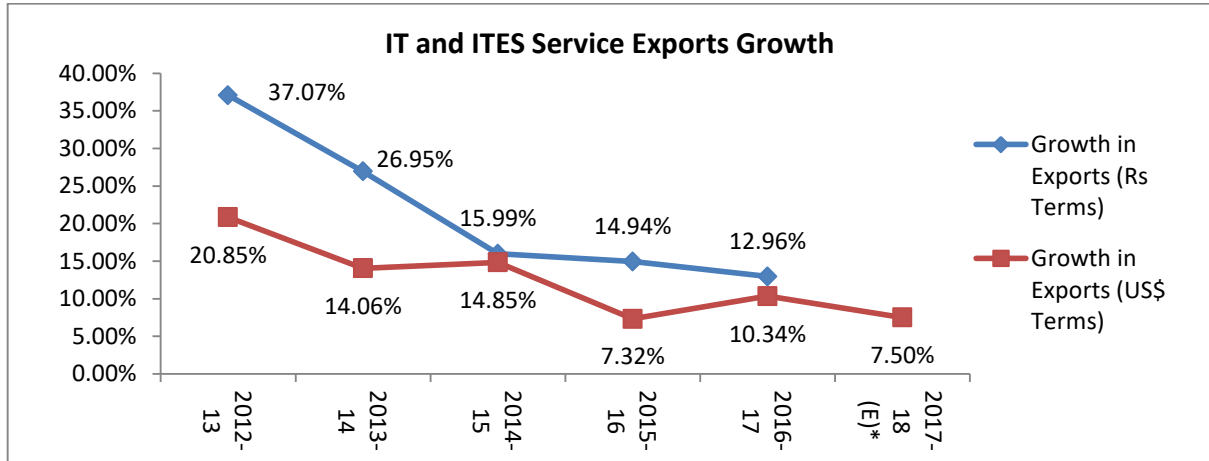
A separate analysis of growth in IT & ITES Exports shows that the growth in exports has touched a five-year low in fiscal year 2017, this can be attributed to the growing uncertainties in international market and Indian outsourcing companies being out of sync with changing environment and needs of clients. BPO industry exports are growing at less than half the pace than they were growing five years back.

IT and ITES Contribution to Exports					
Year	IT and ITES Exports (Rs Billion)	Total Service Exports (Rs Billion)	Total Goods and Services Exports (Rs Billion)	IT and ITES Exports as a % of Service Exports	IT and ITES Exports as a % of Total Exports
2011-12	2484.30	5991.50	17393.81	41.46%	14.28%
2012-13	3405.20	5766.62	17663.23	59.05%	19.28%
2013-14	4322.80	9171.82	28482.55	47.13%	15.18%
2014-15	5014.00	9508.40	28859.04	52.73%	17.37%
2015-16	5763.10	10104.46	27537.34	57.04%	20.93%
2016-17	6510.00	10941.75	29731.18	59.50%	21.90%
Source :- RBI Published Balance of Payment Data in India as per BPM6 and Inputs					

The export growth rate in constant currency (US \$) is at a five-year low of ~10% as compared to ~20% in 2013. The trend for export growth rate has also been declining since it registered a growth of 20% in 2013 and is expected to fall further to 7-8% as expected by industry body Nasscom in FY 2018. This can be partly attributed to the fact that clients are no more interested in just having Software or an IT backbone BPO they are looking for companies that can provide them with solution oriented processes. The growth rate has suddenly been expected to reduce in 2017-18 by almost 200 basis points due to difficulties faced by companies in renewing long term contracts, policy uncertainty relating to H1B visas has increased the overall uncertainty of doing business in US and any policy change against the current visa law is likely to increase the cost of

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operating in US which will likely lead to increase in contract prices and eventually the industry might lose out its current competitiveness.



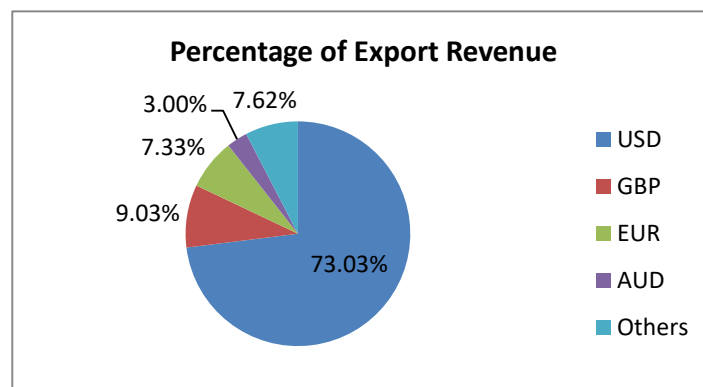
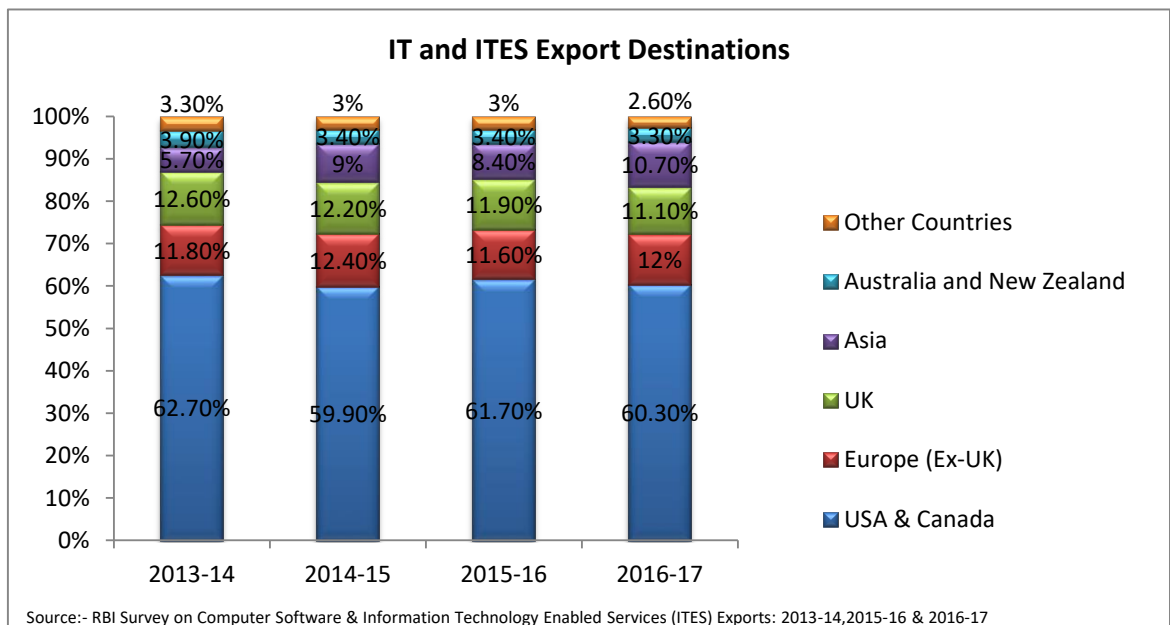
In addition, the trend of reverse globalization as seen by Brexit and rise of right wing parties in Europe might also hurt the software companies, for example Infosys one of the largest players in ITES sector lost Royal Bank of Scotland (RBS) as a key client immediately post Brexit. This was because RBS divested its consumer banking unit Williams and Glyn, a client of Infosys, and dropped the plan of separating listing the consumer banking arm as a separate bank. This project alone generated \$150 million to \$200 Millions of revenue about 2% of the entire revenue for Infosys. In addition to US there are many countries like Singapore, Australia and UK that have made changes to visa policy thereby curbing free movement of labor across globe and having an inward looking policy towards international workers. Australia has scrapped 457 visa program which was used extensively for transfer of skilled foreign workers in April, 2017, thereby affecting 95,000 Indians (a sizeable portion being IT workers) holding Visa under that program making it difficult for them to stay in future. Singapore on the other hand has almost withheld 200 work permit application since a year affecting people wanting to go and work there. The UK has significantly increased cost of Visas being used by Indian IT professionals. Thus, the inward looking policy is impacting the outsourcing industry in India indirectly and there are signs direct impacts on the sector are likely.

An important finding that points out to the fact that the export growth in total goods and services and in exports of services is mostly due to IT and ITES exports growth. Based on statistics correlation between outsourcing exports and service exports is 0.94 meaning they are highly

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correlate, further t that r-squared points out to the fact that about ~89% of the increase or movement in service exports is justifiable by movement or increase in outsourcing exports.

Impact of ITES exports on Total Exports		
	IT and ITES with Service Exports	IT and ITES Exports With Total Exports
Correlation	0.94	0.87
R-Squared	88.96%	75.18%



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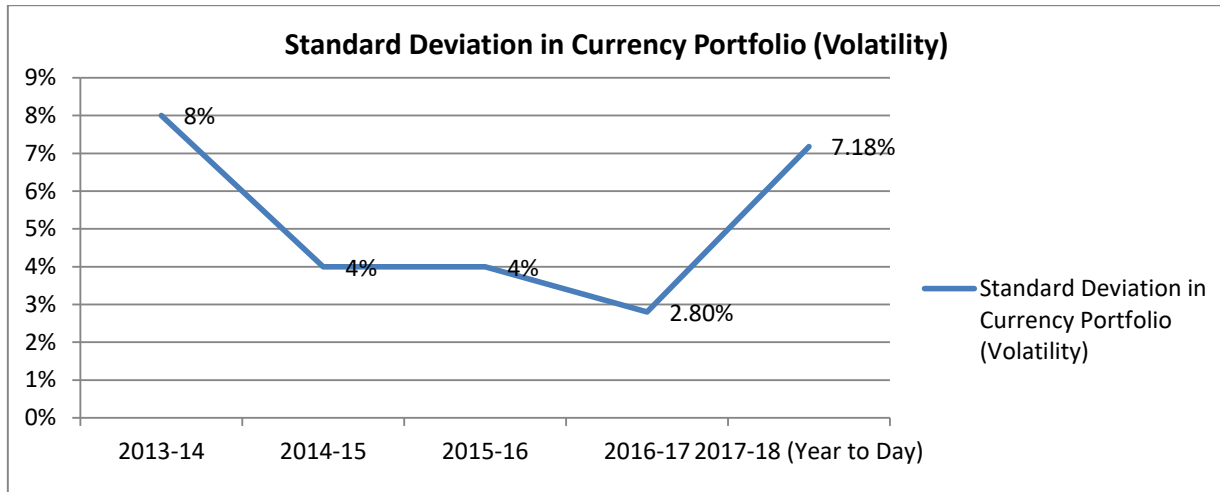
The scenario is not much different when we compare outsourcing exports with total exports the correlation is 0.87 which is quite high pointing towards the fact that total exports and outsourcing exports move hand in hand most of the years. Over and above of that ~75% of the movement or increase in total exports is justifiable by change or increase in outsourcing exports. The analysis thus shows the importance of outsourcing sector in total exports and how badly the impact can be on Indian exports in the forthcoming years due to the uncertainty that the sector is facing and is likely to face due to the inward looking economic policies by nations.

Lack of diversity in Destination of Exports

We do not see a significant change in the destination of outsourcing exports from India over the period of last few years. More than 60% of the exports are to the US followed by Europe with 12% and then by United Kingdom by 11%. The trend hasn't changed much in the past five years. The destinations targeted by outsourcing sector are thus not diversified and are overly dependent on one nation i.e. US.

The risks also seem to be more if look into the currency composition of the invoicing done by these companies. The most used currency for receiving payments or making invoices for these companies is USD followed by GBP and then EURO. US Dollars constitute almost 73% of foreign exchange revenue for these companies implying they face with a large risk associated with movement in USD or for that matter in any currency they receive payments in. The companies are likely to hedge their exposure in currency market by using forward contracts with banks or financial institutions. The cost of hedging depends and

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varies based on contracts done by individual companies with their counterparts but the cost is likely to be affected by a few factors i.e., duration of the forward contract, volatility in the currency markets, interest rate differentials between countries etc. In India the best gauge to measure hedging cost is the Mumbai Interbank Offered rate (MIFOR) which has been on the rise since the mid of 2017. MIFOR hasn't budged from its levels and has remained around 6.0-6.5% as per Bloomberg Data (Source: <http://www.livemint.com>). This makes the cost of hedging also high for the companies and they have to grapple with the volatility in currency markets and bear Forex losses.

The Chart above shows that the currency volatility has risen in the year 2017-18 and was only so high in the year 2013-14. The volatility analysis is done using a model that captures the movement of multiple currencies that IT and ITES industry exports to and also offsets volatility between cross currency pairs and gives out the volatility depending upon the weights of each currency in the exports of India. Two high data points in the chart are in the year 2013-14, that can be justified as taper tantrum took place the same year, the second-high volatility period we see is in the current ongoing period. The volatility in the current period along with the high hedging cost as measured by MIFOR indicates that outsourcing industry has to grapple with high volatility while converting their Forex revenue into the domestic currency. Higher the volatility higher is the risk that the companies face while converting their foreign currency to Indian rupees.

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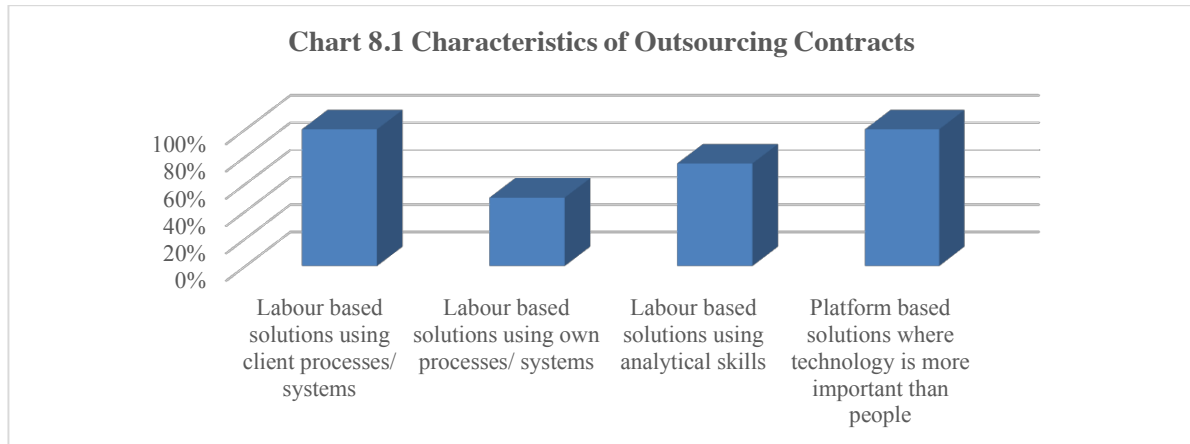
The IT and ITES sector is thus important part of the Indian economy and has key roles as far as exports from the nation are concerned. All the data presented points to the fact that uncertainties due to inward looking policies relating to movement of free labour by a few countries has hampered the sector and is likely to hamper the sector more going forward. Any hit on the outsourcing sector is likely to thus hit its contribution to Indian Exports and by that means Indian GDP.

PRIMARY RESEARCH

Primary Data was collection through Personal Interviews (Please refer to the Appendix 1) from Mid - Top Level Management of various companies in the Outsourcing Sector in India. These companies primarily cater to the Banking and Finance, Healthcare/ Pharma and Telecom Sector. Mohapatra (2013) suggests that in recent years, the banking sector, because of digitization of processes and high reliance on IT are attracted towards the value opportunities offered by outsourcing. He further states that banks are increasingly going for outsourcing of their business functions for cost savings as well as for strategic benefits.

Additionally, the outsourcing companies interviewed, support organizations in activities such as Client Servicing and Data Processing (such as Mortgage Processing, Insurance Claims Processing etc.) This indicates that most of the work being done in this sector is low value projects and India has still not capitalized on the high value analytical services. The managers of the outsourcing companies also highlighted that in order to provide these services to their clients they depend on platform based technological solutions as well as processes/systems shared by the client. However, in certain organizations outsourcing contracts also require analytical skills of the employees (Chart 8.1). According to Mr. Pawar, ex-chairman of NASSCOM suggests that transformation in the industry is in areas such as hyper-specialization where clients are seeking service providers who specialize in their field and can provide customized solutions. For instance, insurance companies prefer to work with companies who have gained knowledge and expertise in insurance related business processes.

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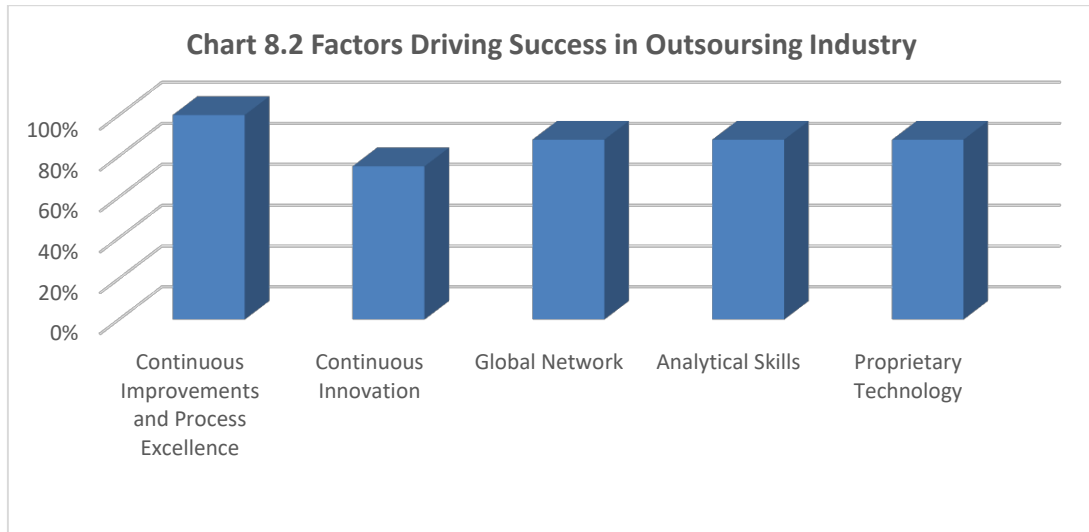
Source: Primary Research

The primary research indicates the clients of these outsourcing companies were based out of the US and UK market thus indicating that the outsourcing sector in India is over dependent on these markets for their business. Hence, any volatility in these markets has a huge impact on the businesses of the outsourcing companies in India.

Similarly, according to Mr. Som Mittal, the last head of NASSCOM, “The U.S. customer base is large and will continue to grow. It currently accounts for 61 percent of our work and I don't see it shrinking to less than half. But there is a major shift happening as other geographies that had underinvested come to the table. India will be moving more aggressively into other industries that are not so dependent on U.S. corporate spending. We're doing more and more work in Europe. We're seeing a lot of traction in Latin America. We've seen Japanese companies who had been resisting offshore outsourcing starting to embrace it.” (Source: CIO, Jan 2014)

The primary research suggests that factors such as continuous process improvement, analytical skills, proprietary technology, global network and relations and innovation are key drivers of success in this industry (Chart 8.2). Additionally, India's competitive advantage lies in its cost advantage versus the other nations and talented employees with high analytical capability.

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Source: Primary Research

According to Mr. Rajesh Subramaniam, MD and CEO of Firstsource Solutions Ltd (one of the early players in the industry), "India's edge in the industry was largely about the availability of cheaper labour since salaries were a fraction of those in the West and the cost advantage was a big draw for international clients. But now it is about value addition - which also helps fight challenges from other BPM countries. The quality of Indian employees also seems to be fighting protectionist moves in bigger markets. And automation is seen as just removing the duller and more routine parts of the jobs as the job description itself becomes more challenging. But attrition levels in the industry remain high". (FE Online September 8, 2017)

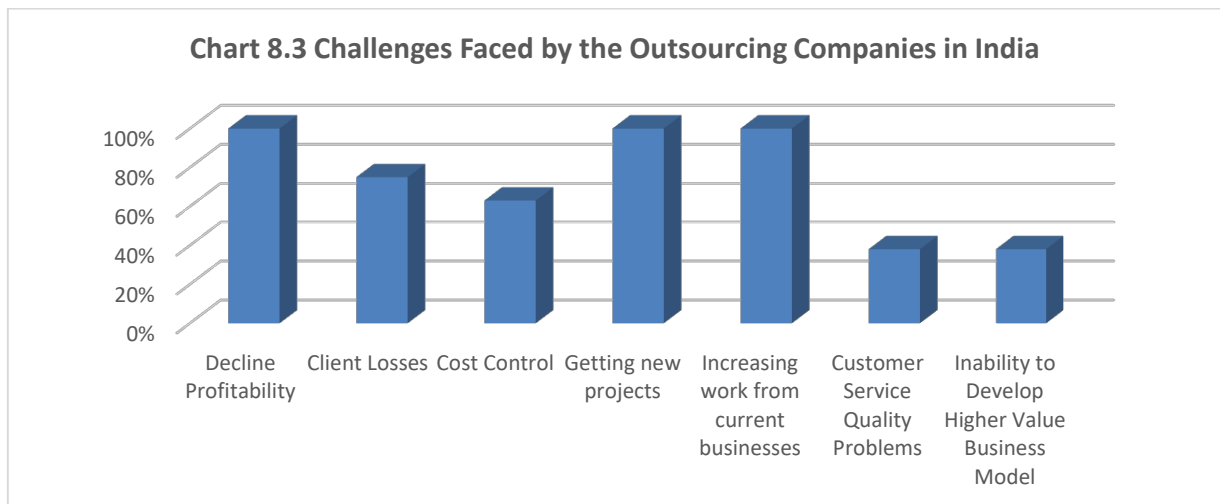
His insights are supported by the primary research where the managers were of the opinion that the Indian companies' inability to provide comprehensive end to end solutions to their clients has slowdown of the growth of the outsourcing sector in India. The situation has worsened on account of high level of automation, emergence of captive centers, high employee attrition along with international factors (such as slowdown of economies, anti-globalization measures, VISA restrictions among others).

Mr. Rajesh Subramaniam says, "The level of attrition is high due to stress because you are as good as the last transaction you have done. And you know you work in the time zone your customer is in. So you know if it is a US shift, you could be doing things from 6 pm to 6 am or 9

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am if it is a UK shift, it starts at about 2 pm, so there is a level of stress that sets in. For example, at a level where people have a direct interaction with the clients, attrition rate could be high as 3 to 4% a month, but as you go higher in the supervisory role, the attrition level falls significantly." (FE Online September 8, 2017)

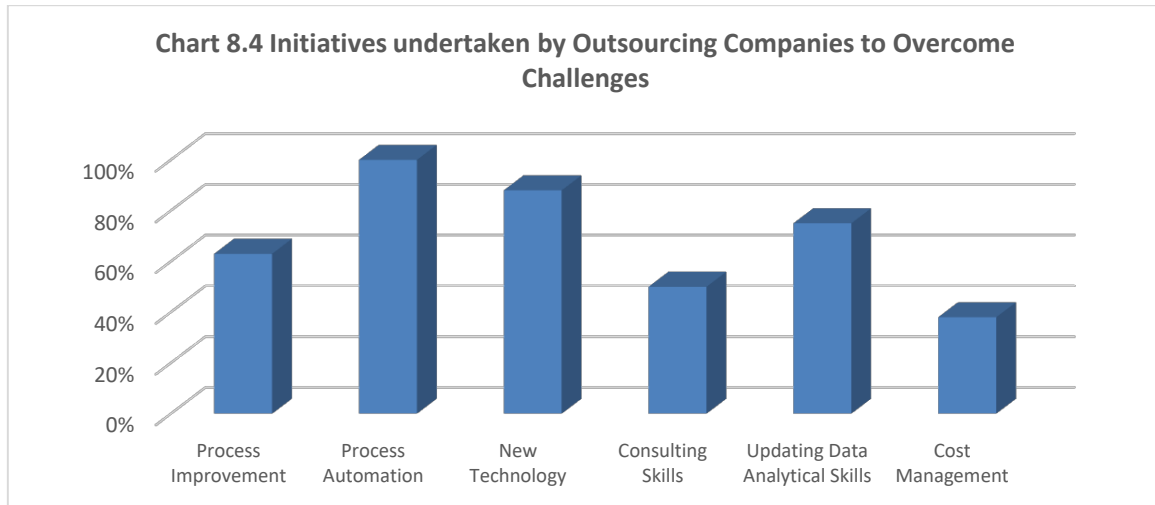
As a result, the companies in the outsourcing sector in India have lost a number of clients. Additionally, they are facing difficulty in getting more work from the existing businesses along with new projects. As a result, the profitability of these organizations have been badly damaged. (Chart 8.3)



Source: Primary Research

Findings from the primary research suggests that in order to overcome the challenges, companies in the outsourcing sector in India should now focus on measures such as process automation, technology development and updating the analytical skills. Additionally, these companies are also developing domain knowledge to be capable of providing end to end solutions to the clients (Chart 8.4).

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Source: Primary Research

These findings are in line with what Mr. Vishal Sikka has highlighted. He says, “We will not survive if we remain in the constricted space of doing as we are told, depending solely on cost-arbitrage, and working as reactive problem-solvers.” Infosys has cut its growth forecast twice last year as it seeks to expand its use of non-linear initiatives such as software platforms such as its artificial intelligence platform Mana, to reignite growth. (Indian Express 25th June 2017).

Similarly, according to Mr. Vivek Wadhwa, distinguished fellow at Carnegie Mellon University's College of Engineering, "Indian outsourcers need to be very concerned. In addition to them being out of sync with the changing markets, they are now facing a protectionist and populist government in America, "They have to shift from an old way of doing business (a focus on outsourced, cost-based software services) to evolving first to provide software platforms (like Infosys' Mana); and updating capabilities to cater to shifting customer demands to be more of a business partner and less of an IT provider. This would involve Indian outsourcers learning to work with marketing chiefs (who often control more of the IT budget than CIOs and CTOs), and speaking their language. (business outcomes over tech jargon), to stay competitive. (Business Today January 2, 2018).

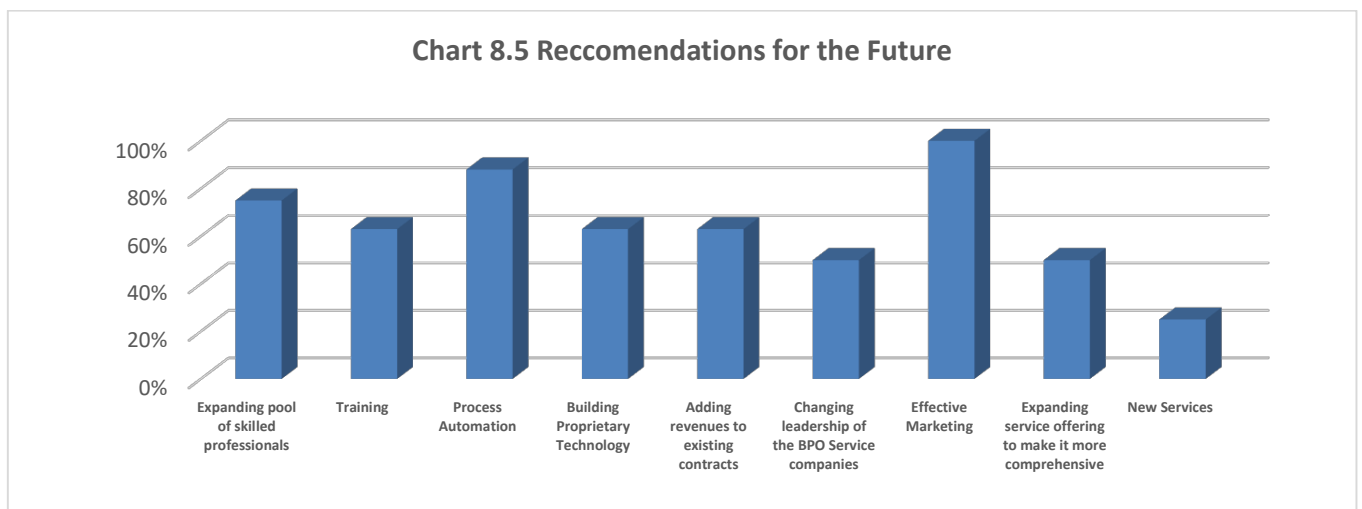
Finally, the findings of the primary research also indicate that moving forward the contracts in the outsourcing sector are more likely to be flexible in nature and those where the client and the

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service provider will share the gains. Hence, indicating that in the future the outsourcing companies are going to be seen more as partners rather than service providers.

Similarly, Mr. Rajesh Subramaniam, MD and CEO of Firstsource Solutions Ltd told NDTV, "Today, the industry is a partner to your customer and we are no more seen as vendors. We are no more seen as outsource agencies, we are seen as partners because the impact we make to their customer franchise is significantly high."

Moving forward the companies in the outsourcing sector need to focus on bringing highly skilled people in the organization and invest in training them to increase productivity and efficiency. Additionally, the organizations need to focus on process automation in order to capitalize on the opportunities in the future. Finally, the companies in the outsourcing sector need to carry out effective marketing strategies in order to add more revenues from existing businesses as well as win new projects (Chart 8.5).



Source: Primary Research

CONCLUSION

The outsourcing industry is headed for challenging times. The expectation of customers has changed and companies are trying to keep pace with this shift. Some of the strategies to deal with these challenges could be:

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De-Risking, not to put all Eggs in one basket: We have seen that the Indian sector has been overly dependent on one Country i.e. US for business and any adverse economic policy in that country is likely to impact the sector badly. There are uncertainties surrounding H1B visa policy and any adverse outcome can hit the sector badly, hence it becomes the sector diversifies into other countries for business. Many US companies are also pulling out of their operations in other countries due to the fears of tax repatriations policy that the newly elected President may enact. This by default cancels contracts of Indian Vendors that were serving operation of a US Company in other locations. Therefore, it is in the best interest for the companies operating in the IT and ITES sector to move out and diversify business in other locations. One of the locations could be the African part of the globe and also the Middle Eastern part of Asia (mainly Saudi Arabia, Dubai, Turkey) etc. The sector is also not as exposed in the European region as it is in the United States, it could explore opportunities in that region.

Moving back to the Offshore Model: Many companies have opened their offices outside India especially in countries where their clients are located and send Indian techies there so as to save on employee cost rather than paying higher wages to local techies. This poses a big risk as any change relating to migrating labour or any visa policy can lead to a dislocation of many Indians techies. To offset this, companies should start again serving the clients as they did before by having offices in India. With advent of technology and ease of communication it is no more difficult operating in India and serving clients in other locations. In addition to being safe from any adverse policy in other country this strategy also helps the company reduce the burden of complying to foreign country laws, taxation policy etc. With cloud computing, high speed internet at a cost effective rate, data sharing and automation the companies can easily provide outsourcing services sitting in India.

Talent development and growth in tertiary cities: New initiatives is to be taken to deal with issues like talent development and growth in tertiary cities NASSCOM has launched a digital literacy initiative with the goal of making sure that one person in every household where fiber reaches will be digitally literate. Also IT Sector Skills Council has been formed to make sure graduates coming out of colleges are more industry-ready. This council offer short programs post-college to provide them with some specialization -- for example in software development, infrastructure management, or embedded systems-rather than just a generic skill set.

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Today India has seven large cities where 90 percent of the work happens. Having those hubs was important for customers who wanted to visit and need to be in a city with international flights. But the customers are more experienced now and they do not insist on a specific location anymore. With emergence of tier two and three towns by 2020, 40 percent of work will happen at new centers, for example in Jaipur Coimbatore, Nagpur, etc. Tier II cities offer lower business process overhead compared to Tier I cities, but have a less reliable infrastructure system. The Government in partnership with private infrastructure corporations is working on providing robust infrastructure all over the nation. Another problem is that, while we have enough entry-level resources in the smaller cities, India will have to have to move middle managers there.

Innovation and End to End Solution Provider: A report by US-based research firm HfS Research says around 7 lakh low skilled workers in IT/BPO industry in India are expected to lose their jobs due to automation and artificial intelligence by 2022. However, the report also predicts a significant rise in medium and high skilled jobs in India by 2022. (Source: FE Online, September 8, 2017) In order to survive this trend India will have to improve its skills, or shift to other lucrative sectors, if its skill set doesn't conform to medium or high skill criteria demanded by IT/BPO sector. According to Rohit Kapoor of ExlService Holdings Inc, the 'job loss scenario' that's being painted is not that grim yet as many Indian BPO companies are offering services such as analytics in addition to the low skilled work. Also, not all experiments with automation have seen 100 per cent success. He also added that in the past, BPM companies were given work to manage processes like enrolment, claims, and mortgage. Now, because of the automation, clients are outsourcing end-to-end operations. (Source: Business Today, January 2, 2018)

As companies embrace new development methodologies and infrastructure choices, many standalone IT service areas no longer make sense. "In the past, companies may have sourced app services from one provider and secured cloud services from another," says Ollie O'Donoghue, senior research analyst with HfS Research. "Now, thanks to new methodologies like devops and the increased 'cloudification' of business infrastructure, the lines between distinct IT services are blurring. Service providers and clients are far more likely to procure a blend of IT services to deliver business outcomes from a single vendor [rather than] contracting segments of IT out to a range of suppliers." (Source: FE Online, September 8, 2017) Digital transformation is driving

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demand away from compartmentalization and silos of service delivery and toward frictionless integration. End to end solution provider is the way forward for this sector.

BPO industry is 25-years-old. It has matured a lot. Cheaper, better, faster is now a given. Customers are looking beyond costs. Technology has become consumerized, whether we are talking about social media, cloud computing, analytics, or mobility. All of these are now getting integrated into IT services. The change in India's BPO industry is reflected in the name change from business process outsourcing to business process management. The basic interaction with customer is still there. But the bulk of the service provided is at a much higher level and it is this value-add which is needed to keep India at the top - globally - in this industry.

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APPENDIX 1: QUESTIONNAIRE

1. Which industries does your organization service to?
2. Your Clients belong to which of the following markets?
3. Which Outsourcing Service does your organization provide?
4. How would you describe the characteristics of the Outsourcing Contracts?
5. What according to you are the main reasons for the growth of the Outsourcing Industry in India?
6. What capabilities are important that drive successful in this Industry?
7. Over the years have you seen a slowdown in the sector? If yes, what according to you have been the major contributors to this slowdown?
8. What has been the result of this slowdown on your organization?
9. (a) Which are the major challenges that your organization is currently facing?
(b) What are these factors due to which the challenges have emerged?
10. (a) What initiatives has the organization undertaken that has helped to overcome these challenges and achieve the organization's goals?
(b) Could you provide some details regarding the initiative undertaken and the impact of the same:
11. Moving forward do you anticipate a change in the kind of Outsourcing Contracts India will receive as compared to the present? If yes, how will they be different from the present contracts?
12. In which areas should an Outsourcing partner invest in order to be ready for the contracts of the future?
13. Moving forward what are the things that the Outsourcing Sector should stop doing in order to be more successful in the market? Any why?

DISCLAIMER

The content and analyses presented in this paper are a reflection of the personal views of the authors and in no way are associated with the organizations they work for.

**MICRO INSURANCE IN INDIA: AN ANALYSIS OF THE PERCEPTIONS,
PROBLEMS AND OPPORTUNITIES**

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ABSTRACT

India is a country with a population of 1.2 billion. It is estimated that 37% of the total population live below poverty line (BPL). Social security for BPL people is a matter of concern for the nation. To answer the question, why should the poor insure? We should have answer for the questions like, what happens when a poor family's breadwinner dies, when a child in a disadvantaged household is hospitalized, or the home of a vulnerable family is destroyed by fire or natural disaster? Every serious illness, every accident and every natural disaster threatens the very existence of poor people and usually leads to deeper poverty. *That's where "microinsurance" comes in.*

To cope with the risks such as health problems, crop failure, loss of livestock, death of a family member, loss of asset, income and employment is much harder on the part of poor and low- income groups than others. Many poor households involve in activities of smaller scale but carrying higher degree of risk and uncertainty. The objective of the present study is to examine different risks faced by the poor and low-income groups, their current coping mechanisms. The objective of the present study is to examine the perceptions about micro insurance, opportunities of micro insurance, challenges and factors determining the micro insurance demand. The study identifies the different risks faced by the poor and low-income groups, their current coping mechanisms.

The study attempts to indicate that access to microinsurance by the poor and disadvantaged population can contribute significantly to the achievement of the development goals of the country, particularly the goals of eradicating extreme poverty and hunger, promoting gender equality and empowering women.

KEY WORDS: Micro Insurance, risks, problems, poverty, outreach, gender specific demand

INTRODUCTION

India is a country with a population of 1.2 billion. It is estimated that 37% of the total population live below poverty line (BPL). Social security for BPL people is a matter of concern for the nation. To answer the question, why should the poor insure? We should have answer for the questions like, what happens when a poor family's breadwinner dies, when a child in a disadvantaged household is hospitalized, or the home of a vulnerable family is destroyed by fire or natural disaster? Every serious illness, every accident and every natural disaster threatens the very existence of poor people and usually leads to deeper poverty. *That's where "microinsurance" comes in.*

To cope with the risks such as health problems, crop failure, loss of livestock, death of a family member, loss of asset, income and employment is much harder on the part of poor and low- income groups than others. Many poor households involve in activities of smaller scale but carrying higher degree of risk and uncertainty. Poor farmers borrow money from private lenders who squeeze more interest than the principal amount of the loan. Illiteracy and non-availability of banking facilities, lack of structured insurance schemes or timely advice—leave the poor people helpless and they face the fury of nature. Micro insurance is a solution for addressing these problems. The efficacy and uptake of any microinsurance product depends upon the extent to which it is synced to the needs of its target group.

THEORITICAL FRAMEWORK

Microinsurance:

Microinsurance, commonly called as insurance for the poor, has recently drawn the attention of practitioners in developing countries. Microinsurance represents a financial instrument designed to protect the poor against risks, by using community-based mechanisms that are characteristic of developing countries. By offering a pay-out in critical situations, microinsurance has the potential to avoid costly ways of coping with losses.

Microinsurance is defined by Churchill (2006) as the insurance that (i) operates by risk-pooling (ii) financed through regular premiums and (iii) tailored to the poor who would otherwise not be able to take out insurance.

Micro insurance provides security to the low-income group or poor people. It is a kind of a financial service package for poor people that covers their risks by paying a small amount of premium on regular basis. Most of the people in villages do not have a regular source of income. This could be due to illiteracy or use of traditional methods of farming.

Life and assets of the insured / poor people need to be covered from risks arising out of natural calamities. The assets to be covered include food grains, crops, cattle, carts and associated accessories, loans availed from banks, etc.

There are two broad categories of microinsurance often commonly understood – one focused on extending social protection to the poor in the absence of appropriate government schemes and the other offering a vital financial service to low-income households by developing an appropriate business model that enables the poor to be a profitable.

History of Microinsurance In India

India is enjoying rapid growth and benefits from a young population. Its middle class is growing rapidly but 70 percent of the population is still rural, often very poor, and handicapped by poor health and health services, and low literacy rates.

The insurance industry in India, private and public, has its roots in the 19th century.

The non-governmental organizations (NGO) initiated a few micro-insurance schemes in India as they felt the need in the communities in they were involved. These schemes have now gathered momentum because of the development of micro-finance activity and also because of the regulation. The regulatory authority made it mandatory for all formal insurance companies to extend their activities to rural and well-identified social sector in the country (IRDA 2000). The schemes are still very limited, their potential is viewed to be considerable. The micro insurance regulation of 2005 was a pioneering approach by the Insurance Regulatory Development Authority (IRDA). India is among the few countries to draft and implement specific microinsurance regulations. In 2002 IRDA developed rural and social sector obligation norms that mandated every insurance company to achieve:

- Percentage of policies to be sold in rural areas; and
- Number of lives to be covered in the social sector.

A consultative group on Microinsurance was set up in 2003 to look into the issues which highlighted the:

- Non-viability of standalone microinsurance programme
- Apathy of insurance companies towards microinsurance
- The potential of alternative channels.

For a country like India, risk management among low income population, especially for rural households and women, can contribute to economic and social inclusion. It can help in convergence between income generation and protection.

The present study aims to study the perceptions of people regarding the micro insurance products in India. It also examines the opportunities and challenges of micro insurance.

REVIEW OF LITERATURE

The following is the summarized findings and issues from some important studies and reports on microinsurance in general and in India with focus on household risks and risk managing strategy, outreach of microinsurance products, major policy regulation and constraints. It helps us to develop a framework for analysis of the present study which is presented in subsequent chapters. Literature available in evaluating the impact of insurance in low-income countries is limited. There is also unbalance between different types of insurance products. Overall, the emphasis is concentrated on different health insurance schemes, and their impact on health care utilization, out-of-pockets expenditure or social inclusion. Very few studies evaluate the impact of insurance on household income, nutrition, or other dimensions of welfare than those directly related to the insurance. Study on other insurance products are also limited and hindered by the lack of systematic baseline data on individual beneficiaries and groups.

Prathma Rajan (2011) gave a detailed understanding of the RSBY (Rastriya Swastya Bhima Yojana) scheme by conducting several rounds of interviews with both FINO and ICICI Lombard. Intense primary and secondary research was involved during the process to ensure unbiased analysis.

Oscar Joseph Akotey, Kofi A. Osei, Albert Gemegah, (2011) investigated using the probit model indicates that premium flexibility, income level and nodal agency are significant determinants of micro-insurance demand. Insurance knowledge, expectation (trust) and marital status were also found to have positive and significant impact on the demand for micro insurance. The analysis showed that formal education is not a significant determinant; rather one's level of insurance knowledge has a positive and significant impact on micro-insurance demand.

Stefan Hochrainer, Reinhard Mechler, Daniel Kull, (2010) found that micro-insurance instruments may help low-income farming households better manage drought risk by smoothing livelihoods and reducing debt, thus avoiding poverty traps. Yet many obstacles to optimal design, viability and affordability of these schemes, are encountered. One of those is climate change and the authors find that changing drought risk under climate change would pose a threat to the viability of micro-insurance, as well as the livelihoods of people requesting such contracts

Cohen and Sebstad (2006) highlighted the need to carefully study of clients 'insurance needs before introducing a new product, where market research can include studying (i) clients' needs, (ii) specific products, or (iii) the size of the potential market. Analyzing insurance demand from Uganda, Malawi, Philippines, Vietnam, Indonesia, Lao P.D.R., Georgia, Ukraine and Bolivia they found that the most prevalent risks relate to health and loss of wage earners. In a recent study by Ito and Kono (2010) on health microinsurance in Karnataka, India found that take-up rates of microinsurance have been low despite its perceived need and the enthusiasm of microfinance practitioners. They found some evidence that people behave in a risk-loving way when facing the risk of losses.

However, despite these patterns, households' priorities regarding demand for insuring risks are nevertheless context specific. More research is essential to understand and identify the means for increasing insurance take-up rates and decreasing dropout rates. A general understanding about attributes of microinsurance products from a client perspective is awareness, easy to understand, simple, affordable, valuable and trust. These factors are determinants of uptake and therefore, determine the impact of microinsurance at household level.

In case of weather insurance, some recently studies have attempted to assess its impacts on household incomes and also on risk-taking behaviour (Gine et al., 2007a; 2007b; Gine and Yang, 2007). The findings do not show substantial impacts; for example, Gine and Yang (2007) undertake a study in Malawi and shows that those with insurance did not increase the uptake of risky technologies, one of the expected outcomes. In terms of the impact of new schemes on existing mechanisms, Jowett et al. (2003) found that social cohesion and informal financial networks are negatively associated with insurance uptake, suggesting that the former crowd out public voluntary health insurance. Dercon and Krishnan (2003) present evidence that suggests a crowding out effect of informal risk-sharing arrangements by food aid. On the other hand, Morduch (2006) argues towards a possible negative price effect of insurance during times of shocks when insured individuals drive up the price of goods, for example food products.

On the other hand, more educated households have been found to be more likely to take up insurance (Chankova et al., 2008; Gine et al., 2007b). It emphasizes on effort to improve communication and financial education on risk-pooling, insurance and rights of policyholders tailored to low-educated and illiterate individuals and simplify policies. Similarly, households with a sick household head are less likely to purchase insurance. This might capture the fact that households with a sick household head have less income flow and have difficulty in financing the insurance premium (Ito and Kono, 2010). Clients 'understanding of insurance products and ability and willingness to pay are key to take up of insurance.

As regard, to constraints of microinsurance products it could be region and group specific. Some common constraints already documented in literature are low take-up rates, high claim rates, low renewal rates, poor delivery channels, high transaction costs and poor insurance literacy. Another serious constraint to the uptake of insurance is trust on each other. The contrast of microinsurance with microcredit helps to see the difference between these two activities. Lenders have to trust borrowers; while insurers have to be trusted by clients. Radermacher et al. (2006) underline the importance of trust along these two dimensions: first, that the insurer is willing to make payments to clients; and second, that the insurer can deliver the payments. The demand, uptake and renewal of insurance clients also depend on the market conditions and constraints to insurance provision.

Willingness to pay for insurance is crucial in promoting enrolment by low-income households (Chankova, 2008). Paying premiums should be in line with households' cash flows (Cohen and Sebstad, 2006). Dror et al. (2007) study households' willingness to pay, analysing data on households in India find a higher level of nominal willingness to pay and household income and nominal willingness to pay are positively correlated, while household income and willingness to pay as a percentage of household income is negatively correlated. Size of the Household is the most important determinant of willingness to pay levels.

Relating to supply of microinsurance products some common findings are emerged from across studies. While different perspective of different stakeholders constitutes as a major supply constraint, availability of suitable distributive channel, pricing and regulation determine the overall supply of microinsurance products. Interestingly, most of the low segment insurance markets are supply driven. From the insurers' perspective, microinsurance opens a huge market, especially for the ones facing market saturation. Insurers aim to develop new business models that create mechanisms which cater to this low-income market who will be future high-income clients. Unfortunately, standardized insurance product may not respond to client needs.

As regard to the designing of microinsurance products, Brown and Churchill (2000a) argues for some criteria, (i) a large number of similar units exposed to risk, (ii) limited policyholder control over the insured event, (iii) the existence of insurable interest, (iv) losses can be identified and measured, (v) losses should not be catastrophic, (vi) chance of loss is calculable and (vii) Premiums are economically affordable.

Potential demand for insurance may get influenced by type and nature of risks and vulnerability. Leftley and Mapfumo (2006) highlight, the importance of demand side factors for developing a successful product depending on the operational and regulatory environment as well as risk carrier options. The risk coverage-premium tradeoff by providing a menu of choices and letting clients chose their desired coverage and corresponding premium has been developed (Dror, 2007). In Ethiopia, it was found that the risk inherent in a modern high-return input (fertiliser) caused lower than optimal uptake (Dercon and Christiaensen, 2007). Unable to insure agricultural risk, aversion to risk led to choices that suppressed expected returns. The UNDP (2007) study on India,

found that health insurance was perhaps in most demanded products but short in supply, because of operating such insurance schemes.

Managing moral hazard is another key constraint in microinsurance sector. Households with a higher ratio of sick members are more likely to purchase insurance (Ito and Kono 2010), showing some evidence of presence of moral hazard. To manage moral hazard and adverse selection problems composite insurance products is recommended by Cohen and McGuinness (McCord 2008). But Roth and Chamberlain (2006), warn that in practice the potential benefit of bundled microinsurance in terms of lower premium is hardly passed on to its clients.

As regard, to delivery channel of microinsurance using intermediaries such as NGOs and MFIs is common, particularly in rural areas. However, within institutional models and delivery channels there are four major delivery models such as (1) partner-agent model, (2) community-based model, (3) full-service model, and (4) public insurance provider model. Partner-agent model found referred in many cases (McCord 2006, Roth and Athreye, 2005).

OBJECTIVES OF THE STUDY

The objective of the present study is to examine the perceptions about micro insurance, opportunities of micro insurance, challenges and factors determining the micro insurance demand. The study identifies the different risks faced by the poor and low-income groups, their current coping mechanisms.

PERCEPTIONS OF MICRO INSURANCE

Private players' presence in micro insurance sector is negligible. Rural customers do not trust private players as much as they trust LIC of India. Agents instrumental in selling in rural areas feel that the products of insurance companies are not rural customer need based. They also feel that the companies are not evincing interest in rural areas.

The number of insurance agents for micro insurance policies is very less for private insurance companies compared to LIC of India.

Research shows that the negative perception of the value was one of the three most important determinants of renewal for the Swayam Shikshan Prayog (SSP) health scheme

in India. SSP observed that clients who had accessed discounted consultations and medicines which is offered as a value-added service were more likely to renew.

Micro insurance providers must increase the awareness level of the insurance products to the rural and poor consumers, evolve products acceptable in the market and promote rural agents to ensure trust among the customers. Satellite branches in rural areas can be opened to promote the insurance concept in rural market.

OPPORTUNITIES AND CHALLENGE OF MICRO INSURANCE

Creating a sustainable micro insurance scheme is challenging given the trade-off between three objectives:

- i. Focussing on the needs of low income people
- ii. Transaction costs and Operating costs for the insurer and
- iii. Affordability of the price and transaction costs for clients.

Opportunities of Micro Insurance:

- a. Uninsured can be insured under these small policies
- b. Delivered through many channels like MFIs, Credit Unions, Insurance Cos etc.,
- c. Technology an enabler. Eg: Mobile phones for insuring people, RFID used in insuring cattle(IFFCO)
- d. Covers variety of risks

Microinsurance does not refer to the scope of risk perceived by the clients. The risks are not micro to the ones experiencing them. It could cover a variety of risks like illness, death, property loss and many other.

Another important aspect of micro insurance is that it can be delivered through many channels. The community based schemes, Credit Unions, Micro finance institutions and also multinational insurance companies. Allianz, one of the largest insurance company, has recently launched an initiation with United Nations Development Programme (UNDP) to provide insurance to poor in India and Indonesia.

Technology promises to be an important enabler for microinsurance distribution, especially through mobile phones. The majority of microinsurance clients live in rural

areas, making it difficult for insurance suppliers to use traditional methods of distribution to reach them. Mobile phones make it far more cost effective to reach far larger numbers of customers. For example, IFFCO-Tokio has introduced radio frequency identification devices (RFID) instead of the traditional ear tags for cattle and buffalo insurance coverage. The use of this technology enables viability while simplifying the claims process for the policyholders.

CARE India, for example, works with Bajaj Allianz to provide comprehensive, affordable insurance policies to over 300,000 people in the state of Tamil Nadu, India. Unlike other microinsurance products sold to poor communities in India, and around the world, Bajaj Allianz – and CARE are offering bespoke, rather than off-the-shelf products, to this vulnerable group of people and the communities themselves are involved in designing the new policies. These policies include a wide variety of cover from death to paying wages during illness.

Challenges of Micro Insurance:

Challenges at different levels (clients, providers, regulators, environment) limit the expansion of micro insurance. The following are some of the challenges at all the above said levels:

- a. Lack of client education
- b. Lack of insurance culture
- c. Ineffective business models and delivery channels
- d. Absence of need based products
- e. Unsupportive regulation
- f. Unstable financial markets
- g. Resilience to instruments
- h. Insufficient funds at the time of enrolment / liquidity constraint
- i. Barriers to action
- j. Opting out option
- k. Non-availability of the data for actuary to design appropriate policy
- l. Distribution challenge of micro insurance
- m. Lack of understanding of micro insurance concepts

It is observed that the demand for micro insurance products is low because people can't afford. The liquidity constraints are one of the biggest determinants of demand. It is not because the poor do not have money but because they have insufficient funds at the time of enrolment or purchase of policy.

By scheduling premium payments when money is readily available insurers can mitigate liquidity constraints, for instance after a harvest. Researchers evaluated the effect of deferred premium payments in a pig insurance scheme in China. They offered credit vouchers that allowed farmers to take up insurance while delaying the premium payment until the end of the insured period, coinciding with when pigs are sold.

Barriers to action greatly influences demand the demand for micro insurance products. Even people who are convinced about insurance do not buy it because of a failure to convert intentions into action. Researchers in Nicaragua found when they allowed market vendors to enrol directly at their market stall rather than the insurer's office, uptake was 30 percentage points higher.

A study in China shows that the renewals were higher when clients had to opt-out, rather than stay-in insurance. The option of opting out must be clearly communicated to clients as an undesired renewal can easily lead to distrust in the scheme. Swiss Re and its development partners are spearheading two ground breaking new initiatives in Haiti and Senegal that show how even the world's poorest communities can benefit from insurance protection and get back on their feet in times of hardship.

Harnessing technology shows promise in tackling the distribution challenge of insurance. Mobile phones make it far more cost effective to reach far larger numbers of customers. For example, Tigo and MicroEnsure have partnered so that Tigo offers free insurance to its clients for one year as a loyalty gift. After the first year, clients can extend their insurance coverage by paying an additional fee through their mobile phones. This approach allows clients to become familiar with insurance before committing to pay.

Low demand of microinsurance is often attributed to a lack of understanding of microinsurance concepts and products. Poor understanding, however, is only part of the problem. Many other factors influence a household's decision to buy microinsurance.

Factors determining microinsurance demand

Determinant	Effect on Sale
Trust	High
Liquidity Constraint	High
Value -Proposition (actual and perceived)	Medium- High
Behavioural incentives and constraints	Medium- High
Access to other coping mechanisms	Medium
Insurance awareness, knowledge and skills	Low- Medium
Personal characteristics	Low

Source: <http://www.cgap.org>

Lastly it is also important to understand that the insurance systems can only be built based on "actuary", on verifiable risk-related data integrated into a risk-analysis system. When a person is not registered, and his/her address and activities are not available, how can a sustainable and valuable insurance be built?

The following issues cannot be addressed by microinsurance alone. They need long term interventions. Yet, microinsurance as one risk management tool can impact on improving the situation:

- Maternity;
- Social status of women. Higher priority given to males in the provision of food and care adversely affects the nutrition and health conditions of women and girls;
- Unequal inheritance laws, insufficient property rights for women, little control over assets;
- Situation of women after divorce and at widowhood adversely affecting their economic situation (e.g., returning home, leaving all assets with the ex

-husband's family) and their social status (e.g., often little mobility for earning money);

- Low education combined with high presence of women working in the informal economy causing little or no social protection and less access to secure and skilled jobs;
- Girls taken out of school in periods of crisis, leading to low education, which affects future professional opportunities and earnings.

CONCLUSION

Microinsurance is an important instrument that ensures and increases social protection for the poor and destitute.

Microinsurance is no longer about merely pushing out products. To create real impact, there is a need for work to develop inclusive markets that includes creating the appropriate enabling and protective policy and regulatory environment and developing the necessary supporting infrastructure and capacity to facilitate offering a wide range of affordable products and services to diverse client segments. It is a truth that the world's poor will not achieve lasting prosperity without access to insurance.

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**DYNAMIC FIRM-LEVEL RISK METHODOLOGY A STATISTICAL APPROACH
TOWARDS FOCUSING ON “DEGLOBALIZATION”**

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ABSTRACT

Globalization also bring additional complexities and risk dimensions to our investment. Unless a robust and sustainable risk definitions and profiling is not in place it will not serve any benefit rather make the management of information a more complicated and unresolved mystery. To reassure this philosophy the present empirical paper is aimed and the idea is to bring a new methodological dimension. What is Grey-box? It can be defined as a mixture of system dynamics modeling (white-box) and correlation-based (black-box) models.¹ Illiquid assets and the size-effect relationship are commonly understood with the notion that small-cap stocks remain illiquid because of poor information available about them in the market. The present paper demonstrates this illiquidity asset risks or illiquidity premium in form of the first difference of dynamic beta’s among stochastic volatility of relative prices using endogenous firm-level human capital (as proxy) factor models derived from two latent routes, i.e. market-information based (hereafter Model (CMP) and internal-accounting generated (hereafter Model (others) based. The paper critically examines that mispricing associated with small-cap companies support in long-term illiquid risk mitigation and can, therefore, provide useful alternative measurement-basis for the credit-rating framework.

KEYWORDS: EWMA volatility, Model (others), Model (CMP), Anchoring, long horizon risks

JEL: C22, C51, C52, G14, G24, G32

¹ See Barlas, Y. (1996). Formal aspects of model validity and validation in system dynamics. System dynamics review, 12(3), 183-210.

THEORETICAL CONSTRUCT/ INTRODUCTION

“Heuristics are unconscious routines people use to cope with complexity inherent in the most decision situations (Gilbert, 2002)

In reference to Tversky and Khaenman (1974) it is evident that an analyst initial information starting point (as proxy for factor specification for pricing assets) is reference-dependent, and such informative-historical signals (in case followed in the same way earlier) or non-informative historical signals (used individually by the analyst for the first time, “smart beta approach”) will influence the model, only when the first differences between the dynamic betas tend to convergence in the long term. If that happens, then, comparatively (in relation to traditional pricing models) mispricing reduces, and such “factors” based pricing models tend to become reference-points for the next set of long term investors in the factor-pricing frameworks.

To continue with the above proposition, the present paper will use the Average conditional volatility of human capital prices derived from market-based and internal-accounting based information/factors (the first difference of “dynamic” betas (see specifically equation 4). These first differences of dynamic betas will be termed as Illiquidity volatility premium .In case the initial factor selection in form of anchoring-bias which is reference-dependent as stated in the article by Comin and Mulani (2004,2009), reduce the mispricing, it will be reflected in the volatility profiles of the two models. In the present case, the author is biased towards model-others (ie. Human capital at firm-level is more impacted by internal financial information in comparison to market prices mainly in terms of long-horizon basis).

LITERATURE REVIEW

This study is first of its kind since using Empirical pricing model of human capital with internal financial information and stock prices separately were not used most often for generating illiquid volatility premium using dynamic betas. Generating conditional volatilities as a surrogate for “anchoring biases” by introducing differences in dynamic beta’s associated with conditional volatilities pricing models justifying mispricing corrections in the long horizon is the underline motive. The uses of “first differences of dynamic beta were associated with conditional volatility

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pricing model” make this study worth experimenting in its truest sense. To support the empirical gap some strands on recent work on anchoring bias and asset pricing models were explained.

Campbell, Raymond, LaBrosse, Mayes, Singh (2009) explained the extended role of Bank’s supervision in the wake of protective proactive arrangements to evade any financial crisis. But question relies on the “timing” when the intervention of authorities to tighten banking activities should start, traditionally, CAMEL approach etc. was adequate, but essentially, there are some more idiosyncratic issues which may emerge due to management or operating issues in the banking system. The paper talk about blanket guarantees but this can be a fiscal challenge in case moral hazard led banks to start extending sub-standard loans and disobey compliances in the long run (leading to often denoted moral hazard consequences).

Englich and Soder, (2009) talked about the impact of judge’s moods on the anchoring factors if they remain in good mood more inefficient in decision outcomes is seen, on the contrary, in the case of bad mood, they probe for more information resulting in better decision making. Hou and Xue and Zhang (2015) used q-factor models on the cross-sectional information set-up to ascertain the behavioral biases in the investment decisions.

Beaver, Kettler and Scholes (1970) described the joint-hypothesis between accounting and market-related information. It is claimed that for efficient markets, the extent of non-price (exogenous) information also contributed to efficient markets. The average beta associated with exogenous factors of large firms tend to be lower in comparison to small firms, under this consideration large firms outperform in terms of diversification.

Dougal, Engelberg, Parsons and Van Wesep (2015) described that there could be an impact of non-informative historical signals acting as initial information point or anchors, and it is also important that it may not be irrational. Dynamic settings of parameter estimation can be used to ascertain the long-memory effect of the new information absorbed.

Meub, Proege and Bizer (2013) explained through an experimental approach conducted with a meaningful hypothesis, where anchoring biases reduced the variances in forecasts. For this purpose, the model used a lagged regression with the autoregressive explanatory and explained factors attached and in case the anchoring brings the efficiency than under dynamic setup the beta’s (regression parameters) must return to 1 or converge towards perfect elasticity.

Hammad (2015) addresses that how anchoring biases as stylized facts are more relevant to describe the expected utility than expected prices. More the task complexity in terms of

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information starting point more will be the cognitive biases (overconfidence bias) of the agent decision attached to it. Tversky and Kahneman (1975) utilized representative heuristic and prior probability (as base rate frequency) for obtaining initial information point.

Weitzman (2007) clearly mentioned the reasons of inflated thick-tailedness due to initial subjective structural parameterization which asymbiotically adverse. The violation of rational expectation hypothesis can be improved if such hidden volatility premiums are used as surrogate structures during the learning phases in a dynamic structural model.

Hammad (2017) explained the impact of anchoring bias which can be reflected in terms of regression parameters as it should tend to be nearing 1. The paper also discussed the information starting points as anchoring biases which can be associated in explanation of various traditional asset-pricing puzzles. Tang, Wu, and Xu (2017) highlighted that the stock investor's preferences are mainly for losses, and as such, they invest in lottery-like investments. Warren (2014) postulates that the latitude of holding illiquid assets during long tenured investments coupled with a notion that during financial crisis it is usually found that illiquid and equity risks tend to correlate more strongly.

With reference to beta convergence, Todorov (2009) used high-frequency dynamic dependence of variance risks. The stochastic variance was divided into two parts-one is a continuous Gaussian function and another was non-Gaussian in nature. However, in this paper, since it is an illiquid asset volatility pricing the three volatility factors were the one-period lagged non-Gaussian (EWMA-Model CMP) volatility and (EWMA-Model Others) volatility and lastly, the one-period lagged (EWMA-Model Others). The volatility risk premium in the Todorov (2009) was named as “wedge” and the article interestingly touches upon the aspect of what drives the variance risk premium. Silva and Silva (2015) describe the process of “expectation stability” where the monthly initial subjective predictive learning model converges towards actual learning model. System 1 (i.e. non-informative historical signals) was utilized. Silva and Silva (2015) used the Pearson correlation to differentiate the anchoring effect while using subjective anchors by different experts. Instead, in the current paper, the use of correlation was employed across sample companies using dynamic beta approach. Gal, Mrva, and Mesko (2013) discussed outside anchors which are informative historical signals and together explained about “inside” anchors that perhaps may put their intuitive abilities in providing factors or information

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signals which are not unearthed yet and can aid in mispricing errors represented by high volatility premiums.

Kárný and Guy (2015) critically associated the normative ‘Bayesian’ decision making with the descriptive decision-making process. The author claimed that problem of latent factors, the author spoke as “ignorance” will simultaneously become permanently absorbed in the non-Bayesian learning process. However, this confine to the individual decision makers learning process and no sharing with other decision makers to improve rationality in the intertemporal process is administered.

Marsh and Ahn (2006) compared the impact of anchoring biases with Primary effect and Recency effect. If the Primary effect is to be correct then Bayesian probabilities with anchoring factors can serve well. This notion can be linked with the financial crisis, I believe that it must be influenced by not controlling the impact of a Primary effect since it was an initial trigger (however small) which transformed into explosive financial meltdown. Beaver et. al (1970) described the joint hypothesis between Economic event triggered by Accounting information and impact of such Economic events into the stock prices. The underlined aspect is that investors tend to remain biased with Accounting information (whether such information is true or not?). To refer again, Dougal et.al (2015) explained the anchoring biases in terms of prior credit spreads providing a decision in relation to current loan disbursements. With reference to the current article, (as against prior credit spread described above) illiquid volatility premium in case decline consistently over the long horizon describe that there are no kinks in the joint utilities of the two volatility pricing models. Kudryavtsev and Cohen (2010) also provided empirical justifications for the impact of recent information as anchors in the pricing process. Seiler, Seiler, Traub, and Harrison (2008) explained the concept of Regret aversion, it means any past decision (resulting losses) will be carefully eliminated under the current valuation process. Hershey and Schoemaker (1985) presented the comparison of Fama French models and stressed on the use of irrationality or behavioral factors into the traditional CAPM framework. Li and Yu (2009) expressed the notion of “limited attention” of investors in overweighing the Sectoral and Macroeconomic variables in comparison to firm-specific idiosyncratic information. Jain, An, and Tambe (2012) describe the confluence of ideas of Automatic agents and Multi-agents framework in security systems with Game theory experimentation. Smedts and Smedts (2006)

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described how hedge funds resort to time-varying alpha generation strategy since any unique Alpha approach was soon captured by the market and this lead to evaporating their profits. Also, the author stressed on the high autocorrelation which must be accounted while investing the hedge funds. Marinelli (2010) explained the characteristics of size-effect in terms of diversified and single-segment firms. Single-segment firms are usually small-cap and it has been witnessed that in the long term diversified firms outperform single-segment firms.

METHODOLOGY

The following outcomes are generated:

Creation of Regression equations:

For a simple Univariate OLS regression look like:

$$y_{EC_t} = \beta_1 + \beta_2 x_t + \varepsilon_t \quad (1)$$

y_{EC_t} = decision variable (Employee cost)

β_1 = Const (drift)

β_2 = Regression parameter for x_t

x_t = the explanatory variable from PCA decomposition

ε_t = stochastic error term

EQMA Model for Conditional Variance of fitted time-series data

Using Equal weighted moving average for Conditional variances

$$\sigma^2_{x_n} = \omega v + \lambda \sigma_x^2_{(n-k)} + (1 - \lambda) \mu^2_{(n-k)} \quad (3)$$

$\sigma^2_{x_n}$ = The n period variance of the index series

ωv = Long term weight*long term volatility

$\lambda \sigma_x^2_{(n-k)}$ = The λ (decay rate) multiplied with the squared lagged variance

$(n-k)$ = the lagged component, in the present paper the yearly lag is considered

$(1 - \lambda) \mu^2_{(n-k)}$ = here this is decay representing the Growth rate, this denotes whether there is rapid decay or slow decay, in the case of rapid decay the mean reversion is fast.

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For the present purpose, the decay rate was kept as 0.10 or 10% y.o.y. for 10 years simulated time period

Dynamic-factor-premium identification and credit-rating migration

$$\sigma_{CMP_t} = \beta_1 \sigma_{CMP_{t-1}} + \beta_2 \sigma_{OTHERS_t} + \beta_3 \sigma_{OTHERS_{t-1}} + e \quad (4)$$

Here σ_{CMP_t} can be considered as K-state space (where K is finite value from 1 to 10) as $S_{\sigma_{CMP_t}} = \{S_{\sigma_{CMP_{t+1}}}, S_{\sigma_{CMP_{t+2}}}, \dots, S_{\sigma_{CMP_{t+K}}}\}$ of empirical Model (CMP) volatility priced through an initial parametric space (anchoring bias) as S. the probability of S i.e. P_K is a linear function $f(\sigma_{CMP_t}) = (\beta_1 \sigma_{CMP_{t-1}}, \beta_2 \sigma_{OTHERS_t}, \beta_3 \sigma_{OTHERS_{t-1}})$

(5)

The case of dynamic set-up the rate of conversion of β_2 and β_3 should be faster towards perfectly elastic position from the the starting point (i.e from the 1st year to the 10th year) and β_1 should move away from perfect elasticity. (See equation 4).

(Specific mathematical interpretations)

The following proposition was suggested :

In case the dynamic beta’s derived from portfolio of conditional volatilities of Model (CMP) with that of Model (others) converge slower towards perfectly elastic (equal to 1 or nearing 1) position then it defines a situation of an acceptance of anchoring-bias of analyst with non-informative historical signals (new signal) to be positive and defines “Mispricing”.

Hence equation may look like :

Bifurcating the equation 4 into non-lag and lag part of the anchoring-factor:

$$\begin{aligned} & |(\beta_1 \sigma_{CMP_t} - \beta_2 \sigma_{OTHERS_t})| > |(\beta_1 \sigma_{CMP_{t+1}} - \beta_2 \sigma_{OTHERS_{t+1}})| > |(\beta_1 \sigma_{CMP_{t+2}} - \beta_2 \sigma_{OTHERS_{t+2}})| > \\ & |(\beta_1 \sigma_{CMP_{t+3}} - \beta_2 \sigma_{OTHERS_{t+3}})| \dots \dots |(\beta_1 \sigma_{CMP_{t+k}} - \beta_2 \sigma_{OTHERS_{t+k}})| \end{aligned} \quad (6)$$

Here, $|(\beta_1 \sigma_{CMP_t} - \beta_2 \sigma_{OTHERS_t})|$ represents the illiquidity volatility premium where the absolute first differences of dynamic annual beta’s of conditional volatility pricing model (see equation 4) was utilized.

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Equation 5 denotes the dynamic illiquidity volatility premium across time t to $t+k$ where the lag of beta's of both model volatilities is of the same lag-order. Graphically, this gap should move southwards if the hypothesis is to be accepted.

$$\begin{aligned} & |(\beta_1\sigma_{CMP_t} - \beta_2\sigma_{OTHERS_{t-1}})| > |(\beta_1\sigma_{CMP_{t+1}} - \beta_2\sigma_{OTHERS_t})| > |(\beta_1\sigma_{CMP_{t+2}} - \beta_2\sigma_{OTHERS_{t+1}})| > \\ & |(\beta_1\sigma_{CMP_{t+3}} - \beta_2\sigma_{OTHERS_{t+2}})| \dots \dots \dots |(\beta_1\sigma_{CMP_{t+k}} - \beta_2\sigma_{OTHERS_{t+k-1}})| \end{aligned} \quad (7)$$

LIMITATIONS

The primary limitation could be the notion of low-frequency prices, and small observation sets, these two data driven approaches seem less meaningful to the mainstream capital market asset pricing theories. Besides, the study should accompany non-financial variables and can be adapted to accommodate some disaggregate employee specific information to make it more concrete and reasonable for the firm-level diversification purposes. A long-term multi-agent game theoretic perspective can be added where in the closed-loop additional initial information parameters can be introduced or more rational player's expectations can be introduced in the dynamic illiquid premium as explained earlier.

DATA ANALYSIS & RESULT

Dynamic Parameters- Descriptive statistics and Correlation analysis

To understand the dynamic behavior of anchoring-biases (use of illiquidity-volatility premiums); it is utmost necessary and prudent, to begin with dynamic beta's and their yearly movements. As can be witnessed by the descriptive statistics of three coefficients associated with three-factor models (as explained in equation 4), to refer to Table 8 (additionally refer Table 2 for details) with regard to EWMA volatilities associated with Model (others) and Model (CMP) i.e. β_2 it can be seen, that in terms of mean values all six companies were better than that of β_1 , but β_3 i.e. elasticity of the lagged EWMA volatility and share price volatility with respect to Model (CMP) and Model (others) appeared more stronger except the case of Bombay Dyeing (BD). This means that essentially speaking the anchoring or ‘initial information point’ or ‘latent-factor’ biases were significantly impacting the movement of Model CMP volatilities. With respect to correlation (see Table 5, 6 and 7)

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among the dynamic settings, for β_1 Except between Vardhaman Textiles and SRF, where the correlation among the dynamic beta's were 0.707 and significant, rest all pair-wise combinations showed “weak” correlations (it shows the clear reflection of idiosyncratic behaviour) so far the lagged or serial correlation of share prices among sample companies are concerned. Contrary to this, for β_2 , none of the 15 inter-temporal combinations of dynamic beta values were significant (i.e. each company irrespective of size, were weakly linked with dynamic patterns of other companies). Finally, with regard to lagged Model (others) volatility variable, i.e. β_3 , leaving the Arvind Mills and SRF of 0.722 and significant, and Arvind Mills and Vardhaman Industries i.e. 0.639 and significant, rest all the other 13 combinations were weakly correlated.

Hence, in terms of correlations, small-cap, mid-cap and large-cap behave differently in terms of their elasticity towards conditional volatilities are concerned. To reframe, the behavior of intertemporal dynamic beta's with respective conditional volatilities across textile sectors companies (as a small sample) even corresponding to long-horizons act differently.

Comparing EWMA volatilities of two latent factor models (see Table 1) for small-cap firms, i.e. Bombay Dyeing, SRF and Vardhaman Textiles, wide differences are existing with context to the strength of volatilities, while in case of Bombay dyeing all the 11 periods the EWMA volatility of model (others) exceeded that of Model (CMP), this was reduced to 5 cases in Vardhaman Textiles and only 1 case of Raymond Industries. For Arvind Mills under mid-cap 5 cases were witnessed, while SRF reported 7 cases. Grasim Industries also was found with 10 cases. Overall, we can see that not only among the corresponding sizes but within sizes to a wide variation of idiosyncratic inter-temporal volatilities was witnessed.

The behavior of Illiquidity-volatility premium

Technically speaking, the details as explained with reference to dynamic beta's correlations and strength of elasticity of lagged EWMA volatility of Model (others) is already justified. Now, the question arises that whether the “mispricing” with respect to first differences of dynamic beta's corresponding between the conditional volatility associated with Model (CMP) and lagged and without lagged EWMA volatilities of Model (others) as a surrogate of anchoring-biases shows some sign of efficiency inter-temporally.

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Ideally, as discussed in the methodology, in absolute terms, this gap (illiquid volatility premium) should reduce over a period of time, i.e., in the long horizon scenario, the reflection of immediate dip in the “Premium” value in the first few years must be exhibited otherwise, if it is increasing, or remain unstable means, that “other” factors are stronger, or it could be that more robust techniques are required to understand the behaviour of such “latent” dynamic idiosyncratic elasticity effect. To ascertain (refer Table 3 and Figure 1), it is seen that leaving Arvind Mills (mid-cap) and Grasim Industries (Large-cap), the dip in premium was witnessed in all the rest four of companies. All three small-cap firms for (premium without lag) generated the same results. However, Raymond Industries (small-cap) was having its premium with lag moved northwards i.e. increased. So, this certainly translates to “mispricing” and its absorption in the dynamic system. While the first dip is witnessed in the four companies as discussed, a further investigation may be necessary. Beyond the first leg of premium reduction, under the long horizon, only Raymond Industries and Vardhaman Textiles found the trend southwards for premium-without lag values. It is important that this means, that small cap exhibited more prolonged “mispricing” adjustments. Subjectively these phenomena may be attributed to the behavior of learning due to anchoring-bias which tends to be slower but consistent in these two companies. Although, counting on the shift in the “premium” directions, i.e. moments of yearly changes in premium directions, we found it hover around 4 to 8 times across 11-year scenario. The minimum lies with Raymond industries (small-cap) (for premium with lag at 4) and while maximum shifts were witnessed among Bombay Dyeing (small-cap) and SRF (mid-cap) (for premium with lag) with 8 in number.

CONCLUSION

Finally, how can anchoring –biases (with respect to conditional volatilities as latent factors) or their premium as (first differences of dynamic betas across time) make sense for understanding the behavior of markets in long term? There are two learning aspects, one, that pricing of volatilities of hidden assets like human capital using internal financial information and market prices differ significantly. As the dynamic beta’s exhibited already (all 15 pair-wise combinations for β_2 were with low and insignificant beta values). Any amount of size-

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effect matters till the time the most complex information through (anchoring like the one use here) remained costly due to more certainly investor’s intellectual awareness. In the long-horizon identification and incorporating such risk premiums which emerge through such hidden information improve the rational pricing structures. Hence, the efficiency of markets improves by discovering such dynamic risk premiums and their behaviour across the idiosyncratic set of information already available to investors. Deglobalization is more precisely the need of hour since enough “inefficiencies” in terms of price discovery is practically desired within Indian Listed companies and efforts to integrate with internal idiosyncratic factors make more sense for empirical generalizations.

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TABLE AND FIGURES

TABLE 1: The low-horizon (yearly) Conditional (EWMA) volatilities corresponding to the single-Factor Human capital models (Model-CMP and Model-others)

year	ARVIND MILLS		BOMBAY DYEING		GRASIM IND		RAYMOND IND		SRF		VARDHAMAN	
	CMP	EWMA	CMP	EWMA	CMP	EWMA	CMP	EWMA	CMP	EWMA	CMP	EWMA
1	0.2812	0.3688	0.0227	0.2512	0.0453	0.1753	1.4248	0.2306	0.0393	0.1033	0.1937	0.1431
2	0.2186	0.2172	0.0345	0.2588	0.0615	0.0650	0.4513	0.1408	0.0743	0.0502	0.7733	0.4688
3	0.1010	0.0687	0.0470	0.2872	0.0196	0.0886	0.1433	0.0447	0.1772	0.1430	0.2644	0.1527
4	0.1958	0.1730	0.0230	0.3069	0.0436	0.1227	0.1720	0.0893	0.1741	0.2396	0.1678	0.1285
5	0.1508	0.2778	0.0075	0.1274	0.1074	0.1891	0.2256	0.0504	0.1922	0.1515	0.2172	0.1550
6	0.1971	0.1112	0.0468	0.5120	0.0342	0.1061	0.2800	0.1216	0.1227	0.1448	0.0699	0.2205
7	0.3312	0.0441	0.0296	0.1634	0.0677	0.1936	0.4807	0.0973	0.1463	0.2070	0.0759	0.2228
8	0.2959	0.1928	0.0130	0.3992	0.0623	0.3628	0.1907	0.6589	0.1811	0.3315	0.2489	0.3214
9	0.1972	0.3402	0.0046	0.2619	0.0503	0.1631	0.6633	0.5063	0.1792	0.1352	0.0991	0.2025
10	0.1038	0.1600	0.0066	0.1970	0.0741	0.1256	2.0064	0.2118	0.1709	0.3063	0.2049	0.1326
11	0.1924	0.2928	0.0150	0.0841	0.0525	0.0435	3.0931	0.0682	0.0881	0.1718	0.1944	0.3012

Footnote: CMP= Conditional Equal weighted moving average (EWMA) volatilities of human capital pricing using Current Market Prices
EWMA = Conditional Equal weighted moving average (EWMA) volatilities of human capital pricing using Internal Financial Information factor (latent factor)

TABLE 2: The low-horizon (yearly) Dynamic beta's corresponding to the three-factor regression model

year	B1-AM	B2-AM	B3-AM	B1-BD	B2-BD	B3-BD	B1-GI	B2-GI	B3-GI	B1-RM	B2-RM	B3-RM	B1-SRF	B2-SRF	B3-SRF	B1-VD	B2-VD	B3-VD
1	0.4580	0.5420	0.0000	-1.3668	2.3668	0.0000	1.0000	0.0000	0.0000	-0.7548	1.7548	0.0000	1.0000	0.0000	0.0000	-0.3154	1.3154	0.0000
2	-0.7163	1.0234	0.6929	0.6979	0.0180	0.2841	-1.9038	0.0000	2.9038	0.9990	0.0000	0.0010	0.4867	0.5133	0.0000	0.0020	0.9847	0.0133
3	-0.6661	0.3822	1.2839	-1.5794	0.8383	1.7411	-1.3952	0.7163	1.6789	-0.2936	0.0000	1.2936	-0.0254	0.0269	0.9985	0.5473	0.0334	0.4194
4	-0.2824	0.0586	1.2238	-0.3666	1.3666	0.0000	1.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.9285	0.0000	0.0715	-0.5100	0.5249	0.9852
5	-1.6568	0.1228	2.5340	-2.8372	1.1120	2.7252	-0.3884	0.2563	1.1321	0.0174	0.1667	0.8159	-2.6148	1.6665	1.9483	-3.4757	0.8199	3.6558
6	1.0000	0.0000	0.0000	-0.0005	0.5346	0.4660	-0.5009	0.7740	0.7270	1.0000	0.0000	0.0000	0.1589	0.5776	0.2635	-0.1115	1.0102	0.1013
7	-0.8127	0.1324	1.6804	1.0000	0.0000	0.0000	-0.0804	0.0000	1.0804	-1.4755	0.0788	2.3967	-1.8635	0.9710	1.8925	-6.3093	6.3840	0.9254
8	1.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.7574	0.2426	0.0000	-5.0747	2.5187	3.5560	0.0463	0.0377	0.9160	-0.2253	0.2402	0.9851
9	-1.3565	1.7537	0.6028	-1.3224	1.7332	0.5892	-3.7780	1.1111	3.6669	0.8504	0.1423	0.0074	0.9908	0.0000	0.0092	-2.1465	0.6478	2.4987
10	-0.6802	0.6393	1.0410	1.0000	0.0000	0.0000	0.0624	0.4914	0.4463	0.2703	0.0083	0.7214	-0.8431	1.1885	0.6547	-1.2908	1.0440	1.2468

Footnote: β_1 = Dynamic Coefficient denoting elasticity of annual conditional volatility of Model CMP with its lagged yearly values
B2 = Dynamic Coefficient denoting elasticity of annual conditional volatility of Model CMP with conditional volatility of Model Others
B3 = Dynamic Coefficient denoting elasticity of annual conditional volatility of Model CMP with lagged conditional volatility of Model Others

TABLE 3: Illiquidity-volatility premium (anchoring-factor: Dynamic-beta first differencing) comparisons with conditional volatility comparisons at their first differences

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year	ARVIND MILLS			BOMBAY DYEING			GRASIM			RAYMOND			SRF			VARDHAMAN		
	PREMIUM	PREMIUM	DIFF	PREMIUM	PREMIUM	DIFF	PREMIUM	PREMIUM	DIFF	PREMIUM	PREMIUM	DIFF	PREMIUM	PREMIUM	DIFF	PREMIUM	PREMIUM	DIFF
	without lag	with lag		without lag	with lag		without lag	with lag		without lag	with lag		without lag	with lag		without lag	with lag	
1	0.0841	0.4580	-0.0876	3.7336	1.3668	-0.2285	1.0000	1.0000	-0.1301	2.5097	0.7548	1.1942	1.0000	1.0000	-0.0639	1.6308	0.3154	0.0505
2	1.7397	1.4093	0.0013	0.6799	0.4138	-0.2244	1.9038	4.8077	-0.0035	0.9990	0.9980	0.3105	0.0265	0.4867	0.0241	0.9827	0.0113	0.3045
3	1.0483	1.9500	0.0323	2.4177	3.3204	-0.2403	2.1115	3.0741	-0.0691	0.2936	1.5871	0.0986	0.0523	1.0238	0.0341	0.5139	0.1279	0.1117
4	0.3411	1.5062	0.0227	1.7331	0.3666	-0.2839	1.0000	1.0000	-0.0791	1.0000	1.0000	0.0827	0.9285	0.8569	-0.0655	1.0349	1.4952	0.0393
5	1.7796	4.1909	-0.1270	3.9492	5.5625	-0.1200	0.6447	1.5205	-0.0818	0.1493	0.7986	0.1752	4.2813	4.5631	0.0407	4.2956	7.1315	0.0622
6	1.0000	1.0000	0.0859	0.5351	0.4665	-0.4652	1.2749	1.2279	-0.0719	1.0000	1.0000	0.1584	0.4187	0.1045	-0.0221	1.1217	0.2129	-0.1506
7	0.9451	2.4931	0.2871	1.0000	1.0000	-0.1338	0.0804	1.1608	-0.1259	1.5543	3.8722	0.3834	2.8344	3.7560	-0.0607	12.6933	7.2347	-0.1469
8	1.0000	1.0000	0.1031	1.0000	1.0000	-0.3862	0.5148	0.7574	-0.3005	7.5934	8.6308	-0.4682	0.0086	0.8697	-0.1504	0.4655	1.2104	-0.0725
9	3.1102	1.9593	-0.1431	3.0556	1.9117	-0.2573	4.8891	7.4449	-0.1128	0.7081	0.8430	0.1570	0.9908	0.9816	0.0440	2.7943	4.6452	-0.1035
10	1.3195	1.7212	-0.0562	1.0000	1.0000	-0.1904	0.4290	0.3839	-0.0514	0.2620	0.4511	1.7946	2.0316	1.4978	-0.1353	2.3348	2.5376	0.0723

Footnote: Premium without lag = Dynamic Coefficient (beta's) first differences between β_1 and β_2 as proxy for anchoring-bias (illiquidity volatility premium)
 Premium with lag = Dynamic Coefficient (beta's) first differences between β_1 and β_3 as proxy for anchoring-bias (illiquidity volatility premium)
 DIFF = First Differences of Conditional (EWMA) volatilities of Human capital relative prices

TABLE 4: Comparison of Error Distribution of OLS and DOLS models under low-frequency information

year	ARVIND MILLS		BOMBAY DYEING		GRASIM		RAYMOND		SRF		VARDHAMAN	
	OLS	DOLS	OLS	DOLS	OLS	DOLS	OLS	DOLS	OLS	DOLS	OLS	DOLS
1	0.1360	0.0000	0.0631	0.2003	0.1219	0.1283	0.0532	0.0000	0.0325	0.7932	0.3500	0.0000
2	0.3057	0.0000	0.0011	0.0000	0.0887	0.0000	0.4195	0.0000	0.0200	0.0000	0.8268	0.0000
3	0.4818	0.0000	0.0058	0.0000	0.0229	0.0000	0.5290	0.0000	1.9937	0.0000	0.4345	0.0000
4	1.2380	0.0000	0.2207	0.0041	0.1677	0.0568	0.3481	0.0124	0.0112	0.0144	0.0342	0.0000
5	0.0000	0.0000	0.5608	0.0000	0.0385	0.0000	0.0351	0.0000	0.1245	0.0002	0.0164	0.0000
6	0.1214	0.1399	11.6251	0.0000	0.0513	0.0000	0.6783	0.2263	0.0389	0.0000	0.0003	0.0000
7	0.0179	0.0000	0.5163	0.0376	0.4400	0.0000	0.0049	0.0000	0.0358	0.0001	0.0045	0.0000
8	3.2002	0.0516	0.0587	0.0079	0.0000	0.0000	6.5672	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.0002	0.0000	0.5299	0.0003	0.3374	0.0000	0.1198	0.0000	0.0919	0.0013	0.3390	0.0000

Footnote: OLS = Ordinary least square error term
 DOLS = Dynamic Ordinary least square error term

IS BITCOIN INVESTMENT DEPENDENT ON INTEREST RATE?

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ABSTRACT

Trust is a major concern while doing transactions. With many people getting involved in a transaction, the trust factor keeps on decreasing. Due to lack of trust among different parties, the government websites have been hacked and personal data has been breached worldwide in recent years. In order to maintain trust among individuals; laws, contracts etc. were devised. The aim of the Bitcoins is to solve this problem using math and algorithms.

Bitcoin is an enormous amount of information which resides in the public ledger and so when a transaction is made, it is publicly available. Hacking or faking of transactions is not possible in the network as it is observed by millions of computers worldwide. Bitcoin also handles the issue of double spending i.e. the ability to copy the bitcoin and spend it twice.

The future of bitcoin is bright but it is only possible to achieve this if proper regulatory measures are taken. There is still uncertainty among individuals as to whether bitcoins are equity or a currency or a physical commodity. But it doesn't fulfill the criteria of any of these financial assets. People around the world are not sure whether it is a bubble that is going to burst in the future similar to the dot com bubble that occurred in 1995. The reason behind this is the volatility in the price of bitcoins and no financial value being attached to it.

Is Bitcoin investment dependent on interest rate?

The current situation demands investment in bitcoins because the interest rate around the world is relatively low. But with time as interest rate will increase, people will start moving their investment from bitcoins to sovereign government bonds (Treasury Bills). The main reason is that the risk associated with bitcoins is higher as compared to the risk associated with government bonds.

KEYWORDS

Cryptocurrency, Block Chain, Sovereign Government Bonds, Treasury bill, Interest Rate, Fiscal Policy, Monetary Policy

INTRODUCTION

Every person around the world wants to ask “What is a Bitcoin?” and the answer is that it is a type of digital currency, the quantity of which is restricted to 21 million. It is generated by data mining and is rectified by a third party which is unknown i.e. it works on the principles of BlockChain. People from the financial world are curious to know, if there is any intrinsic value attached to a bitcoin. The answer to this is that it can be defined as an ‘Intangible currency’, the value of which can be recognized only by the changes in the market forces of demand and supply. Even though it doesn’t carry any intrinsic value, people around the world are investing in it.

All around the world, the bitcoin investment is divided into two opposite viewpoints. The first group of people state that ‘Bitcoin works in practice, but not in theory’ while the second set of people state that the bitcoin investment is dependent on the socio-economic factors which are difficult to predict and model. The main reason behind this is that a lot of socio-economic factors are dependent on human psychology which is difficult to understand as it falls under the domain of behavioral economics and the scope and stretch of which is still limited.

This paper however, considers only one aspect of human psychology i.e. the greed to earn more. This greed to earn more arises when a person believes that he can earn more from one investment over another by conducting a risk - return analysis of the investment. The principle

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being the greater the return, the more risk the person is willing to take. Here in this paper, we are considering investments in bitcoins and the Government Treasury bill as two investment modes and determining when people shift from one investment mode to the other, depending on the return. But since bitcoin do not have any intrinsic value of its own and is dependent on the market forces of demand and supply, therefore we consider a percentage increase in the return to be less as compared to the percentage increase in the risk.

THEORETICAL FRAMEWORK

The return on the Government Treasury bill is dependent on the economic policies of the government like fiscal and monetary policies which in turn help us to determine the Treasury bill rate around the country. The increase and decrease in the Treasury bill rate due to government policies is shown in figure 1 and figure 2 (a closed economy is taken for consideration). Although the Government Treasury bill is said to be riskless, but there is some amount of risk depending on the country which is issuing it, for example the Treasury bill issued by Zimbabwe and Greece is under high risk due to government default in the past.

In the below diagram, G is the Government spending, Y is the Gross Domestic Product, r is the Treasury bill rate of return, $I(r)$ is the investment (inversely proportional to the rate of return)

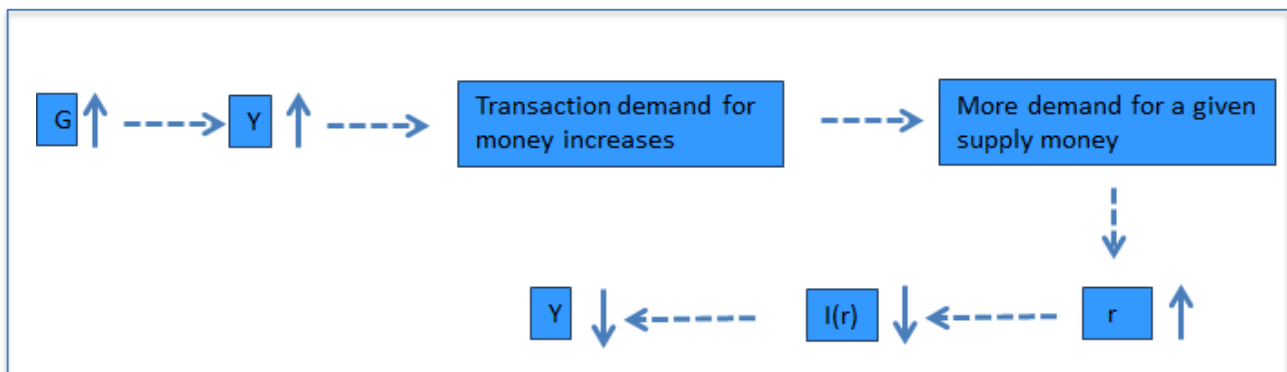


Figure 1: Expansionary Fiscal Policy

Is Bitcoin investment dependent on interest rate?

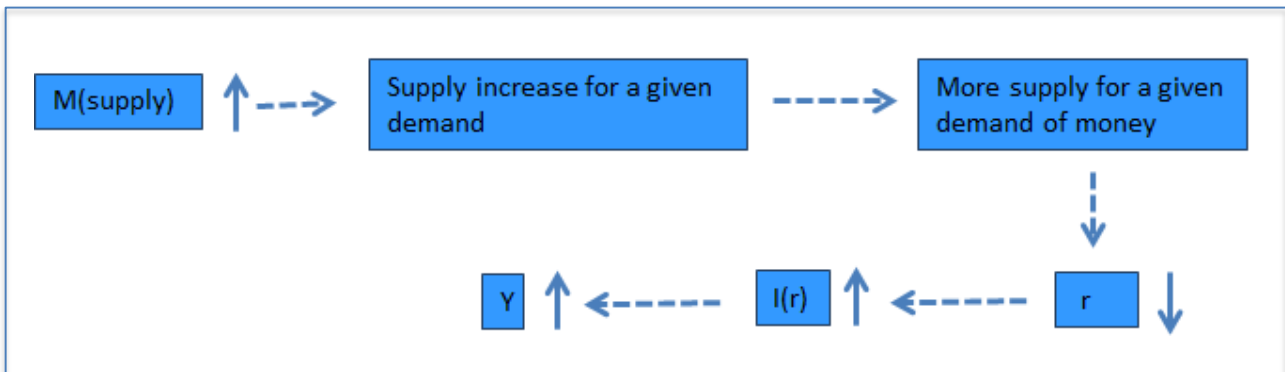


Figure 2: Expansionary Monetary Policy

Although there are a lot of government policies which cause a change in the direction of the Treasury bill rate of return, but for the explanation point of view, only the above two policies have been considered.

From the above figures, it is clearly visible that the government can intervene to change the rate of return; however, the government tries to maintain it as per the economic scenario of the country and the world.

As stated above, this paper is establishing a relationship between the Treasury bill rate of return and the return from the bitcoin investment. There are a lot of research papers which state how a the Treasury bill rate of return in the country affects the stock market prices i.e. with increase in the interest rate around the world, the investment in stock market decreases and with decrease in the interest rate, the investment in stock market increases. This is based on the same theory of risk and return factors. Although the relationship is not strictly inversely proportional, but there is some form of inverse relationship among them (The data for the same is present in Table 1, which shows the S&P returns for 15, 10 and 5 years with different US treasury bill rate).

The stock market indices as we know is dependent on lot of other factors like the company fundamentals, volume transaction etc. This helps us to conclude that the stock market prices are not just dependent on a single factor i.e. interest rate, but they are backed by other multiple factors as stated above. On the other hand, the bitcoin investment is dependent only a single

Is Bitcoin investment dependent on interest rate?

factor i.e. the interest rate prevalent in the country which will be illustrated in the coming sections.

	15 Years		10 years		5 years	
10 Years Treasury Starting Yield	Max	Min	Max	Min	Max	Min
3% & under	19.03%	7.48%	21.43%	3.92%	26.75%	-9.75%
3% to 4%	14.52%	-0.41%	15.53%	-4.95%	36.12%	-17.36%
4% to 5%	7.25%	4.11%	9.88%	-2.65%	13.99%	-6.63%
5% to 6%	11.58%	3.76%	11.36%	-3.43%	24.25%	-3.77%
6% to 7%	14.34%	4.15%	13.82%	-1.59%	26.89%	-3.16

Table 1: S&P 500 Performance 1926- 2006

LITERATURE REVIEW

Bitcoin has previously been compared to gold as they have many similarities; the primary value is derived due to scarcity of supply and this supply is not controlled by a government but independent agents. Both assets have high price volatility and the total supply is finite. As gold has well-known hedging capabilities against stocks, bonds and bitcoin might exhibit similar correlations ^[1].

Dahlberg in his paper did an analysis to find the economic abilities of bitcoin in risk management, portfolio analysis and currency capabilities. He concluded that Bitcoin has many

Is Bitcoin investment dependent on interest rate?

similarities to both gold and the dollar. Medium of exchange characteristics are clear and bitcoin reacts significantly to the federal fund rate which points to bitcoin acting like a currency. However as bitcoins are both decentralized and largely unregulated it will never behave exactly like the currencies on the market today ^[2].

Bitcoin is fairly liquid as one can exchange any currency for bitcoin at any time, but due to its scarcity it has limitations in terms of liquidity like other commodities. Furthermore Bohme et al. (2015) ^[3] found that transactions could be delayed for up to an hour which greatly diminishes the liquidity possibilities. However, the bitcoin protocol does not restrict transfers due to watch-lists or embargoed countries as the identities of its users are not known. This gives bitcoin an immense flexibility and speed of international transfer compared to other currencies managed by banks.

Despite the growing interest in Bitcoin as a digital asset, the current economics and finance literature is still lacking empirical evidence on its diversification. There is a limited study on hedging and safe - haven properties of bitcoins against other assets like equities, bonds, oil, gold, the US dollar index etc.

Szafarz et al. (2017) ^[4] established that bitcoin investment exhibits very high volatility but also very high returns. In addition, for holders of well diversified portfolios, high risk is compensated by low correlations with other assets. Including even a small proportion of Bitcoins in a well-diversified portfolio may dramatically improve risk-return characteristics. Spanning tests confirm that Bitcoin investment offers significant diversification benefits.

RESEARCH METHOD

To develop the relationship between Bitcoins investment and Treasury bill rate of return following steps have been followed:-

Is Bitcoin investment dependent on interest rate?

- The Government Treasury bill data of each country is taken into account for the last 5 years as bitcoin investment and the volatility of the bitcoin price has taken place during this tenure
- The bitcoin investment taken into consideration is country wise as the interest rate varies among countries depending on the economic and political scenario of the country
- The bitcoin investment in each country is benchmarked against a single currency. The currency being is US dollar, as it is a widely accepted and most commonly used currency
- The bitcoin investment in US dollar has been plotted against the interest rate in different countries and a relationship has been established
- Large Economies have been taken into consideration as interest rate of these countries has a world-wide impact on global investment

DATA ANALYSIS AND RESULT

Figure 3 shows the amount of dollars invested in Britain from January 2014 till November 2017 in a quarterly manner. As the returns expected from the government securities and bonds are decreasing (Treasury bill rate of return), the amount of bitcoin invested is increasing. This depicts that people are willing to take risk and invest in the uncertain cryptocurrency in order to attain high returns.

Is Bitcoin investment dependent on interest rate?

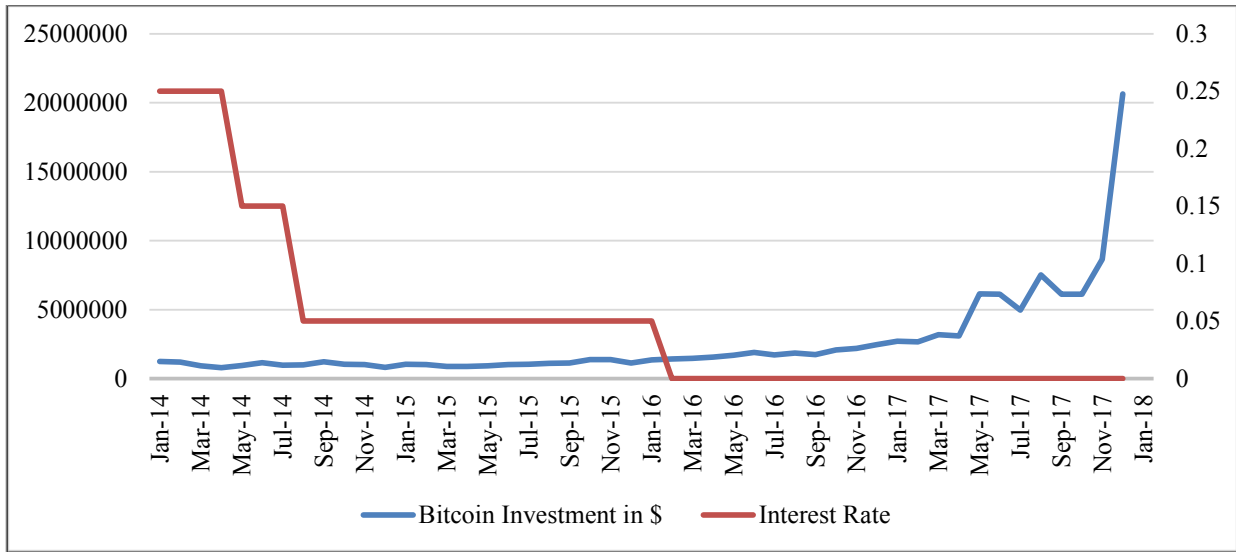


Figure 3:- Britain Data on interest rate and Bitcoin Investment

In USA the bitcoin investment has been increasing constantly even when the interest rate offered by the government is constant from 2014 to 2015 as depicted in Figure 4.

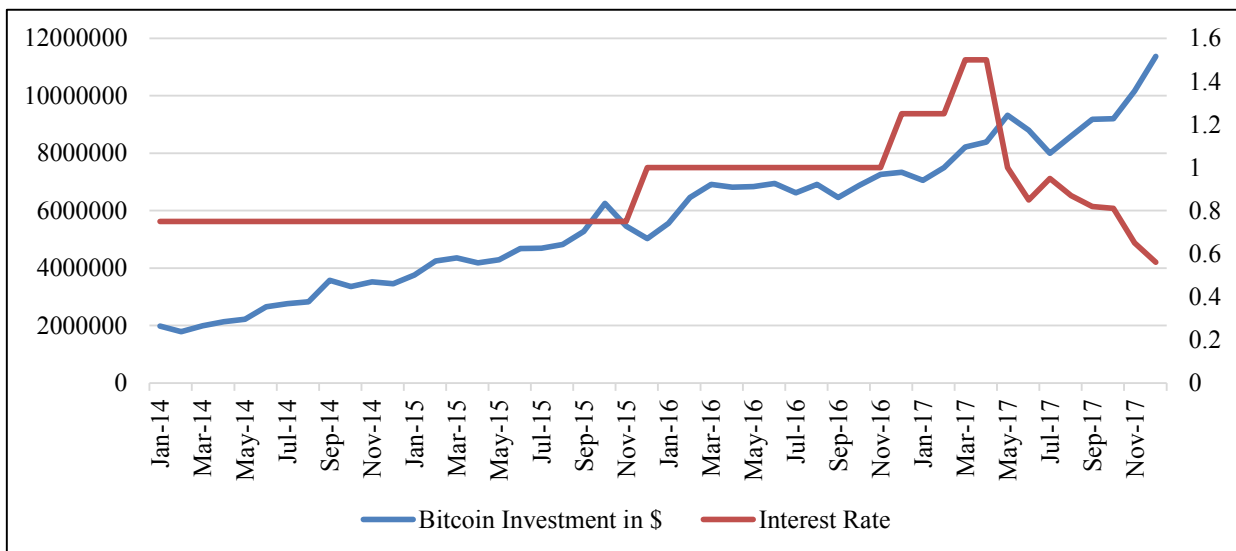


Figure 4:- USA Data on interest rate and Bitcoin Investment

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In Sweden, the bitcoin investment has risen sharply from Sep 2017 as depicted in Figure 5. Over the past few months, Bitcoin has proven its practicality and viability as a safe haven asset and to avoid potential economic uncertainty, both investment firms and individual investors have been purchasing Bitcoin. Claire Ingram Bogusz who is a researcher at Stockholm School of Economics quoted that the bitcoin market in Sweden is growing at a rapid rate. This is due to friendly regulatory frameworks for FinTech startups and cryptocurrency mining. According to Bogusz, investors in the Swedish FinTech market have started to move over to the local bitcoin market, which has seen an exponential increase since the beginning of 2016.

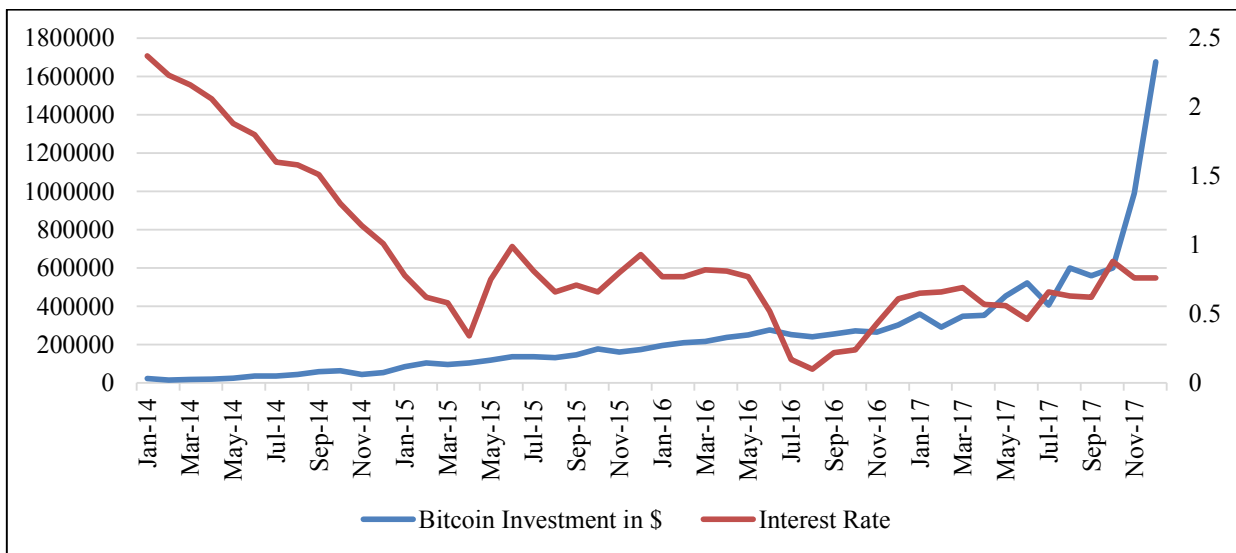


Figure 5:- Sweden Data on interest rate and Bitcoin Investment

Is Bitcoin investment dependent on interest rate?

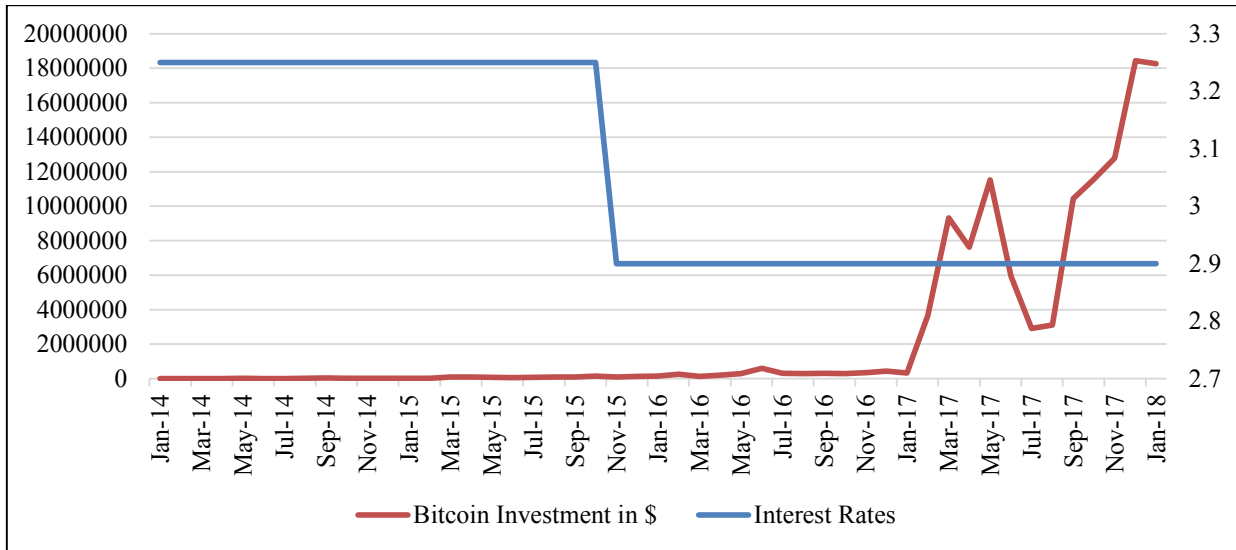


Figure 6:- China Data on interest rate and Bitcoin Investment

Denmark has adopted a friendly attitude towards technology and Bitcoin .This has led to the country earning huge profits.

It is not only one of the most Bitcoin friendly countries in the world, but it is also one of the first to declare Bitcoin trade to be tax free. As depicted in Figure 7, Bitcoin investment in Denmark has increased many folds over the past 5 years.

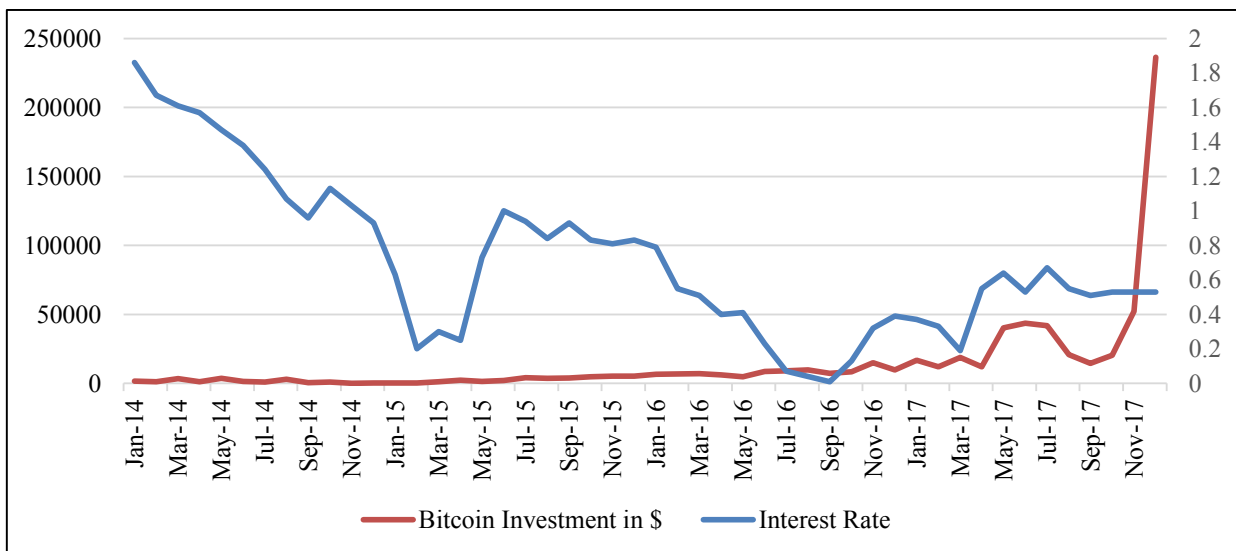


Figure 7:- Denmark Data on interest rate and Bitcoin Investment

Is Bitcoin investment dependent on interest rate?

In Europe the bitcoin investment has risen sharply since 2017 as the interest rate on bonds has fallen to zero as depicted in Figure 8.

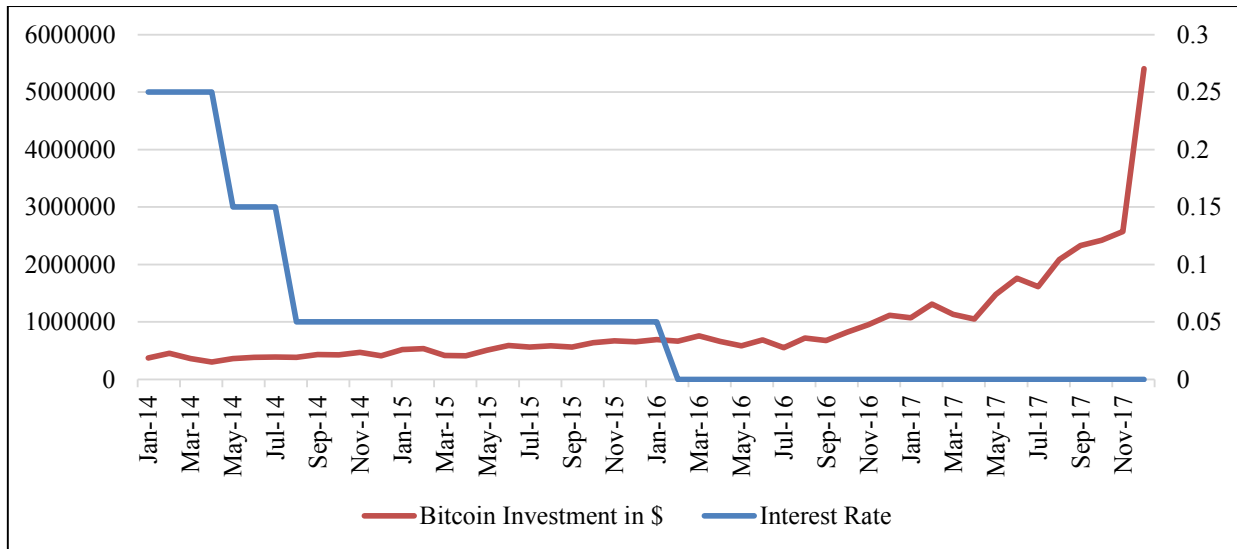


Figure 8:- Europe Data on interest rate and Bitcoin Investment

India was a late entrant in adopting Bitcoin. Due to restrictions by the Indian government in foreign currency remittances, Indians were restricted to trade in international financial instruments. During the time when bitcoin was picking up pace in China, Indians struggled to transfer money to the overseas Bitcoin exchanges and thereby missed the Bull Run.

However, things changed drastically after the demonetization drive announced by PM Narendra Modi. This led to a turmoil situation in India and people resorted to digital payments. As a result, Indians interest rose in bitcoins. Once the local exchanges started functioning in India since 2017, the Bitcoin users got a feasible option to purchase Bitcoin using local currency and the adoption of Bitcoin started increasing considerably as depicted in Figure 9.

Is Bitcoin investment dependent on interest rate?

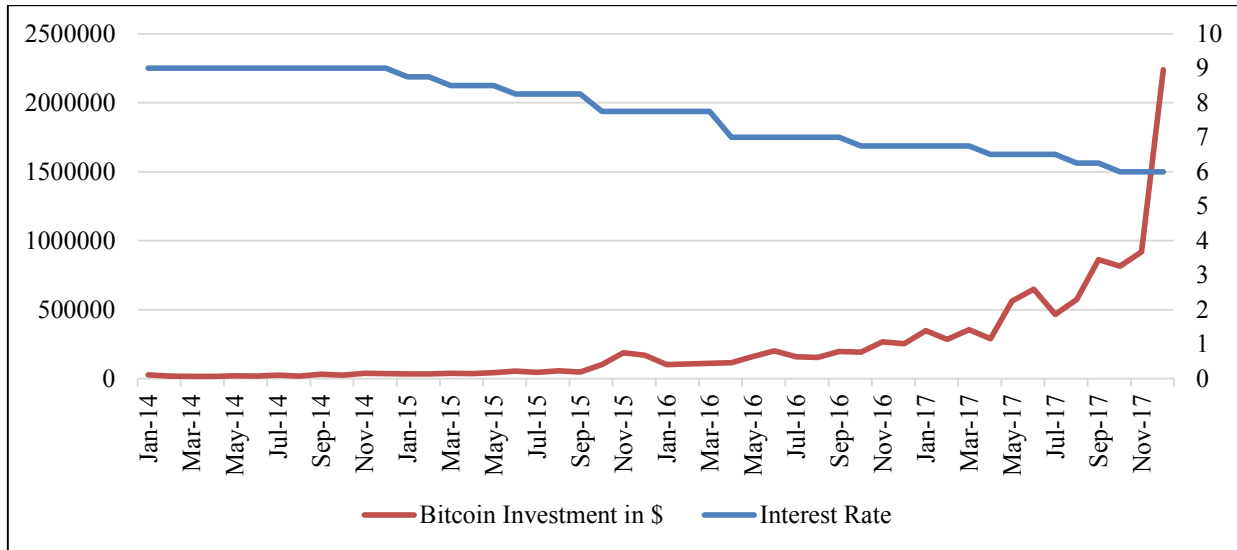


Figure 9:- India Data on interest rate and Bitcoin Investment

CONCLUSION

With the results obtained above, it is observed that the bitcoin investment is inversely proportional to the Government Treasury bill rate of return, although a direct relationship cannot be determined, but it can be observed that with the decrease in the rate of return, the bitcoin investment is increasing.

It can be concluded that the bitcoin investment is likely to increase or decrease depending upon the economic scenario in the country by performing a risk and return analysis. Therefore if the people from the financial community can predict the movement of the Government Treasury bill rate of return, then it may be possible for them to predict the direction of the movement of the Bitcoin prices.

Is Bitcoin investment dependent on interest rate?

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**LIFE INSURANCE FOR RURAL CUSTOMERS AND ROLE OF LIFE
INSURANCE FOR FINANCIAL INCLUSIONS**

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ABSTRACT

Life insurance plays an important role in every individual's life. Life insurance policies not only provide financial security in a case in untold situations, they also provide a return on investment. The present research paper understands the role of life insurance policies in bringing financial inclusions and uplifting the feeling of security in rural population. The study would provide directions with regards to market trends for life insurance in India, the role of Government in bringing awareness with regards to life insurance and initiative undertaken by the government to provide life insurance to the rural population. The study also presents the research finding from the rural population from Belagavi villages and understands from the perspective of awareness of the rural population about life insurance, type of life insurance scheme enrolled by the rural population and benefits derived by the rural population. This study provides an overall view of life insurance policies in bringing financial inclusions in rural population.

KEY WORDS: Financial Inclusions, Life Insurance, Rural Population, Inclusive Growth

INTRODUCTION

Economic liberalization in India has provided a large opportunity to Indian population with regards to employment, trade, and business, this impact of economic liberalization supported India in rapid economic growth during the last two decades.

Financial inclusion plays as an crucial factor in the efforts of the government to bring equitable growth and progress in the country, financial inclusion also improves the productivity of the economy. The focus of financial inclusion is to provide financial services which include pension, insurance and saving services to all the sectors of the society and bridge the gap between the income levels of the population. Financial inclusions provide an opportunity to poor for increasing the savings in the formal financial system of banking of a country. (Gopalan, 2010)

Financial inclusion provides a platform for poor in increasing the savings and availing loan services in the most inexpensive and in simple methods, financial inclusion include services like bank accounts in nationalised banks, private bank and approved banks by government in providing services like insurance and other avenues of financial services. Apart from financial inclusion it also ensures to many individuals in a country to provide awareness with regards to benefits of the formal financial transaction in a formal system of banking in a country to poor population of a country.

The policy makers across the world are working on financial inclusion to empower the poor with greater financial freedom with greater access to credit system of banking. In India, banks have opened 19.21 crores of the bank account under the financial inclusion scheme of India named after Pradhan Mantri Jan Dhan Yojana (PMJDY), the main highlight is individuals can open a bank account with zero balance, this bank account provides banking transaction through debit cards, life insurance cover of Rs. 30,000 and an accidental insurance cover of Rs. 1 Lakhs. (Rebello, 2015)

Hence the Government of India has taken steps to provide financial inclusions and providing life insurance to the substantial number of individuals in the country. The present study provides an insight on the role of life insurance as means of financial inclusions in India and provides details with regards to rural population response in Belagavi rural areas on the role of life insurance as financial inclusions.

THEORETICAL FRAMEWORK

Financial Inclusion promotes prudence and develops the culture of saving. It also enables efficient payment mechanism through formal banking system. It is possible to achieve financial stability, economic stability and inclusive growth without financial inclusion. (Dubhashi, 2015). The states are committed to its target of increasing the inclusion of every household in the financial system so that the masses can get all the legitimate benefits arising out of the growth of the country and in turn, the funds mobilised from the people are brought in the formal channel of banking and thereby giving the economy of the country an extra thrust to lead the path of growth (Government of India, 2017). Life insurance demand in India is growing due to opening of the sector to private insurance companies, the business of premium has grown over 35-40% per year, and the new companies have improved insurance awareness amongst the large number of individuals from urban and rural population through improved distribution channel and have brought competitive environment in life insurance sector of India. (Bhattacharya, 2017). In the rural sector of India life insurance have underwritten by 11.3 million policies of which 44.1 million are the fresh policies in the year 2012-13. The major company are Life Insurance Corporation of India which has a market share of 25.44% in the new policies and other private insurance companies have underwritten 26.99% in the rural sector of India. (M, 2015). Insurance companies in India have undertaken efforts to attract customers in urban and rural India to include the customers in insurance sector and provide an umbrella of protection to customers. Insurance companies also have provided product variation based on the income level of the consumers and these products are made available through vibrant delivery channel of distribution in rural India. (Banerjee, 2010). India lives in villages. Out of the total of 1210.2 million people in the country, the size of the rural population is 833.1 million which constituted 68.84% of total population, according to the Census 2011. During 2001-2011 the rural population increased by 90.4 million, and the number of villages increased by 2,279. The majority of world's rural population lives in rural India. With its vast size and wide array of consumers, the marketers of financial products such as life insurance have been exploring the opportunities to understand and penetrate rural markets. (Dubhashi, 2015)

LITERATURE REVIEW

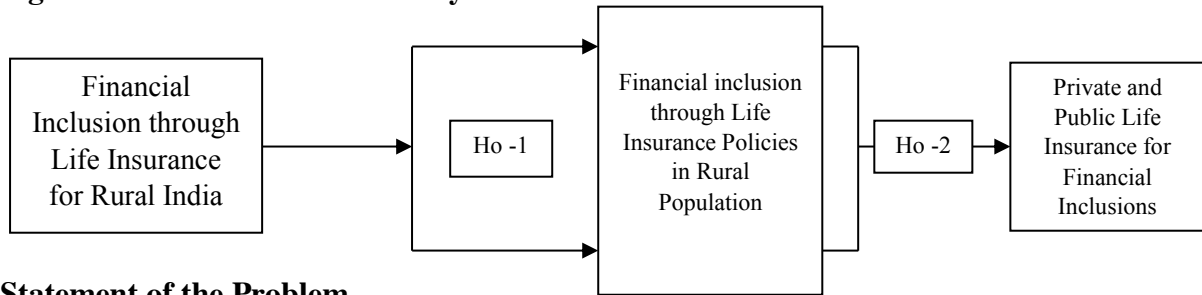
Life insurance to rural population plays a key role in financial inclusions, the literature review for the study is divided into two parts, first part provides insights on the role

of life insurance for the rural population and second part provides insights on the role of life insurance for financial inclusion. In a study conducted by Dr. P.K. Gupta in the year 2000 highlighted that to improve growth of life insurance in the rural sector of India insurance companies must improve on the accessibility of the policies, improved communication and enhance the network through agents in the rural sector on India. Like wise Gupta, 2005 mentioned that there is an enormous potential for growth of insurance products in rural part of India, insurance companies have developed strategies and enhance the market share for life insurance products and services. Study conducted by Kumar in the year 2008 showed that awareness of rural population with regards life insurance is low due to issues related to lack of education and low awareness program by insurance companies and the same is indicated in the study conducted by Rao in the year, 2010. Satisfaction of rural customers with regards to life insurance is important as many Indian population situated in rural India; the study conducted on the satisfaction level of rural customers shows that level of customers satisfaction still needs to be improved with regards to better services to customers. (Badlani, 2015), hence the research on the role of life insurance for rural population indicates that awareness level amongst the rural population is moderate to low with regards to benefits of life insurance. In the second part of the research which understands from the perspective of life insurance as a measure for financial inclusion, measures taken by government of India through Pradhan Mantri Jan Dhan Yojana (PMJDY) has improved the number of individuals included in the mainstream of banking has increased amongst the rural population, apart from PMJDY organization run by Government of India like LIC and Post offices also provide Life insurance to the customers which have improved the number of individuals in life insurance products and services. The present study would be undertaken to understand from the perspective of life insurance services for financial inclusion, further the study directs for understanding the rural customers with regards to awareness of life insurance schemes, the importance of savings and protection through life insurance.

RESEARCH METHODS

Financial inclusion through Life insurance services provided by the service providers and based on the literature review and research gap, the present study provides the model for the research.

Figure No: 1 – Model of the Study



Statement of the Problem

Financial inclusion through life insurance is an important aspect for uplifting the poor in developing economy; the present study is focused towards understanding the role of life insurance in financial inclusions and awareness of rural population towards life insurance products and services.

Objectives of the Study

The study is designed to understand the following objectives towards role of life insurance for financial inclusions;

1. To understand the importance of life insurance for financial inclusion
2. To study the effectiveness of life insurance for financial inclusion in India.
3. To evaluate the effectiveness of life insurance towards financial inclusion in district of Belagavi, Karnataka, India
4. To suggest measures for improving financial inclusions through life insurance products and services for the rural population.

Scope of the Study

The present study is confined to understand the effectiveness of life insurance for financial inclusion and role of life insurance in bringing financial inclusion in rural India. The study would not include other insurance policies like vehicle insurance, medical insurance and crop insurance in the present study.

Methods of Data Collection

The study on the role of Life insurance for financial inclusion was conducted in two villages in the district of Belagavi, Karnataka, India. The villages selected are based on the number of population and secondly on occupation level of the population. As the study was focused on the rural population villages selected have limited access to the main city and there is a change in the village occupation due to the migration of population to Belagavi city.

Life Insurance for Rural Customers and Role of Life Insurance for Financial Inclusions

The village Shindolli is located in western part Belagavi City, the major occupation of the population in the village is agriculture, while Mutuga village is located in East-West of Belagavi city, the main occupation is agriculture, however due to demand for skilled labour in construction industry in Belagavi many of the adults have now been involved as construction labours and carpenters in the village. In the study, we would mention Village A as Shindolli and Village B as Mutuga. The primary data obtained through structured questionnaires designed for the study. The data collected from the rural population from Belagavi villages, secondary data is collected from internet, online journals, textbooks, Government publications and published research work and primary data is collected through structured questionnaire. A sample is drawn from the population of individuals who have purchased life insurance in the villages of Belagavi. Sampling Unit: Sampling unit for the study are individuals in the villages who have purchased life insurance. Sample size of 200 individuals was obtained for the study. Sampling technique adopted for the study is random sampling method. The study involves a survey of the sample respondents from the study villages. The details with regards to sample size identification and random sampling table is provided in Table No: 1. The total population in both the village as per the census records as on 2011 is 3150, wherein Shindolli village has a population of 1853 population of which 60% is the adult population which is 1119 while Mutuga has 1297 population of which 54% are the adult population which is 713 individuals. The total population for the study is 2010. Administration of sample size formula with a study population of 2010 respondent, sample size identified is 129 respondents as per the sample size formula. The details of the calculation of sample size is as under;

N	2010	Population
p	10%	Expected incidence
A	0.05	Accuracy
c	1.96	c = 1.96 for 95% confidence
Formula result	129.39	

The study has included 200 respondents to improve the study response rate. The data collection was based on simple random sampling based on village and occupation of the respondents, this would provide a holistic response to the study. The total response from the respondent is 93% that is 186 respondents from the sample.

Table No: 1 – Simple Random Table for Sampling Process of the Study

Occupation	Shindolli		Mutuga		Total Respondents	
	N	Percentage	N	Percentage	N	Percentage
Agriculture	47	59%	39	33%	86	43%

Life Insurance for Rural Customers and Role of Life Insurance for Financial Inclusions

Construction	14	18%	37	31%	51	25.5%
Carpenter	19	24%	44	37%	63	31.5%
Total	80	100%	120	100%	200	100%

A structured questionnaire is applied to collect the information from respondents. One Way ANOVA provides the comparison with regards to the response of the individuals buying life insurance from the private sector and public-sector companies. Chi-Square Test provides in the research the relationship between the financial inclusion and life insurance products in the rural sector of the study area. From the above Model of the Study and review of the literature, research evaluates the awareness towards life insurance products with testing of the hypothesis that life insurance product awareness amongst the rural population and evaluate the effectiveness of life insurance products for financial inclusion.

Importance and effectiveness of Life Insurance for Financial Inclusion

Life insurance is very important for supporting the individuals to during un-told situations of life cycle. Life insurance is provided into two types firstly with pure life insurance which provides the lump sum or an annuity upon survival and secondly which guarantees to beneficiaries of the subscribes a payment if death occurs to the subscriber. In both, the scenario life insurance is essential in providing financial inclusion for poor and less income population of the country. Life insurance also provides cushion to the poor against unplanned expenses in the form of emergency illness and death in the family. This is the most crucial factor for the individuals. The role of life insurance in India has transformed in India with the change in the Government rules and regulations and providing financial inclusions through life insurance. Government agencies and organization have contributed effectively to upbringing the poor population in India. The life insurance sector in India has grown from Rs. 1050 Crores in the year 2001-2002 to Rs. 6492 crores in the year 2016-17, the public-sector insurance company which includes major government organization Life Insurance Corporation of India has recorded Rs. 4661 cores as the collection of the premium on life insurance, while the private sector life insurance companies recorded Rs. 1831 Crores in the year 2016-17. The overall growth of Life Insurance sector in India is predicted at the rate of 18% annually, the reports suggest that major business for the life insurance is attracted from the rural part of India. The rural population of India has received better options and services with regards to Insurance and Banking sector, in the recent years, postal services have also improved and included in the services to provide banking and insurance. The table provided in the section shows the number of life insurance through postal services in India.

Table No: 2 Rural Postal Life Insurance (RPLI)

Year	No. of Policies in Force	Sum Assured (in Rs. Crore)	Corpus of Fund (in Rs. Crore)
2007-2008	61,67,928	41,846.09	3003.78
2008-2009	73,56,446	53,072.10	3994.36
2009-2010	99,25,103	59,572.59	5,524.69
2010-2011	1,22,03,345	66,132.23	6,607.79
2011-2012	1,35,47,355	69,754.17	9,141.43
2012-2013	1,46,64,650	75,154.06	11,388.20
2013-2014	1,50,14,314	79,466.46	13,352.01
2014-2015	2,35,14,055	1,05,204.79	14,968.67

The number of Life insurance policies in India have increased from 61,67,928 in the year 2007-2008 to 2,35,14,055 in the year 2014-15, the above information indicates that inclusion of population in life insurance is a major achievement in the sector. This inclusion has provided a security towards the poor and needy individuals in the rural population of India. The data with regards to the role of public sector in providing life insurance sector has been a major advantage to the poor for financial inclusions, Table No.3 shows the sector-wise details, the public sector has contributed in the year 2016 and 2017 stands at 4,28,43,96 crores while the private sector stands at 1,04,18,66 Crores.

Table No: 3 – Investment in Life Insurance Sector of India

Investment in the Life Insurance Sector of India in the Year 2016 and 2017			
(Amount in Crores)			
Sector	2016	2017	Total
Public Sector	2009119	2275277	4284396
Private Sector	492949	548917	1041866
Total	2502068	2824194	5326262

The Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) is a one year term life insurance scheme which provides life coverage of Rs. 2 lakhs and it is available for a one year period stretching from 1st June to 31st May at a premium of Rs.330/- per annum per member and is renewable every year, it offers insurance coverage for death due to any reason. It is available for people in the age group of 18 to 50 years (life cover up to age 55) having a savings bank account who gives their approval to join and enable auto-debit. The risk coverage on the lives of the enrolled persons has already started from 1st June 2015.

Life Insurance for Rural Customers and Role of Life Insurance for Financial Inclusions

Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) scheme is offered and administered through LIC and other Indian private Life Insurance companies. For enrolment, banks have tied up with insurance companies. Participating Bank is the holder of master insurance policy. Hence the analysis and information on importance and effectiveness indicate that life insurance has been effective in India to a large extent in providing direction with regards to financial inclusions in life insurance sector of India.

DATA ANALYSIS AND RESULTS

Study to understand the financial inclusions through life insurance, the data collected from two villages from Belagavi district namely Shindolli and Mutuga. The respondents were divided into two sectors based on the location, hence 80 respondents from Shindolli and 120 respondents from Mutuga village were collected from respondents. The profile of the respondents is as under;

Table No: 4 – Age of the Respondents

Village Name	25-35 Years	36-45 Years	46-55 Years	56-66 Years	66 & above Years	Total Respondents
Village - A	17	37	17	4	5	80
Village - B	28	33	37	14	8	120
Total	45	70	54	18	13	200

Table No: 5 – Gender of the Respondents

Village Name	Male	%	Female	%	Total
Village - A	61	41%	19	36%	80
Village - B	87	59%	33	64%	120
Total	148	100%	52	100%	200

Table No: 6 – Total Income for the month of the Respondents

Village Name	Rs. 1000 - Rs. 5000	Rs.5000-Rs. 10000	Rs. 10000-Rs. 15000	Rs. 15000 and above	Total
Village - A	24	18	20	18	80
Village - B	32	32	28	28	120
Total	56	50	48	46	200

Table No: 7 – Occupation of the Respondents

Occupation	Village – A		Village - B		Total Percentage
	N	Percentage	N	Percentage	
Mason	12	15%	58	48%	35%
Agriculture	43	54%	39	33%	41%
Carpenter	13	16%	20	17%	17%
Others	12	15%	3	3%	8%

Life Insurance for Rural Customers and Role of Life Insurance for Financial Inclusions

Total	80	100%	120	100%	100%
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Table No:8 – Income frequency from the Respondents

Income Frequency	Village- A		Village -B	
	N	Percentage	N	Percentage
Daily	20	25%	56	47%
Weekly	17	21%	53	44%
Monthly	43	54%	11	9%
	80	100%	120	100%

The data provided in Table No. 4 indicates the age of the respondents, majority of the respondents are in the age group of 36-45 with 70 respondents, while 54 respondents are in the age group of 46-55. The study has undertaken gender information about the respondents. In the village, A 41% of the respondents are male, while 59% are from Village – B. The percentage of female respondents in Village – A is 36% and Village -B is 64% respectively. The overall percentage of male and female respondents is in equal proportion in the study. To understand the impact of financial inclusion through life insurance income level of the respondent is a crucial factor for the study, 48 respondents had an income in the range of Rs. 10,000 to Rs. 15,000 per month, while 50 respondents have an income of Rs. 5000 to Rs. 10000 per month. Respondents with Rs 1000 to Rs. 5000 were 50 and respondents with Rs.15000 and above were 46 respondents respectively. The study has included respondents from income group of Rs. 1000 to Rs. 15000 per month. Occupation of the individuals provide a better opportunity for enhancing the earning of the individuals, the study covered the major occupation of the study village, the major occupation of the respondents is agriculture as most of the population are dependent on agriculture with 54% in Village A, while the in Village B of 33% population depends on agriculture as most of the population have identified employment opportunity in construction industry in Belagavi city with 48% from Village -B, while only 15% of the respondents are in construction industry from Village -A. Village population have also undertaken carpenter as their occupation with demand for this skill set in Belagavi City, hence from Village – A 16% and Village -B 17% of the population is dependent on carpentry. Individuals in the villages have also identified other occupations which include plumbing, industrial workers etc, the number of respondents in the village -A are 15% and from Village – B 3% respectively. Individual income level and frequency of receiving the income provides consistency in receiving the income for the individuals. In the village, A 54% and 9% from Village - B of the respondents receive monthly income as the occupation is in agriculture and most of the landholder receive monthly wages as per the tradition of both the villages. While respondents working in

construction industry receive daily income with the majority of the individuals from Village B respondent at 47% and 25% from Village – A. Other occupation including carpentry receives weekly income, village A at 21% and 44% from village-B respectively.

Banking Transaction amongst the Respondents

Financial inclusion through banking sector is a crucial factor for inclusion of poor in an economy, recent development in the banking sector of India has provided an opportunity to enhance financial inclusion through banking. The present study has collected response from the respondents with regards to the involvement of respondents in the study in banking. Another dimension is also important for the study with an interaction of banking to insurance investment of the respondents, as the government of India scheme like Jan Dan Yogna provides life insurance with the bank account to the customers; hence the analysis on the involvement of respondents in the banking sector is analyzed in the study. The study has included bank account with respondents, level of savings in the bank, type of banks which include nationalized bank, cooperative bank and private bank and final awareness towards the Jan Dan Yogna saving bank account amongst the respondents.

Table No. 9 - Bank Account with the Respondents

	Yes	Percentage	No	Percentage	Total
Village - A	46	44%	36	38%	80
Village- B	58	56%	60	63%	118
	104	100%	96	100%	200

Table No: 10 - Banking Organization

Bank Account	Nationalised Bank	Percentage	Cooperative Bank	Percentage	Private Bank	Percentage	Total
Village - A	35	55%	8	30%	3	23%	46
Village- B	29	45%	19	70%	10	77%	58
	64	100%	27	100%	13	100%	104

Table No: 11 - Saving in the Bank

Village	Yes	Percentage	No	Percentage
Village - A	33	42%	13	30%
Village- B	46	58%	12	70%
Total	79	100%	23	100%

Table No: 12 - Savings Amount by the Respondents

Savings	Village-A	Percentage	Village -B	Percentage
500-1000	6	13%	9	16%
1000-2000	13	28%	18	31%
2000-3000	12	26%	12	21%
3000 & Above	15	33%	19	33%
	46	100%	58	100%

Table No: 13 - Jan Dhan Account

Village	Yes	Percentage	No	Percentage
Village - A	29	43%	17	49%
Village- B	38	57%	18	51%
Total	67	100%	35	100%

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Savings bank account in a recognised bank by RBI provides safety of savings for poor, the study collected information with regards to savings bank account in the study area, in Village – A 44% have saving bank account while 56% have savings bank account in Village – B. In understanding of not availing savings bank account around 63% in Village -B don't have savings bank account, reason mentioned by the respondent's lack of awareness with regards to bank account and its benefits. While in the study understand the type of banks, respondents availed nationalised banks, cooperative banks and private banks, of the respondents who have bank accounts majority of the respondents with 55% and 45% from both villages believe in nationalised banks, while 30% in village -A and 70% in Village B of the respondents have bank accounts in cooperative bank and bank accounts in private sector bank saving account, respondents have savings in private bank at 23% from the respondents. The respondents asked with regards to savings in the bank account 42% in Village – A indicate that they have savings in the bank account while 58% in Village – B mention having the savings account. While a small percentage of respondents don't have savings in the bank account due to low income and heavy expenses at personal lives. Savings amount by the respondents in the banks showed a trend of Rs. 1000 to 3000 per month. Majority of the respondents in the village – A save around Rs.3000 while 33% respondents save the amount in Village – B. With regards to Jan Dhan Bank Account 57% of the respondents in Village -B have Jan Dhan Bank Account and 43% in Village – A.

Life Insurance as Financial Inclusion

Among all forms of savings, life insurance has a distinctive feature, it permits to distinguish long-term savings from straightforward bequest intentions. The present study conducted to understand the rural population financial inclusion through life insurance, the data analysis in this direction provides information on subscription of rural population to life insurance, awareness and subscription to postal life insurance scheme as Indian post offices are in rural areas of India. Subscription to Pradhan Mantri Jeevan Jyoti Bima Yojana(PMJJB), The study also provides directions with regards to the involvement of individuals in public and private sector life insurance companies, the data collected provides directions with regards to claims and bonus received by the study respondents through life insurance schemes.

Table No: 14- Subscription to Life Insurance

	Yes	Percentage	No	Percentage
Village - A	62	42%	18	30%

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Village - B	84	58%	36	70%
Total	163	100%	23	100%

Table No: 15- Postal Life Insurance Scheme Subscription

	Yes	Percentage	No	Percentage
Village - A	62	53%	22	54%
Village- B	54	47%	19	46%
Total	116	100%	41	100%

Table No: 16- Subscription to PMJJBY

Village	Yes	Percentage	No	Percentage
Village - A	36	51%	10	29%
Village- B	34	49%	24	71%
Total	70	100%	34	100%

Table No: 17- Claims from Life Insurance Policies

Village	Yes	Percentage	No	Percentage
Village - A	27	45%	19	43%
Village- B	33	55%	25	57%
Total	60	100%	44	100%

Life insurance and financial inclusion, the study understands the subscription of the respondents to life insurance policies, 58% in Village – B and 42% in the village – A have the subscription to life insurance. With regards to investment in Postal life insurance by the respondents 53% in Village – A and 47% in Village – B has invested in postal life insurance, while other respondents have not invested they still believe in Life Insurance Corporation of India and few respondents lack awareness with regards to postal life insurance. The awareness and subscription to Pradhan Mantri Jeevan Jyoti Bima Yojana by the respondents 51% of the respondents in village –A and 49% in Village – B out of 163 respondents have invested in Pradhan Mantri Jeevan Jyoti Bima Yojana, the respondents received awareness through television media and radio about the scheme announced by the Government of India. Life insurance claims received by the respondents in Village – A 45% of the respondents have received bonus and in case of death they have received the claims when asked about the process they mention that most of the process was simple as there are agents nominated by insurance companies and they have provided the support required for the claims.

Public Sector insurance companies play a key role in bringing financial inclusion in the insurance sector, however, private insurance companies have also provided better claims and support in life insurance. The study was focused on understanding the role of the public sector and private sector insurance companies in bringing financial inclusion through life insurance. Private sector insurance companies included in the study were ICICI Life Insurance, Bharti Axa, HDFC life insurance and Axis Bank life insurance as these life insurance companies were more prominent in these villages, while public sector insurance

Life Insurance for Rural Customers and Role of Life Insurance for Financial Inclusions

companies included Life Insurance Corporation of India and Postal Life Insurance. The study indicated on financial inclusion through life insurance and included both private and public sector as the focus of the role of life insurance to bring financial inclusion; hence hypothesis was developed to understand the relations between financial inclusions through life insurance in the study area. The following hypothesis was formulated in the study.

Ho: Life Insurance does not provide financial inclusion in rural sector

Ha: Life insurance provides financial inclusion in rural sector

The study applied Chi-Square analysis as the data collected through questionnaire was nominal scale and as per the scaling and measurement appropriate statistical intervention is Chi-Square analysis. The analysis and results of data analysis is as under;

Table No: 18 – Preference towards Insurance Companies by Village – A

Village - A	Frequency	Percentage
Private Sector	21	37.5%
Public Sector	35	62.5%
Total	56	100%

Table No: 18 – Preference towards Insurance Companies by Village – B

Village - A	Frequency	Percentage
Private Sector	40	24.53%
Public Sector	46	28.22%
Total	86	100%

Table No: 19 – Chi-Square analysis on relation between financial inclusion and life Insurance services

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	13.440 ^a	1	.000		
Continuity Correction ^b	11.293	1	.001		
Likelihood Ratio	18.743	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	13.200	1	.000		
N of Valid Cases ^b	56				
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.00.					
b. Computed only for a 2x2 table					

The analysis to understand the relationship between financial inclusions through life insurance is indicated in the analysis which shows that probability is 0.000 in the analysis.

Life Insurance for Rural Customers and Role of Life Insurance for Financial Inclusions

Conclusion: we reject the null hypothesis and accept the alternative hypothesis which indicates that life insurance products provided by private and public sector provide financial inclusions to the rural population. The study to understand the preference towards the life insurance offered by the private sector and public sector, response from the respondents was collected in the study and analysis was conducted independently from both villages. The data was collected through rating scale and hence statistical intervention of one way ANOVA was administered to understand the grouped data in the study. The study formulated following hypothesis for the study to test the level of significance towards preference towards public and private sector insurance companies for subscription of life insurance.

Ho: Respondents from Village – A don't prefer life insurance from private sector over public-sector companies

Ha: Respondents from Village – A prefer life insurance from private sector over public-sector companies

Ho: Respondents from Village – B don't prefer life insurance from private sector over public-sector companies

Ha: Respondents from Village –B prefer life insurance from private sector over public-sector companies

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Strong Agree	34	34	1	0
Agree	26	26	1	0
Neutral	5	5	1	0
Disagree	12	12	1	0
Strongly Disagree	3	3	1	0

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>F crit</i>
Between Groups	0	4	0	6.5535	2.493696
Within Groups	0	75	0		
Total	0	79			

The analysis shows F value at 6.5535 and F critical value at 2.49, which shows that F value, is higher than the F critical value. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. This indicates that respondents prefer public sector insurance policies for life insurance.

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Strong Agree	39	39	1	0
Agree	42	42	1	0
Neutral	4	4	1	0
Disagree	15	15	1	0
Strongly Disagree	6	6	1	0

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>F crit</i>
Between Groups	0	4	0	5.5535	2.461698
Within Groups	0	101	0		
Total	0	105			

The analysis shows F value at 5.5535 and F critical value at 2.46, which shows that F value, is higher than the F critical value. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. This indicates that respondents prefer public sector insurance policies for life insurance.

DISCUSSION AND CONCLUSION

The study on role of life insurance in bringing financial inclusion, the results of the study indicate that respondents with lower income level also have invested in life insurance products, respondents mention that life insurance is important in today's changing life pattern and awareness towards life insurance products has also increased in rural sector of study area. The individuals with higher income level have also invested in higher value life insurance products with a monthly investment of Rs. 1000. Respondents in the village – B have invested higher value life insurance as they have employed in an occupation like construction which provides higher wages. Financial inclusion through the banking sector, most of the respondents have a bank account with leading nationalised banks, as the distance between the city to the village is 20 kms and respondents are aware of the importance of having bank accounts, they have also invested in banking product like recurring deposits and fixed deposits. However few respondents are still not included in the main banking sector as they lack awareness towards the banking products and services. The study on investment in life insurance by the respondents around 60 % of the respondents have invested in life insurance services which include public and private sector insurance companies. Respondents have also been aware of the life insurance services provided by the postal department and have found to be beneficial, with regards to claims and bonus received respondents mentioned about receiving the claims and bonus with ease from both private and public-sector insurance companies. The study on the subscription to Pradhan Mantri Jeevan Jyoti Bima Yojana shows that of the total 163 respondents with life insurance subscriptions 70 respondents have availed the services of life insurance through to Pradhan Mantri Jeevan Jyoti Bima Yojana, which is a notable benefit to the rural population in the study area. The study showed through chi-square analysis on the effectiveness of financial inclusion through life insurance was indicated positive and mentioned that life insurance services have provided financial inclusion in the study area and mentioned that respondents preferred public sector insurance over private sector insurance due to trust created by public sector insurance companies. The study provided directions with regards to improving the growth of life insurance products amongst rural population, directions were related to awareness of life insurance products as few respondents were not aware of endowment scheme of life insurance and inclusion of

health aspects with life insurance lacked awareness. Few of the respondent's response also indicated on providing monthly information about the level of investment in the life insurance services. Life insurance companies which are operating in private sector must increase the advisory base in rural sector which would provide them with better business opportunity and provide financial inclusion through life insurance for the country. The overall analysis shows that life insurance services have provided financial inclusion in the rural sector.

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TESTING THE WEAK FORM OF MARKET EFFICIENCY

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ABSTRACT

This study tests the weak form of market efficiency in Indian Financial Market. Markets are said to follow random walk model. But investors claim presence of different market anomalies. For example, January effect, Size effect, Value effect, Holiday effect etc. However, for this study we choose day-of-the-week effect to test the week form of market efficiency in Indian Markets.

Objective: To empirically test the seasonality in Indian Financial market by studying the days-of-the-week-effect considering Nifty 500 as the benchmark

Methodology: Hypothesis testing to evaluates whether the daily returns on Nifty500 on different weekdays are significantly different and follow a pattern on consistent basis. Daily data series ranging from 2008-2018 is considered. For establishing the relationship and testing the hypothesis, ANOVA has been used with dummy variable technique.

Result: The result proves the presence of the-week-of-the-day effect. There is a significant opportunity for investors to outperform the market by identifying the anomalies present in securities market.

KEYWORDS

EMH (Efficient Market Hypothesis), Stock Market Seasonality, Anomalies

Testing the Weak Form of Market Efficiency

INTRODUCTION

Presence of seasonality is a known fact. From variations in demand to sales to stock prices, its existence can't be denied. Seasonality is the fluctuation occurring periodically in repeated patterns and affecting economic variables. In financial markets, security prices are also said to make patterns at certain time period or based on an event. These patterns can be because of calendar-effect, momentum effect or holiday effect. Similarly, some of the days of the week may provide more returns than others, known as day-of-the-week-effect. Investors try to outperform the market by exploiting these patterns.

However, existence of systematic variation or seasonality violates the investment theory of "Efficient Market Hypothesis" developed by Eugene F. Fama in 1970. It states that stock prices follow random walk model and investors cannot beat the market as stock prices are reflection of all the available information.

This paper aims to empirically explore the weak form market efficiency of Indian Financial Market and the anomaly of week-of-the-day effect.

THEORETICAL FRAMEWORK

Efficient Market Hypothesis

Eugene F. Fama in his theory of Efficient Market Hypothesis talks about information efficiency of market. A market is said to be efficient if asset prices existing in the market incorporate new information quickly, completely and rationally. As a result, prices are reflection of all past as well as present information. In informationally efficient markets it is not possible to earn superior risk adjusted returns consistently.

The process of information incorporation in stock prices takes place because of the mechanism of trade. The speed of this trade provides the baseline for this "quick" estimate. If substantial number of traders are able to make profits with little amount of risk involved then markets are considered to be relatively inefficient. Information which is expected is already priced in market prices. Market responds only to "surprises" and "unexpected information".

Testing the Weak Form of Market Efficiency

Three forms of Efficient Market Hypothesis

Weak Form

As per weak-form efficient market hypothesis, asset prices incorporate all the past market data i.e. information of all the historical price and trading volume. Hence, if markets are claimed to be weak-form efficient, past trading data is already incorporated in current stock prices at a given point of time. Consequently, it is not possible for investors to predict future price changes on the basis of past patterns of prices. Technical analysis is not useful to achieve superior profits.

Semi-Strong Form

In the “semi-strong-form efficient market”, security prices encompass all the information which is available publicly. Publicly available information comprises of financial statement data (earnings, dividends, capital structure, investments etc.) and financial market data (highest intraday prices, closing prices, volume traded, etc.). Therefore, weak-form is a subset of the semi-strong form market efficiency. It can be said that a semi-strong efficient market must also be weak-form efficient. In a semi-strong market, both technical and fundamental analysis are futile. For example, analyzing earnings announcements of companies to identify underpriced or overpriced securities is pointless because the prices of these securities already reflect all publicly available information. No investor has access to information which is not already available to other investors and market participants. Consequently, no special advantage to any investor to outperform the market.

It can be explained with the help of event based example. Let’s take the scenario of announcement of earnings by the company. The company announced earnings are higher than expected. In a semi-strong efficient market, investors would not be able to act on this announcement and earn abnormal returns.

Strong form efficient market

In a strong-form efficient market, prices reflect all of the public and private information. Therefore, Strong form is super set to both weak-form and semi-strong form of market efficiency. In other words, a strong-form efficient market must be both semi-strong efficient and weak-form efficient.

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In this form of market efficiency, efforts of even insiders to achieve abnormal returns by trading on the basis of private information are futile. Here, prices encompass everything ranging from information known to the management of a company regarding financial condition of the company that has not been publicly released, to financial statement data to price and volume data.

Importance for Investors

Investment managers and analysts, as noted, are interested in market efficiency because the extent to which a market is efficient affects how many profitable trading opportunities (market inefficiencies) exist. As per the probability of the existence of opportunities to exploit the unpriced information, investors can choose the type of investment strategy i.e. active or passive As well as the type of analysis to be done, technical analysis, fundamental analysis or both.

Importance to Government and market regulators

EMH holds importance even for Governments and market regulators. How much information market prices incorporates is of importance to complete their objectives. If markets are information efficient, it would imply informative prices — prices which reflect all the available information. Now, in economies which work on market forces, market prices help in determining the companies (and projects) that would obtain capital. If these prices do not incorporate information about a company's prospects efficiently, then it can be the case that funds will be misdirected. On the other hand, prices that are informative would help in directing the scarce resources and funds available to their highest-valued uses. In a way, informative prices thus promote the growth of economy. For a well-functioning financial system, the efficiency of a country's capital markets (which impacts fund raising by businesses) is an important characteristic.

Stock Market seasonality

Seasonality refers to fluctuations in a time series which occurs periodically over a span of less than a year. For example, sales and production departments of woolen clothes or sales of gold during marriage seasons. Similarly, it is said that stock returns depict systematic patterns at certain times of the day, week or month i.e. some days of the week provides lower or higher returns as compared to other trading days, can also be called as days of the week effect. But this existence of seasonality in stock returns violates the aforementioned efficient market hypothesis.

Testing the Weak Form of Market Efficiency

The presence of seasonality in stock returns violates the weak form of market efficiency because equity prices are no longer random and can be predicted based on past pattern. Hence market participants can devise a strategy to extract abnormal profits on the basis of past pattern.

LITERATURE REVIEW

Efficient Market Hypothesis (EMH) talks about market efficiency. But studies also claim the existence of various market anomalies in the form of calendar effect, size effect etc.

Testing stock market seasonality has been a topic of interest for research since a long time for obvious reasons of predicting stock returns and outperforming the market.

The Monday-effect was studied by Kelly in 1930 using three years US market data. He found that Monday is the worst day to go long on stocks. Similar conclusion was identified by Cross in 1973. He concluded that the average return of the S&P 500 on Friday was higher than mean return on Monday.

Pandey (2002) concluded the monthly seasonal effect in returns of BSE Sensex. Also, they identified that Monday returns were higher in comparison to the returns of other weekdays in both BSE and NSE.

Sah studied stock market seasonality on S&P CNX Nifty and Junior Nifty returns. Weekly effect, weekend effect and monthly effect was tested. The study concluded the presence of stock market seasonality. Friday effect was found in Nifty Returns. In case of Nifty Junior, returns were found to be statistically significant on Monday, Wednesday and Friday. The analysis of monthly returns also agreed with the existence of seasonality. The study found that stock returns were statistically significant in the month of July, September and January for Nifty. Stock returns were significant for the month of June and December in case of Nifty Junior.

The results of all of research studied claims that the stock markets are not informationally efficient in one form or the other.

The above conclusion establishes the premise for this research study. Primary objective of the report is to analyze the scope available for investors to outperform the market. The results have been established by testing the information efficiency of Indian stock markets.

Testing the Weak Form of Market Efficiency

RESEARCH METHOD

Research Objective: To empirically study the days-of-the-week-effect in Indian stock market considering Nifty 500 as the benchmark

Data description and sampling method

The analysis is based on secondary data.

Daily Returns on Nifty 500 has been used for the period 18 Jan 2008 – 18 Jan 2018 (2475 data points).

Research Hypothesis

Hypothesis states that returns on all the days of weeks are equal. Symbolically,

$$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4$$

H_1 : at least one β_i is different

The daily returns were calculated and the following regression model was formed:

$$\text{“Returns} = \text{constant} + \beta_1 \text{monday} + \beta_2 \text{tuesday} + \beta_3 \text{wednesday} + \beta_4 \text{thursday”}$$

where:

Monday=1 if trading day is Monday; 0 otherwise

Tuesday=1 if trading day is Tuesday; 0 otherwise

Wednesday=1 if trading day is Wednesday; 0 otherwise

Thursday=1 if trading day is Thursday; 0 otherwise

The constant represents the return of the benchmark category which is Friday.

The equation estimated is

$$\text{Returns}_t = \beta_0 + \beta_1 \text{Mon}_t + \beta_2 \text{Tues}_t + \beta_3 \text{Wed}_t + \beta_4 \text{Thurs}_t + \varepsilon_t$$

Methodology

The study explores the days of the week effect and the months effect on the returns of Nifty500.

Dependent variables are the four weekdays and independent variable has been taken as returns on Nifty500. As the independent variable is categorical in nature but dependent variables are

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quantitative in nature the dummy variable regression technique has been used. This technique is used to quantify qualitative aspects. The variable that takes only 2 values is called dummy variable. While 1 indicates presence of an attribute (a particular weekday in this study), 0 indicates absence. The regression in the model has one intercept and 4 dummy variables, one for each of the first four weekdays. ANOVA model has been used to test the research objective.

To study the days of the week effect, daily returns of Nifty500 has been used as:

$$R_t = (P_t - P_{t-1}) * 100$$

where, R_t is the daily return in period t and P_t and P_{t-1} are the daily closing prices at time t and $t-1$ respectively.

Unit Roots Test

Before applying the regression test, the series is tested for stationarity. If a series is not stationary the results of regression would be spurious. ADF (Augmented Dickey-Fuller test) of stationarity has been used to test the same on AR(1) series.

The p-value for the test came out to be less than 0.0001 which is lower than the significance level of $\alpha=0.05$. Hence, there is no unit root for the series. The series is stationary. It can be concluded that though the daily Nifty500 series is not stationary but the return series for Nifty500 is stationary.

The week-of-the-day-effect has been tested on return series.

DATA ANALYSIS AND RESULT

The equation is tested at 95% confidence level.

$$\text{Returns}_t = \beta_0 + \beta_1 \text{Mon}_t + \beta_2 \text{Tues}_t + \beta_3 \text{Wed}_t + \beta_4 \text{Thurs}_t + \varepsilon_t$$

The results obtained were as follows:

	<i>Coefficients</i>	<i>Returns</i>	<i>p-value</i>
Friday(intercept)	0.063274623	0.063274623	0.415843
Monday	-0.019810232	0.04346439	0.857257

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Tuesday	0.019568806	0.082843428	0.858415
Wednesday	0.029378572	0.092653194	0.788839
Thursday	-0.139263572	-0.07598895	0.207073

Returns are in %age

R²: 0.035

F-Statistic: 0.76

The intercept β_0 , measures the average return for stocks on Friday because there is no dummy variable for Friday.

From the equation and table, it can be estimated that the average return for Friday is 6.33%. Each of the estimated coefficients for the dummy variables shows the estimated difference between returns for that day and returns for Friday.

For example, the estimated additional return on Monday is 1.98 percent lower than Friday. This gives a Monday return prediction of 4.34%.

The low R² of 0.035 suggests that day-of-the-week effect in Nifty 500 returns may not be very important for explaining the returns. The 0.76 F-Test value further indicates the poor fit of the model.

Further, the presence of autoregressive conditional heteroscedasticity (ARCH) effect was identified. Hence, the results were corrected by fitting a benchmark GARCH (1,1) model.

	<i>Coefficients</i>	<i>p-value</i>
Friday(intercept)	-0.141082	0.0429
Monday	0.013184	0.8883
Tuesday	0.232879	0.0130
Wednesday	0.717473	0.0000
Thursday	-0.016722	0.8747

Durbin-Watson: 2.12

After correcting for ARCH effect, the significant seasonality can be seen in Nifty500 across the days. The returns for Tuesday and Wednesday came out to be significantly different.

Testing the Weak Form of Market Efficiency

CONCLUSION

From our regression model, using dummy variable technique, it can be seen that among the 4 dummy variables two are statistically significant and other two have statistically insignificant estimated coefficients.

Hence, it can be concluded that the presence day-of-the-week effect is there in Nifty500.

As two are insignificant, investors are recommended to carefully observe such fluctuations and then base the portfolio strategies calling for different investment weights for Nifty500 on different weekdays.

Managerial Implications

Investment managers have great interest in market efficiency. These implications of market efficiency are important because the value and management of securities are affected by it.

Several types of implications can be drawn based on the evidence on efficient markets: weak-form efficiency is present in securities market and hence investors cannot earn abnormal returns on the basis of past trends and data in price. Semi-strong market efficiency is present and therefore, while analyzing the securities analysts should check whether security prices already reflect that information and also how would any new information affect a security's value. It has been observed that markets are not strong-form efficient as securities laws prevent the exploitation of private information.

In this paper, the weak form of efficiency was tested on daily returns of Nifty500 which was taken as a benchmark for Indian Financial Market.

The imprints of week-of-the-day-effect has been empirically proved. As a result, it is recommended that an investor who aims to exploit the market anomalies, can carefully check for calendar-effect, momentum, holiday effect etc. He can check what form of information efficiency is present in the market and on that basis further choose the investment strategy.

For example, a manager managing a retirement fund can have a strategy to buy securities on Monday (which tends to have negative returns on average) and sell them on Friday. Decision to entrust ones' lifetime saving should be taken with caution. For one thing, the negative Monday

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returns are merely an average, so on any given week, they could be positive. In addition, such a strategy would generate large trading costs. Even more importantly, investors would likely be uncomfortable investing their funds in a strategy that has no compelling underlying economic rationale.

If the market is highly efficient, a passive investment strategy (buying and holding a broad market portfolio) which does not aim for superior risk-adjusted returns is preferred in relation to an active investment strategy. This is because of lower costs (such as transaction costs, regularly updating and checking the portfolio, information-seeking costs etc). By contrast, in a very inefficient market, opportunities may exist to exploit these inefficiencies. There can be a case that market has not priced some information which investor has hence, an active investment strategy would be useful to achieve superior risk-adjusted returns (net of all expenses in executing the strategy) as compared to a passive investment strategy. In inefficient markets, an active investment strategy may outperform a passive investment strategy on a risk-adjusted basis. Understanding of market efficiency characteristics enable evaluation of the opportunities to achieve desired profits and hence ultimately become important for investment analysts and portfolio managers.

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**DETECTING CREDIT CARD FRAUD USING DATA PRE- PROCESSING
TECHNIQUE**

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ABSTRACT

In this research paper, the researcher stated the significant research issues about the credit card fraud which is happening in real world. The researcher used the data mining concept to detect the credit card fraud with the help of regression analysis and cluster analysis which is one the significant components of the data mining techniques. The main of objectives of this researcher paper is to state the problem and solution of credit card fraud detection using data mining techniques with respect to data pre-processing.

KEYWORDS: Data Mining, Data Pre- processing, Regression Analysis, Cluster Analysis.

INTRODUCTION

The drop in price of data storage has given companies willing to make the investment a tremendous resource: Data about their customers and potential customers stored in "Data Warehouses." Data warehouses are becoming part of the technology. Data warehouses are used to consolidate data located in disparate databases. A data warehouse stores large quantities of data by specific categories so it can be more easily retrieved, interpreted, and sorted by users. Warehouses enable executives and managers to work with vast stores of transactional or other data to respond faster to markets and make more informed business decisions. It has been predicted that every business will have a data warehouse within ten years. But merely storing data in a data warehouse does a company little good. Companies will want to learn more about that data to improve knowledge of customers and markets. The company benefits when meaningful trends and patterns are extracted from the data.

Data mining, or knowledge discovery, is the computer-assisted process of digging through and analyzing enormous sets of data and then extracting the meaning of the data. Data mining tools predict behaviors and future trends, allowing businesses to make proactive, knowledge-driven decisions. Data mining tools can answer business questions that traditionally were too time consuming to resolve. They scour databases for hidden patterns, finding predictive information that experts may miss because it lies outside their expectations. Data mining derives its name from the similarities between searching for valuable information in a large database and mining a

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mountain for a vein of valuable ore. Both processes require either sifting through an immense amount of material, or intelligently probing it to find where the value resides.

Although data mining is still in its infancy, companies in a wide range of industries - including retail, finance, health care, manufacturing transportation, and aerospace - are already using data mining tools and techniques to take advantage of historical data. By using pattern recognition technologies and statistical and mathematical techniques to sift through warehoused information, data mining helps analysts recognize significant facts, relationships, trends, patterns, exceptions and anomalies that might otherwise go unnoticed. For businesses, data mining is used to discover patterns and relationships in the data in order to help make better business decisions. Data mining can help spot sales trends, develop smarter marketing campaigns, and accurately predict customer loyalty. Specific uses of data mining include:

1. Market segmentation - Identify the common characteristics of customers who buy the same products from your company.
2. Customer churn - Predict which customers are likely to leave your company and go to a competitor.
3. Fraud detection - Identify which transactions are most likely to be fraudulent.
4. Direct marketing - Identify which prospects should be included in a mailing list to obtain the highest response rate.
5. Interactive marketing - Predict what each individual accessing a Web site is most likely interested in seeing.
6. Market basket analysis - Understand what products or services are commonly purchased together; e.g., beer and diapers.
7. Trend analysis - Reveal the difference between a typical customers this month and last.

Data mining technology can generate new business opportunities by:

Automated prediction of trends and behaviors: Data mining automates the process of finding predictive information in a large database. Questions that traditionally required extensive hands-on analysis can now be directly answered from the data. A typical example of a predictive problem is targeted marketing. Data mining uses data on past promotional mailings to identify the targets most likely to maximize return on investment in future mailings. Other predictive problems include forecasting bankruptcy and other forms of default, and identifying segments of a population likely to respond similarly to given events.

Automated discovery of previously unknown patterns: Data mining tools sweep through databases and identify previously hidden patterns. An example of pattern discovery is the analysis of retail sales data to identify seemingly unrelated products that are often purchased together. Other pattern discovery problems include detecting fraudulent credit card transactions and identifying anomalous data that could represent data entry keying errors.

Using massively parallel computers, companies dig through volumes of data to discover patterns about their customers and products. For example, grocery chains have found that when men go

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to a supermarket to buy diapers, they sometimes walk out with a six-pack of beer as well. Using that information, it's possible to lay out a store so that these items are closer.

AT&T, A.C. Nielson, and American Express are among the growing ranks of companies implementing data mining techniques for sales and marketing. These systems are crunching through terabytes of point-of-sale data to aid analysts in understanding consumer behavior and promotional strategies. Why? To gain a competitive advantage and increase profitability!

Similarly, financial analysts are ploughing through vast sets of financial records, data feeds, and other information sources in order to make investment decisions. Health-care organizations are examining medical records to understand trends of the past so they can reduce costs in the future.

BACKGROUND OF STUDY

R. Gayathri, A. Malathi(2013) focused on the more secure data transfer takes place almost by means of internet. Apart from the corporate companies, publics also started using the network media. At the same time the risk also increases in secure data transfer. One of the major issue among them is credit card fraud detection systems which has a significant percentage of transactions labelled as fraudulent are in fact legitimate. Thus this may delay the fraudulent transaction detection. Due to ever increasing volumes of data needed to be analysed using data mining methods and techniques which are being used more and more. The aim of this study is to analyse the five most frequently used classification techniques in fraudulent detection. Neural Network, Decision Tree, Naïve Bayes, K-nn and Support Vector Machine are taken in to consideration.

Sevda Soltaniziba1, Mohammad Ali Balafa(2015) presents a review of data mining techniques for the fraud detection. Development of information systems such as data due to it has become a source of important organizations. Method and techniques are required for efficient access to data, sharing the data, extracting information from data and using this information. In recent years, data mining technology is an important method that it has changed to extract concepts from the data set. Scientific data mining and business intelligence technology is as a valuable and somewhat hidden to provide large volumes of data. This research studies using service analyzes software annual transactions related to 20000 account number of financial institutions in the country. The main data mining techniques used for financial fraud detection (FFD) are logistic models, neural networks and decision trees, all of which provide primary solutions to the problems inherent in the detection and classification of fraudulent data.

V.Priyadharshini, G.AdilineMacrigha(2012) discussed on there are millions of credit card transactions are being processed and mining techniques are highly applied to amount transaction and processing then the data's are highly skewed Mining such massive amounts of data requires highly efficient techniques that scaled that can be extend transactions are legitimate than fraudulent fraud detection systems were widely used but this document gives the detection

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techniques. This paper contains multi-layered techniques for providing the security for the credit card frauds. The first layer is communal detection and second is Spike detection layers that highly provides security for detection of frauds like probe resistant and mark the illegal user through their input details and mark it in a list. Then it removes attacks like defense in depths on cards and by removing the data redundancy of the attributes and it is being processed with millions of the credit cards.

S.Vimala, K.C.Sharmili(2017) focused on the Credit card usage is increasing day by day for both regular purchases as well as online. In every transaction of credit card, the bank should check the fraud detection. Everywhere, the fraudulent transactions are generated in new ways by the fraudsters. Banking industry, mostly use Data Mining techniques for credit card fraud detection. The detection techniques is mostly based on the methods like Decision Tree, Clustering techniques, Neural Networks and Hidden Markov Model, these are evolved in detecting the various credit card fraudulent transactions. This paper presents the survey of those techniques and identifies the best fraud cases.

Clifton Phua , Vincent Lee(2017) focused on categorizes, compares, and summarizes from almost all published technical and review articles in automated fraud detection within the last 10 years. It defines the professional fraudster, formalises the main types and subtypes of known fraud, and presents the nature of data evidence collected within affected industries. Within the business context of mining the data to achieve higher cost savings, this research presents methods and techniques together with their problems. Compared to all related reviews on fraud detection, this survey covers much more technical articles and is the only one, to the best of our knowledge, which proposes alternative data and solutions from related domains.

Francisca NonyelumOgwueleka(2011) emphasized on Data mining is popularly used to combat frauds because of its effectiveness. It is a well-defined procedure that takes data as input and produces models or patterns as output. Neural network, a data mining technique was used in this study. The design of the neural network (NN) architecture for the credit card detection system was based on unsupervised method, which was applied to the transactions data to generate four clusters of low, high, risky and high-risk clusters. The self-organizing map neural network (SOMNN) technique was used for solving the problem of carrying out optimal classification of each transaction into its associated group, since a prior output is unknown. The receiver-operating curve (ROC) for credit card fraud (CCF) detection watch detected over 95% of fraud cases without causing false alarms unlike other statistical models and the two-stage clusters. This shows that the performance of CCF detection watch is in agreement with other detection software, but performs better

Marwan Fahmi , Khaled Nagati(2016) emphasized on Fraud detection is a crucial problem that has been facing the e-commerce industry for decades. Financial institutions throughout the world lose billions due to credit card fraud, which necessitate the use of credit card fraud prevention.

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Several models have been proposed in the literature, however, the accuracy of the model is crucial. In this paper four fraud detection models based on data mining techniques (Support vector machine, K-nearest neighbors, Decision Trees, Naïve Bayes) were developed and their performances were compared when applied on a real life anonymised data set of transactions (“UCSD-FICO Data Mining Contest 2009”). Four relevant metrics were used in evaluating the performance of the classifiers which are True positive rate (TPR), False Positive Rate (FPR), Balanced Classification Rate (BCR) and Matthews Correlation Coefficient (MCC).

Mitali Bansal and Suman(2014) study on Banking Sector involves a lot of transactions for their day to day operation and they have now realized that their main disquietude is how to detect fraud as early as possible. Due to fulsome advancement in technology, it is imperative for bank to save its money from fraud. The primary motive of this paper is to represent technologies that can be redounding to detect credit card fraud. These technologies will help to diagnose the credit card fraud and give the acquiescent result. The use of these techniques will help to distinguish the credit card transactions generally into two types as legitimate and fraudulent transactions. These techniques are generally based on the Supervised and Unsupervised Learning. The approach on which we are working is based on Unsupervised, in which we train our network so that it is able to detect fraudulent transactions.

Suman and Nutan(2013) focused on the theatrical increase of fraud which results in loss of dollars worldwide each year, several modern techniques in detecting fraud are persistently evolved and applied to many business fields. Fraud detection involves monitoring the activities of populations of users in order to estimate, perceive or avoid undesirable behavior. Undesirable behavior is a broad term including delinquency, fraud, intrusion, and account defaulting. This paper presents a survey of current techniques used in credit card fraud detection and telecommunication fraud. The goal of this paper is to provide a comprehensive review of different techniques to detect fraud.

Syed Ahsan Shabbir, KannadasanR(2013) discussed on Detection of fraud in e-commerce payment system” or “An effective fraud detection system using mining technique” is some more related to Mobile computing. Usage of credit card has increased. As we know credit card has become the most popular mode of payment. Customers can easily purchase goods through online. All amounts is credited or debited through credit card. Online banking is also provided for customers to enable them to easily debit, credit or transfer their amount. Whenever a new customer joins, the administrator check the details provided by the customer and send a mail to the customer giving permission for him/her to access the account. When we are thinking for purchasing some item online, then we’ve to aware of fraud as well. This Paper tells that during transaction, it detect fraud of card and alerts the customer regarding the fraud. The matter here is how we are able to know about the fraud, during the credit card transaction, it detect the fraud and the false alert is being minimized by using genetic algorithm. Genetic algorithms are the algorithms which aim at obtaining better solutions as time progresses. Sometimes we don’t know

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about the payment page is genuine or not and we submit all the card details, so by doing this the fraud have easily got all the information.

RESEARCH ISSUES AND PROBLEM ANALYSIS

How is data mining able to tell you important things that you didn't know or what is going to happen next? That technique that is used to perform these feats is called modeling. Modeling is simply the act of building a model (a set of examples or a mathematical relationship) based on data from situations where the answer is known and then applying the model to other situations where the answers aren't known. Modeling techniques have been around for centuries, of course, but it is only recently that data storage and communication capabilities required to collect and store huge amounts of data, and the computational power to automate modeling techniques to work directly on the data, have been available.

The analytical techniques used in data mining are often well-known mathematical algorithms and techniques. What is new is the application of those techniques to general business problems made possible by the increased availability of data and inexpensive storage and processing power. Also, the use of graphical interfaces has led to tools becoming available that business experts can easily use.

Regression

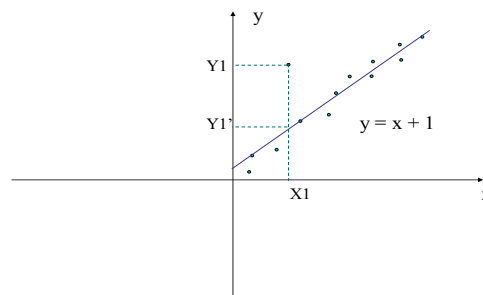


Fig:1.1 Regression Analysis for Data Pre-processing

Some of the tools used for data mining are:

1. Artificial neural networks - Non-linear predictive models that learn through training and resemble biological neural networks in structure.
2. Decision trees - Tree-shaped structures that represent sets of decisions. These decisions generate rules for the classification of a dataset.
3. Rule induction - The extraction of useful if-then rules from data based on statistical significance.
4. Genetic algorithms - Optimization techniques based on the concepts of genetic combination, mutation, and natural selection.

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5. Nearest neighbor - A classification technique that classifies each record based on the records most similar to it in an historical database.

Techniques used for fraud detection fall into two primary classes: statistical techniques and artificial intelligence.

Some of statistical data analysis techniques are:

1. Data preprocessing techniques for detection, validation, error correction, and filling up of missing or incorrect data.
2. Calculation of various statistical parameters such as averages, quartiles, performance metrics, probability distributions, and so on. For example, the averages may include average length of call, average number of calls per month and average delays in bill payment.
3. Models and probability distributions of various business activities either in terms of various parameters or probability distributions.
4. Computing user profiles.
5. Time-series analysis of time-dependent data.
6. Clustering and classification to find patterns and associations among groups of data.
7. Matching algorithms to detect anomalies in the behavior of transactions or users as compared to previously known models and profiles. Techniques are also needed to eliminate false alarms, estimate risks, and predict future of current transactions or users.

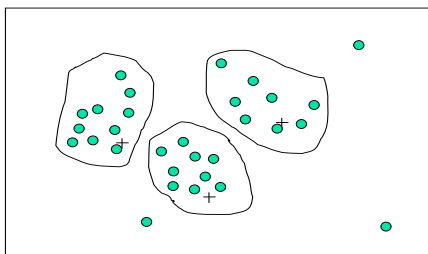
THE FUTURE OF DATA MINING

In the short-term, the results of data mining will be in profitable, if mundane, business related areas. Micro-marketing campaigns will explore new niches. Advertising will target potential customers with new precision.

In the medium term, data mining may be as common and easy to use as e-mail. We may use these tools to find the best airfare to New York, root out a phone number of a long-lost classmate, or find the best prices on lawn mowers.

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Cluster Analysis



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Fig1.2: Cluster Analysis for Outlier

The long-term prospects are truly exciting. Imagine intelligent agents turned loose on medical research data or on sub-atomic particle data. Computers may reveal new treatments for diseases or new insights into the nature of the universe and credit card fraud detection.

CONCLUSION

The researcher is concluded about the research study credit card fraud is one the significant research problem and numbers of customer are facing such kind of problem in real world. The researcher used the data mining techniques and analysis to detect the credit card fraud with the help of regression and cluster analysis. The researcher pointed out the significant research issues and solution with the help of data mining techniques with respect to data pre- processing to refine and clean the data before implementation of any kinds decision making process, without clean and filter data are creating misleading statistics towards decision making process.

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INDIAN BANKING STOCKS: TREND OR RANDOM WALK?
“TESTING WEAK FORM EFFICIENCY OF INDIAN STOCK MARKET BY USING
CNX BANKEX INDEX”

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ABSTRACT

Introduction: The efficiency in stock markets explains the extent to which the stock prices reflects all available information in the market and therefore by relying upon this information one can take decision about buying or selling the stocks. Relevant investment strategies could be adopted after deciding whether the market is efficient or not.

Purpose: This paper is an attempt to test randomness or weak form efficiency of Indian stock market by specially focusing on CNX Bankex index. The study also aims to evaluate the effect of financial crisis on the randomness in the market returns, which is possible by testing market efficiency in weak form.

Methodology : In order to test weak form efficiency of Indian banking industry, daily closing price of CNX Bank Index has been collected from September 2007 to August 2016 from the website of National Stock Exchange. Different parametric and non-parametric tests such as Autocorrelation, Variance Ratio test, Kolmogorov Smirnov test, Unit Root Test and Runs test have been employed in this study.

Results: The study provides empirical insights about weak form inefficiency in Indian stock market. The results shows that Indian stock market does not exhibit weak form market efficiency and thus do not follow random walk in both periods. Further, the recent financial crisis did not impact the behavior of Indian stock markets to a great extent.

Keywords: CNX Bank Index, Indian stock market, Random walk theory, Weak Form of Efficiency and Financial Crisis.

Indian Banking Stocks: Trend or Random Walk?
“Testing Weak Form Efficiency of Indian Stock Market by using CNX Bankex Index”

INTRODUCTION

The economic growth of any country is linked with the financial market of that country and stock market is used as barometer of nation's economy. It is believed that the overall growth of economy depends on how efficiently the stock market performs (Kinjal and Sarla (2013)). Efficient markets have been an area of study of several economists, academicians, research scholars, corporate houses and many more.

Efficiency of stock markets is an essential characteristic to provide fair investment opportunities to all class of investors. It suggests that no investor shall be able to make abnormal gains using any information or by way of analysis. An understanding about the level of efficiency explores avenues for unnatural profits from the stock market. Efficient markets tend to immediately reflect all the information in the value of stocks. Weakly efficient markets showcase randomness in movement of prices. The concept of Efficient Market Hypothesis (EMH) is very essential in the development of stock market and overall economy. If the stock market is efficient then fundamental and technical analysis is a futile exercise as all available information is already reflected in Stock prices. Hence it is not possible to make any extra-ordinary return above the stock market return and that in turn, leads to “Less or No Arbitrage Opportunity” in stock market.

Professor Eugene Fama (1965), defined market efficiency as *"In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value."*

In addition, Fama primarily divided overall efficient market hypothesis in three categories:-

- ✓ **Weak Form Efficiency** which means stock prices already reflect all available information that can be derived by analyzing trading data such as the historical prices, rate of return, trading volume etc.
- ✓ **Semi Strong Form Efficiency** states that security prices adjust rapidly to the release of all publicly available information.
- ✓ **Strong Form Efficiency** asserts that stock prices fully reflect all information which includes past information, publicly available information and even information

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available only to company insiders. This study is conducted to know that whether Indian stock Market is efficient or inefficient particularly at weak level.

This paper attempts to investigate the weak form efficiency of Indian Banking Sector by taking data from NIFTY Bank Index (National Stock Exchange). The Indian banking Industry has been undergoing major changes, reflecting a number of underlying developments. Advancement in communication and information technology has facilitated growth in internet-banking, ATM Network, Electronic transfer of funds and quick dissemination of information. Structural reforms in the banking sector have improved the health of the banking sector. The reforms recently introduced include the enactment of the Securitization Act to step up loan recoveries, establishment of asset reconstruction companies, initiatives on improving recoveries from Non-performing Assets (NPAs) and change in the basis of income recognition has raised transparency and efficiency in the banking system. Spurt in treasury income and improvement in loan recoveries has helped Indian Banks to record better profitability. In order to have a good benchmark of the Indian banking sector, India Index Service and Product Limited (IISL) has developed the Nifty Bank Index (see www.nseindia.com).

Nifty Bank Index is an index comprised of the most liquid and large capitalised Indian Banking stocks. It provides investors and market intermediaries with a benchmark that captures the capital market performance of Indian Banks. The index has 12 stocks from the banking sector which trade on the National Stock Exchange. The Nifty Bank Index represent about 15.6% of the free float market capitalization of the stocks listed on NSE and 93.3% of the free float market capitalization of the stocks forming part of the Banking sector universe as on March 31, 2016. The total traded value for the last six months ending March 2016 of all the Index constituents is approximately 12.5% of the traded value of all stocks on the NSE and 88.1% of the traded value of the stocks forming part of the Banking sector universe¹. Hence it is noteworthy to study the efficiency of Indian Banking Stocks/Index.

In addition to above, stock market efficiency is also checked for different sub periods that is “After and During Financial Crisis”. The present paper distinguish itself from the previous studies by fragmenting the overall period of 2007-2016 into two different sub periods on the basis of global financial crisis which took place in the year 2007. That means weak form efficiency of stock market is also checked for different sub periods i.e. “during and after

¹ See, www.nseindia.com.

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Financial Crisis” It has been observed that in the Crisis like situation even slightly negative news is discounted heavily in the stock market and in Bull market situation even slightly positive news leads to unprecedented price rise. This paper tries to capture the former part and check whether the fragmentation of period alters the conclusion of market efficiency. Most of the previous research papers were focused on studying weak form efficiency for particular time duration but this research paper is not checking weak form efficiency for particular time duration, it investigates weak form efficiency “over a period of time” so that the behavior of Stock market regarding efficiency can be observed for two different periods.

The current paper would be helpful to Investors, Policy Makers, Security Analysts, Stock exchanges and Other Regulatory Authorities.

The remaining paper has been organized as follows. Section II gives need for the study, section III briefly explains the review of past literature, sections sections IV and V are devoted to objective and hypothesis part respectively, section VI clarifies the database and research methodology adopted, section VII discusses results and analysis and finally section VIII concludes with the findings of the study.

Need for the Study: Most of the studies in the above literature have revealed the information that the stocks of banking sector is playing a dominant role in the market movement and influence the performance of stocks of other sectors too. But no study has been conducted so far by considering the index of banking sector as a base to examine its efficiency in processing the information. Hence the researcher has taken this topic to test the weak form of efficiency of Indian stock market by using Bank CNX NIFTY Index.

LITERATURE REVIEW

Numerous studies have been conducted to test the informational efficiency in various speculative markets. Three important surveys by Fama (1970), (1991) and Dimson and Mussavian (1998) reviewed several aspects of the market efficiency debate. These studies apply to asset prices in different speculative markets in general rather than to futures prices specifically. Fama (1965) conducted an extensive study to evaluate the informational efficiency of stock prices. Although prior to this study, numerous evidences (viz, Working (1934), Kendall and Hill (1953), Osborne (1959), Alexander (1961), and Cootner (1962)) were available, which evaluated the informational efficiency of different speculative markets, but Fama’s study published in Journal of Business considered different dimensions of

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informational efficiency of price behavior in speculative markets (specifically stock market). Later on number of studies were conducted in this regard in different economies (including both developed as well as developing and underdeveloped economies) covering different speculative markets viz; commodity market, stock market, foreign currency market, futures and options market and others.

There are two different schools of thought, the first has declared the presence of weak form market efficiency in some international stock markets but at the same time few researchers have not found any evidence of random walk in same or the other stock markets at the global level. At international level, there are a number of studies which supported weak form market efficiency (see, Sharma and Kennedy (1977), Barnes (1986), Annuar et al. (1991), Lee (1992), Urrutia (1995), Chappell (1997), Karemera et al. (1999), Rahman et al. (2004), Omran et al. (2006), Asiri (2008), Chigozie (2009) and Mahmood et al. (2010)). Further, there are number of studies wherein researchers have tried to test the Indian stock market's behavior in terms of stock market efficiency (see Bhaumik (1997), Rao and Shankaraiah (2003), Samanta (2004) and Sharma and Mahendru (2009), Ramasastri (1999) and Pant and Bishnoi (2002)). On the basis of the test results, they have concluded that Indian stock market follows random walk and thus efficient in weak form.

The other school of thought that clearly has observed and rejected weak form of efficiency of stock market in various countries (see, Gandhi et al. (1980), Laurence (1986), Parkinson (1987), Lo and MacKinlay (1988), Frennberg and Hansson (1993), Al-Loughani (1995), Darrat and Zhong (2000), Abraham et al. (2002), Filis (2006), Mobarek et al. (2008) and Uddin and Khoda (2009)). Amongst number of studies conducted on stock markets in India that have rejected the null hypothesis for weak form market efficiency are Choudhari (1991), Poshakwale (1996), Ahmad et al. (2006) and Gupta and Basu (2007).

In nutshell, a lot of literature is available on weak form of efficiency of markets at international level. At national level, a few studies have been conducted to check the randomness in market but focus mostly on Sensex or Nifty Index.

OBJECTIVES OF STUDY:

The current study is an attempt to test randomness or weak form efficiency of Indian stock market by specially focusing on CNX Bankex index and another objective is to test the effect

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of financial crisis on the randomness in the market returns, which is possible by testing market efficiency in weak form. In short, following objectives have been decided for study:

1. To investigate whether Indian Stock Market is weak form efficient or not.
2. To empirically test whether Indian Stock Market follows random walk or not.
3. To examine whether the “Time period Of Crisis” alters the conclusion of efficiency of the stock market.

Hypothesis: Based on objectives following are the null hypothesis for present study:

1. H_0 : Indian Banking Sector is weak form efficient market.
2. H_0 : Indian Banking Sector follows random walk.

DATABASE AND RESEARCH METHODOLOGY

In order to test weak form efficiency of Indian banking industry, daily closing price of CNX Bank Index has been collected from September 2007 to August 2016 from the website of National Stock Exchange.

Rationale for bifurcation of different periods: To analyze the impact of 2008 crisis, division of the overall period is done accordingly that is ‘After, and During Crisis’.

The time period is divided as under

1. 2007-2011(During Crisis)
2. 2011-2016 (Post Crisis)

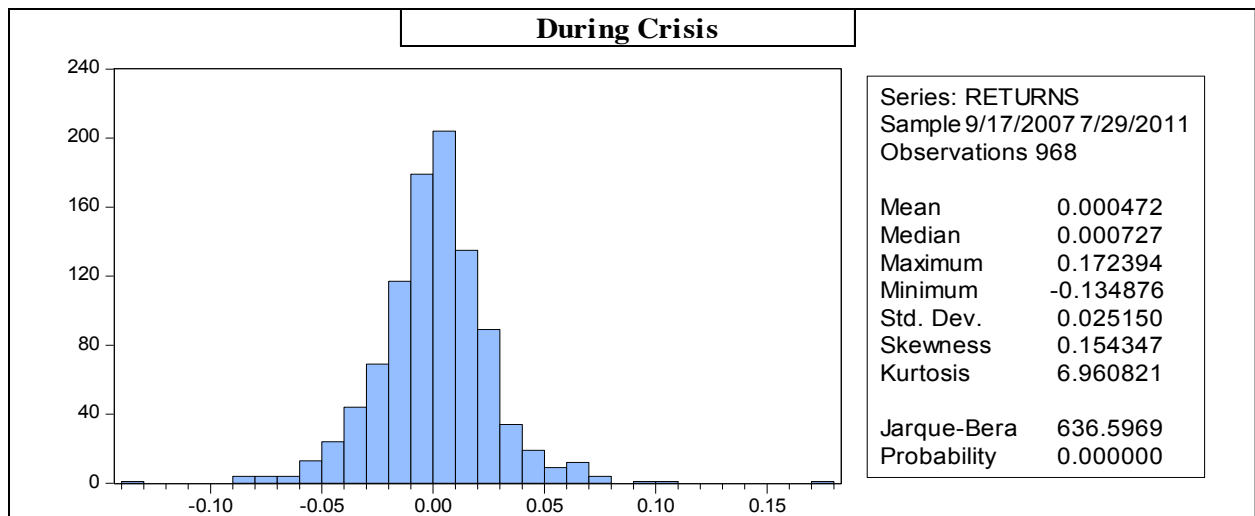
Tests Applied: Different statistical tools have been used to test the hypothesis. Statistical tools like Descriptive statistics, Kolmogorov Smirnov test, Runs test, Autocorrelation test and Variance Ratio test are used for analysis.

EMPIRICAL RESULTS:

- **Descriptive Statistics:** One of the basic assumption underlying EMH and Asset pricing model is normality of data. In normal distribution only two parameters namely mean and variance are used to describe the distribution. Jarque Bera Test is used to test normality of data. In the data, when Skewness is zero, Kurtosis is three, and JB is zero, then it is perfectly normally distributed. Coefficient of Variation shows the volatility in data.

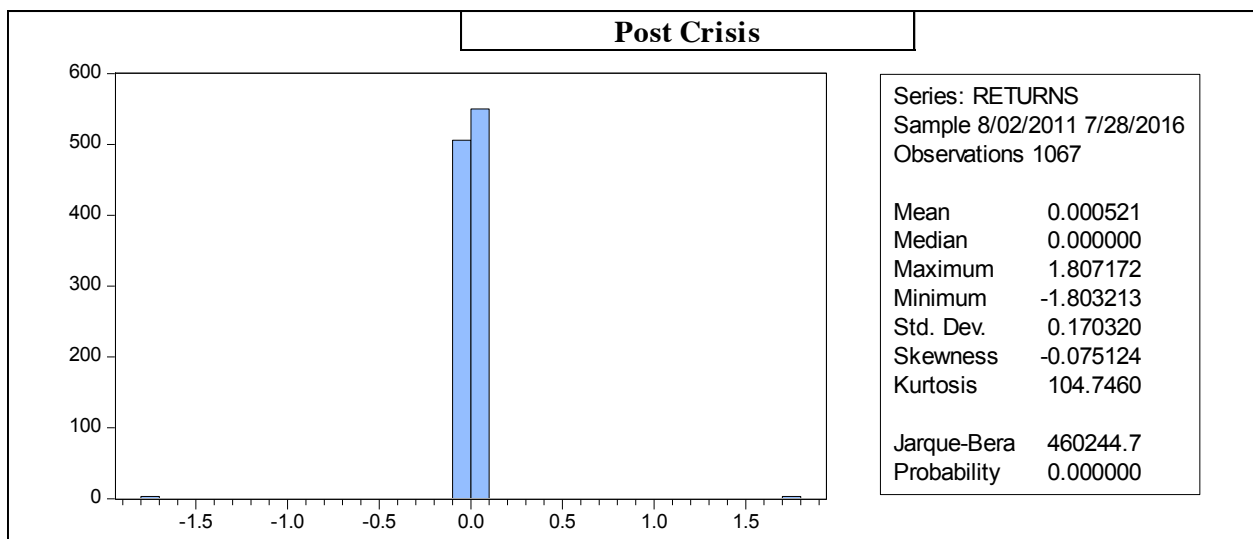
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Table 1: Descriptive statistics (During crisis)



Source: NSE and SPSS Software

Table 2: Descriptive Statistics (After crisis)



Source: NSE and SPSS Software

Returns during and post crisis do not follow normal distribution as the value of probability is less than 0.01 at 1 percent level of significance and null hypothesis of normal distribution for both the markets are therefore rejected.

- **Kolmogorov-Smirnov Goodness of Fit Test and analysis:** KS test is a non-parametric test which is used to determine whether the data follow particular distribution (Uniform, Normal or Poisson). It is based on the comparison of samples' cumulative distribution against the standard cumulative function for each distribution. Here both normal as well as uniform distributions are used.

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Table 3: One-Sample Kolmogorov-Smirnov Test Results

During Crisis			Post Crisis		
One-Sample Kolmogorov-Smirnov Test			One-Sample Kolmogorov-Smirnov Test		
		Returns			returns
N		968	N		1067
Normal Parameters ^{a,b}	Mean	.0005	Normal Parameters ^{a,b}	Mean	.0005
	Std. Deviation	.02515		Std. Deviation	.17032
	Most Extreme Differences			Most Extreme Differences	
	Absolute	.054		Absolute	.392
	Positive	.050		Positive	.390
	Negative	-.054		Negative	-.392
Kolmogorov-Smirnov Z		1.692	Kolmogorov-Smirnov Z		12.819
Asymp. Sig. (2-tailed)		.007	Asymp. Sig. (2-tailed)		0.000
a. Test distribution is Normal.			a. Test distribution is Normal.		
b. Calculated from data.			b. Calculated from data.		

Source: NSE and SPSS Software

The p-values during and post crisis is significant at 1% level of significance and hence we reject the null hypothesis. There is no randomness in the returns and it is not weak form efficient.

- **Runs Test and analysis:** This is a Non-Parametric test which is used in testing weak form efficiency of stock market (Bradley 1968). This test emphasizes on the direction of change (That is sign, whether positive, negative or neutral) and does not consider the change in value. Runs test ignores the type of distribution followed in time series. It is used to check the randomness in time series under consideration.

Table 4: Runs Test Results

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During Crisis		Post Crisis	
Runs Test		Runs Test	
	Returns		returns
Test Value ^a	.00	Test Value ^a	0.00
Cases < Test Value	484	Cases < Test Value	511
Cases >= Test Value	484	Cases >= Test Value	556
Total Cases	968	Total Cases	1067
Number of Runs	453	Number of Runs	494
Z	-2.058	Z	-2.427
Asymp. Sig. (2-tailed)	.040	Asymp. Sig. (2-tailed)	.015
a. Median		a. Median	

Source: NSE and SPSS Software

The p-values during and post crisis is significant at 1% level of significance and hence we reject the null hypothesis. There is no randomness in the returns and it is not weak form efficient

- **Autocorrelation and analysis:** Autocorrelation measures the correlation between two members of a time series separated by lags. It also tests whether the correlation coefficients are significantly different from zero. The autocorrelation exist in data then it means market is not efficient as data will show some pattern and prices can be predicted. For null hypothesis to be true, observed serial correlation should not be statistically significant, i.e., it should not be greater than three times the standard error of coefficients.

The p-values during and post crisis is significant at 1% level of significance and hence we reject the null hypothesis. There is no randomness and autocorrelation in the returns and it is weak form inefficient

Table 5: Autocorrelation in the Bank Index

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During Crisis							During Crisis						
Date: 08/28/16 Time: 23:57							Date: 08/29/16 Time: 11:51						
Sample: 9/17/2007 7/29/2011							Sample: 8/02/2011 7/28/2016						
Included observations: 968							Included observations: 1067						
Auto	Partial	Corr	AC	PAC	Q-St	Prob	Auto	Partial	Corr	AC	PAC	Q-St	Prob
		1	0.13	0.13	16	0	**	**	1	-0.3	-0.3	93.8	0
		2	0.01	-0	16.2	0	*	**	2	-0.2	-0.3	137	0
		3	-0	-0	16.2	0	*	**	3	-0.1	-0.3	148	0
		4	-0	-0	17	0		*	4	0.09	-0.2	157	0
*	*	5	-0.1	-0.1	30.4	0			5	0.11	-0.1	171	0
		6	-0.1	-0	33.2	0	*	*	6	-0.1	-0.1	181	0
		7	0	0.01	33.2	0			7	0	-0.1	181	0
		8	0.07	0.07	38.6	0			8	0	-0	181	0
		9	0	-0	38.7	0	*	**	9	-0.2	-0.4	225	0
		10	0.02	0.01	39.1	0		*	10	0.2	-0.1	269	0
		11	0.03	0.02	40.2	0			11	0.2	0.14	311	0
		12	0.02	0.02	40.6	0	**	**	12	-0.3	-0.3	406	0
		13	-0	0	40.7	0		*	13	-0	-0.1	406	0
		14	0.04	0.04	42	0		*	14	-0	-0.2	406	0
		15	0	-0	42	0			15	0.31	0.04	508	0
		16	0.05	0.05	44.5	0	*		16	-0.1	0.03	520	0
		17	0.02	0.02	45.1	0	*		17	-0.1	0.12	530	0
		18	-0	-0	45.3	0			18	0	0.06	530	0
		19	-0.1	-0	47.8	0			19	0	0.11	530	0
		20	0	0.01	47.8	0			20	0	0.12	530	0
		21	0.01	0.02	47.9	0		*	21	-0	-0.1	531	0
		22	0.02	0.02	48.2	0			22	0	0.02	531	0
		23	-0	-0	48.4	0	*		23	-0.1	-0.1	540	0
		24	0.01	-0	48.4	0			24	0.09	0.09	550	0
		25	0.02	0.01	48.7	0			25	-0	-0	550	0
		26	0.03	0.04	49.7	0			26	0.1	0.02	561	0
		27	-0	-0	51.8	0	*	*	27	-0.2	-0.1	604	0
		28	0.05	0.05	54.1	0			28	0.1	0.02	615	0
		29	0.01	-0	54.2	0			29	0.1	0.16	625	0
		30	-0	-0	54.8	0	*	*	30	-0.1	-0.2	635	0
		31	-0	0.01	54.9	0.01			31	0	-0	635	0
		32	0.04	0.03	56.4	0.01			32	-0	-0	635	0
		33	0.02	0.02	56.9	0.01		*	33	0.01	-0.1	635	0
		34	0.02	0.02	57.2	0.01			34	0.01	-0	636	0
*	*	35	-0.1	-0.1	64.4	0			35	-0	-0	636	0
		36	0.02	0.03	64.7	0			36	0	-0	636	0

Source: NSE and SPSS Software

- **Unit Root Test:** Unit Root Test is used to test the randomness/ stationarity in the return of the bank index. The returns have unit root and hence we reject the null

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hypothesis. There is no randomness/non-stationarity in the returns and it is not weak form efficient

Table 6: Unit Root Test

During Crisis			During Crisis		
Null Hypothesis: RETURNS has a unit root			Null Hypothesis: RETURNS has a unit root		
Exogenous: Constant			Exogenous: Constant		
Lag Length: 0 (Automatic - based on SIC, maxlag=21)			Lag Length: 19 (Automatic - based on SIC, maxlag=21)		
	t-Statistic	Prob.*		t-Statistic	Prob.*
Augmented Dickey-Fuller test:	-27.3092	0	Augmented Dickey-Fuller test:	-7.42177	0
Test critic: 1% level	-3.43689		Test critic: 1% level	-3.43638	
5% level	-2.86432		5% level	-2.86409	
10% level	-2.5683		10% level	-2.56818	
*MacKinnon (1996) one-sided p-values.			*MacKinnon (1996) one-sided p-values.		
Augmented Dickey-Fuller Test Equation			Augmented Dickey-Fuller Test Equation		
Dependent Variable: D(RETURNS)			Dependent Variable: D(RETURNS)		
Method: Least Squares			Method: Least Squares		
Date: 08/29/16 Time: 12:25			Date: 08/29/16 Time: 11:50		
Sample (adjusted): 9/19/2007 7/29/2011			Sample (adjusted): 8/30/2011 7/28/2016		
Included observations: 967 after adjustments			Included observations: 1047 after adjustments		

CONCLUSION:

Table 7: Summary of the Results of Various Tests

Period	Jarque Bera Test	KS Test	Runs Test	Autocorrelation	Unit Root Test
2007-2011	Not Normal	Not Normal	Not Random	Not Random	Not Random
2011-2016	Not Normal	Not Normal	Not Random	Not Random	Not Random

In nutshell, it is observed that Indian stock market does not follow random walk and hence it is not weak form efficient for all periods. Hence null hypothesis of weak form efficiency is rejected for all periods. The basic question in this research paper was that whether the crisis period alters the conclusion of market efficiency for Indian stock market. Most of the statistical tests confirm that as such the “period of crisis” is not having any significant impact on efficiency of stock market.

Thus, there are possibilities of earning extra income in Indian markets because abnormal returns are possible only when the market is inefficient as the future prices can be predicted using the past information. Thus, observation and the use of the past behavior of stock price

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movement may help investors in generating excess profits. But in the hindsight, the fragmentation of data on the basis of crisis has given a new dimension to this research as this bifurcation has helped in understanding the efficiency of Indian stock market in more comprehensive manner. Different parametric and non-parametric tests such as Autocorrelation, Kolmogorov Smirnov test and Runs test are used in this study.

The **practical implication** of inefficiency in stock markets is that, it may lead to the variation in the expected returns of the securities. This is because the changes in prices would be more than expectation on arrival of some new information in the market. In the state of inefficiency, the share prices may not reflect the fair value of the stocks because of which the companies with lower fair value of shares may find it difficult to raise capital, which may disturb the investment pattern in the country in long-run. The condition of weak form market inefficiency may have positive impact on the financial innovation because the opportunity of earning abnormal profit may hike the short-run investments in the country.

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AN OVERVIEW AND ANALYSIS OF INDIAN FUTURE COMMODITY MARKET

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ABSTRACT

The main purpose of this study is analyzing the commodity future market in India. About two by third of Indian population depends on agriculture directly or indirectly, that's why there is a huge potential in Indian commodity market. Organized commodity future contracts started in India as early as 1875. However government of India banned derivative trades by mid 1960's. Commodity future markets were absent in India till 2003, when it made the restart in Indian market. Since then there has been a tremendous growth in Indian commodity markets in terms of revenues and trades. However there has been a lot of criticism about derivative market. Commodity future markets have been accused of huge speculations and manipulations. Many feared that this would be harmful to the healthy functioning of commodity markets. Pervasive market abuse and manipulation has badly affected the market integrity. As per the Forward Control Act (FCA, 1952), future commodity markets in India had been regulated by separate government body known as "Forward Market Commission" (FMC). In 2015 FMC was merged with SEBI (Securities and Exchange Board of India).

The study undertaken below has been outlined on the theme of commodity market's functioning in India. The paper has been divided into four parts: Background of the commodity future market, Development and Trends in commodity future today, Challenges and other side of commodity future market and Conclusion.

An overview and analysis of Indian Future commodity market

Key words: Commodity, Future, Trends, Manipulation, Forward Market Commission, SEBI.

INTRODUCTION

We all know about spot market (eg. Mandi market). Spot market is the place where producer of the commodity (eg. Farmer, manufacture etc) meet with the buyer i.e trader. Traders buy from these producers and sell it further. These type of contracts are settled by delivery of commodity to the respective person.

But another type of trade is also there which is called as future contract (trade). A future contract is a legal agreement to buy or sell a particular commodity at a predetermined price at a specified time in a future. These contracts are settled by delivery or cash at future date. Future contracts are generally traded on commodity exchanges (eg. MCX.NCDEX). Such market where future commodity contracts are traded is called future commodity market.

There are two main purpose of future market

- Price discovery
- Price risk management

Government gave permission to restart future market in India was to benefit farmers. With the proper functioning of future market, farmers can check the prices of the commodities in future and accordingly can decide what to produce and what not. Farmers can also hedge against the fluctuation of prices in the market. They can safeguard themselves by locking deal of selling produced commodity at predetermined price at specified date in future. This prevents farmers from price decline in future. These are known as price discovery and price risk management. These are the main purpose with which future market was started in India.

Instead of recent growth and development in commodity future market in India, future market is facing various challenges which are directly harming the main purpose of commodity future market.

Development and challenges in the future market have been discussed subsequently in the report.

REVIEW OF LITERATURE

This study consists of comprehensive review on commodity exchanges. Sufficient amount of literature on commodity future markets in India in general gives the explanation for evolution and development of commodity exchanges in India.

G Naresh, S Thiagrajan and S mahalakshmi (2015) in their paper “Price grouping of futures on commodity indices in India” have investigated into present status and development in commodity market in India. The study has tried to compare spot and future prices of commodity. The study has also tried to reveal the amount of speculation in the future market with the help of analysis, leaving behind its true function of price discovery and price risk management.

Neeraj Mahajan and Kavaljit Singh (2015) in his study “Beginner’s guide to Indian commodity futures markets” have studied the background of Indian commodity market. Study is helpful in pointing out the purpose and function of commodity future. The study also tries to showcase the challenges in front of the future market. Various detrimental activities which are harmful to the functioning of commodity future market have been showcased in the study.

Dr. Shree Bhagvat and Angad singh Marvi (December 2015) in his paper “Commodity Exchanges in Commodity Markets of India: An Analytical Study of National Commodity Exchanges” has studied the evolution and organizational structure of commodity exchanges in India. The paper also depicts the performance of commodity exchanges in India over the period.

Shree Bhagvat, Angad singh Marvi, Ritesh Omre and Deepak Chand in study called “A Study of Historical Background of Indian Commodity market” have extensively studied the history of commodity future markets in India. The study mainly focuses on history and development of commodity market in the modern age.

Neelanjana Kumari(December 2014) in her paper “Recent Trends in Commodity Markets of India” has highlighted the trend in the commodity markets. Study also tries to show the working of commodity market.

Rohit Bansal, Varsha Dadhich and Naveed Ahmad(August 2014) “Indian Commodity Market- A Performance Review” has studied the performance of the Indian commodity market.

Objective of the Study

An overview and analysis of Indian Future commodity market

- To study the background of commodity future market in India.
- To examine the trends and development in commodity future today.
- To analyze challenges and major issues in commodity future market in India.

Background of commodity future markets

BACKGROUND:

India is one of the top producers of agricultural commodities and major consumer of bullion (gold and silver) and energy product.

Future trading has been prevalent in India for a very long time. There are very strong evidences to believe that commodity future could have existed in India for 1000 of years. Reference to such market in India appear in ancient literature called “kautilya, Arthashastra”

The first organized commodity market in was set up in 1875 as “Bombay Cotton Trade Association. After that for a longer period of time there were many markets established for different commodities like Edible Oil, Seeds, Raw Jutes and Jute Goods etc. after the independence the stock exchange and future markets were brought under union list. In December 1952, “Forward Control Act” (FCA) was enacted and “Forward Market Commission”(FMC) was established in 1953 to regulate the commodity market in India.

There were 3 main bodies which were responsible for the smooth regulation of commodity market in India which are as follows

1. Central government of India
2. Forward Market Commission (FMC)
3. Commodity exchanges

Around 1958 future trading was commenced and few exchanges were registered in various parts of India.

Next jolt to the industry came in 1960's. Many years of draughts in 1960's had forced farmers to default on forward contracts. The situation was criticized to be badly exploited by traders and speculators. This caused the prices to reach sky high not benefitting to farmers.

An overview and analysis of Indian Future commodity market

As a result future trades were completely banned by government in 1966. Commodity future market in India was in dormant stage for around three decades after that.

Good news for the future trading came in post liberalization. After liberalization World Bank and United Nation Conference on Trade and Development (UNCTAD) advised Indian government in favor of commodity future trading. In 1993 Indian government set up a committee under a chairmanship of Prof. K.N Kabra. Finally in 2003 government permitted future in commodities. Many exchanges were registered for the future trading in India around 2002-03.

At present mainly three national exchanges and three commodity specific regional exchanges are there in India.

ORGANIZATIONAL STRUCTURE:

In case of commodity trading there are two forms in which trading takes place in India.

First one is 'Over The Counter' (OTC) which is basically a spot market where buyer and seller meet and transaction happen on the basis of cash and delivery. In OTC participation is restricted to people who are involved with commodity such as farmers, processors, wholesalers etc.

Second form of trading is exchange based trading where majority of the derivative (future) trading takes place. It is done with help of online system.

MARKET PARTICIPANTS:

1. **Daily traders:** These are the traders who take positions for a day or a short period of time and try to cash in on those positions.
2. **Hedgers:** Hedgers are the players who are exposed to the risk and are specially producer or consumer who wish to transfer the risk on to the markets which is willing to take risk.
3. **Speculators:** These are the players who have no genuine commercial business to underlying assets. Their aim is to profit from price movements.
4. **Arbitraders:** These are the people who buy and sell to make money on price differentiation across different markets.

Key Functions of Future Market:

There are two main functions of future market

An overview and analysis of Indian Future commodity market

- **Price Risk Management:** This is also known as Hedging. One of the main reasons behind opening future markets in India was benefiting farmers, producers. In future market farmers can hedge against the risk of price fluctuation by transferring risk on market. This was the most important function of commodity future market i.e price risk management
- **Price Discovery:** Future markets are suppose to give an fair idea of commodity prices with valid supply and demand forces in act. This helps farmer getting idea and deciding what to produce next.

DEVELOPMENT AND TRENDS IN COMMODITY FUTURE

Since the establishments of various commodity exchanges in India commodity trading in India has witnessed a tremendous growth in terms of volumes and values (turnover). All over the world commodity market is far bigger than stock market in terms of value traded. India has immense potential to become big player in commodity market. India is one of the top producers of a large number of commodities ranging from agricultural to non-agricultural products, with a long history in its trading market. These markets have been experiencing ups and downs since its inception, but with strengthening of the working our country has been able to bring a degree of stability to this market. It has been progressing in terms of technology, transparency and trading activity with the removal of government protection from a number of commodities

At present commodity future market in India comprises of three national exchanges as follows

- ▶ Multi Commodity Exchange (MCX)
- ▶ National Commodity and Derivative Exchange (NCDEX)
- ▶ National Multi-Commodity Exchange (NMCE)

And three commodity specific regional exchanges

- ▶ COC Hapur.
- ▶ The Rajkot Commodity Exchange
- ▶ IPSTA Kochi

113 commodities have been permitted for trading. 38 commodities have been actively traded at these exchanges. Out of these 38 commodities 28 are agricultural and 10 are non-agricultural.

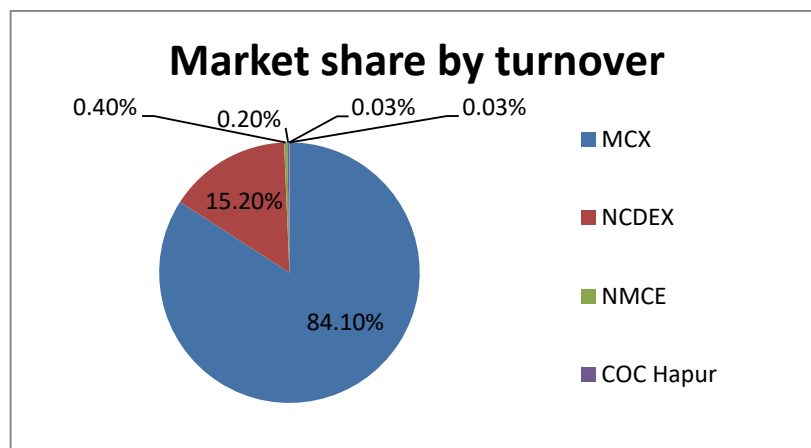
An overview and analysis of Indian Future commodity market

Globally, in 2015-16, commodity prices continued on a declining trend of past three years, reinforced by a slowdown in growth in emerging and developed economies that are net exporters of commodities. Waning growth prospects of China, which has been largest consumer of many industrial commodities for the last one and a half decades, accentuated the downward pressure in prices of major commodity groups, especially metals. Oil prices declined mostly on account of news about strong supply magnified by risk-off behavior in financial markets. Food prices declined as a result of a record high harvest and unfavorable weather triggered by El Niño.

Now let's have a look at market share of commodity exchanges across India

► Market share of commodity exchanges in India

Figure 1 Exchange wise share in commodity future segment turnover



Source: www.sebi.com

MCX with 84.10% market share is India's largest commodity exchange. After that NCDEX with 15.20% market share stands as second largest commodity exchange in India. Majority of the commodities traded on MCX are non-agricultural while around 96% of the commodities traded on NCDEX are agricultural commodities. Majority of the future trades all over India are done through MCX and NCDEX covering around 98% of the market. Government's efforts are in this direction to put a common exchange for a nationwide platform.

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► Trends in Commodity Futures at national exchanges in India (by value turnover)

Exchanges	2011-12 (Value in Cr.)	2012-13 (Value in Cr)	2013-14 (Value in Cr)	2014-15 (Value in Cr)	2015-16 (Value in Cr)
MCX	15597095	14881057	8611449	5183707	5634194
NCDEX	1810210	1598425	1146328	904063	1019588
NMCE	268350	176570	152819	36040	29368

Table 1 value (turnover) data

► Trends in Commodity Futures at national exchanges in India (by volume)

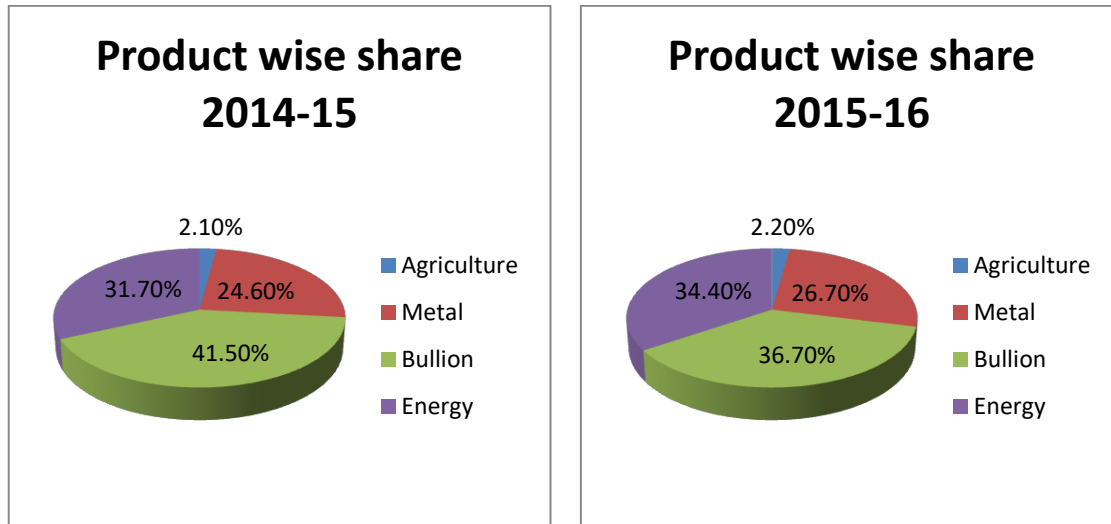
Exchanges	2011-12 (Volume in million ton.)	2012-13 (Volume in million ton)	2013-14 (Volume in million ton)	2014-15 (Volume in million ton)	2015-16 (Volume in million ton)
MCX	882.3	1001	530	480.3	911.2
NCDEX	417.5	356	274.5	194	217.3
NMCE	34.7	24.8	31.0	8.3	6.02

Table 2 volume data

From the data given in Table 1 and Table 2 we can say that till 2015 there is a decline in the turnover and volume across the market and exchanges due to global slowdown in recent years. China's slowdown in growth (biggest consumer of many industrial commodities), increased supply of crude oil on global level are one of the reasons of such decline. But in 2016 many exchanges have shown upward trend which shows huge potential in the market. Whatever be the trend but the huge numbers traded in terms of turnover and volume shows the spread of the market. Commodity future markets are bigger than equity markets. It has a huge potential and capability to grow. For India to become biggest player in commodity it is important for these future markets to become strong. These markets are upgrading itself in terms of technology, transparency and other aspects. With the government support it can achieve tremendous success benefitting economy as a whole.

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► Product segment wise share in turnover at MCX



Source: www.sebi.com

From the MCX data above it is clear that bullion (gold and silver) has been the most influential commodity on MCX Exchange in terms of turnover. The other influential commodities are Energy (crude oil and natural gas) and Metal.

While 96% and 100% of the commodities traded on NCDEX and NMCE are agricultural respectively.

CHALLENGES AND SEVERE ISSUES IN COMMODITY FUTURE

Commodity future in India has huge potential to grow and it has benefitted Indian commodity market on a global level. But Indian commodity future market is also grappled with some serious issues.

First evidence of such issues can be seen from the fact that on the recommendation of “Kabra Committee” government of India permitted future trading in India in 2003. However, it is important to note that the Kabra Committee’s recommendation not to allow futures trading in

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wheat, pulses, non-basmati rice, sugar, coffee, tea and other food products was not accepted by the government. The National Agricultural Policy (2000) also recommended the removal of price control and use of futures trading in agricultural commodities. Despite the strong recommendation of the Guru Committee, that “all the commodities are not suited for futures trading,” the central government went ahead to open up forward trading in 54 prohibited commodities like wheat, rice, sugar and pulses. Hence, it is clear from these developments that the government succumbed to the pressures of powerful lobbies and opened up important new avenues of profit making to speculators and traders.

‘High speculation’ is another challenge regulation will have to deal with. Unnecessary speculation leads to higher commodity price which does not benefit either farmers or consumers. And that is harmful for the real beneficiary of the market. According to FMC data 99% of trading in future market is carried out for speculative purpose with no actual deliveries involved. The rapid expansion of Indian commodity futures markets is posing new regulatory challenges for FMC and the government. The real challenge lies in framing strict rules and their timely enforcement rather than allowing speculative frenzy to go unchecked and then banning the trading as a knee-jerk reaction.

Third and the most important challenge and issue faced by commodity future market is ‘Manipulation’. There are widespread allegations of circular trading by a small group of brokers to prop up the trading volumes at MCX. It has been pointed out by market analysts that some MCX members allegedly used hundreds of benami companies as well as bogus, forged or genuine PAN cards to open a maze of fraudulent demat accounts. Besides, the growing trend of high trading volumes and low open interest is not healthy.

Various manipulation techniques used in markets are as follows

- Circular trading: Here two people agree to sell and buy back at the same price in the market. This helps in creating false expectation that there is lot of demand in the market. This lures the small investors to trade in them. Once such investor enters the market, circular trading involved traders sell at higher price and small investors lose their money.

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- Dabba trading: Here broker manages the unregulated trading platform where derivative trading takes place. Reference prices are similar as regulated exchanges. This causes many investors to lose money.
- Wash trading: This involves selling and repurchasing the same security to make semblance of activity in market. It lures other investors into buying position. Its purpose is to manipulate the market.

So these are the various ways by which market participants in the form of speculators and manipulators exploit the future market. These are the issues which need serious regulatory action. Government should take appropriate regulatory steps to tackle these challenges and issues which are actually coming in a way of fulfilling the main purpose of future markets.

CONCLUSION

Commodity future market has been growing at a tremendous rate since its inception. Numbers we see in terms of turnover and volumes are huge. This shows the huge potential in future market and its capability to make India global commodity market. But at the same time there are serious challenges and issues like speculation and manipulation which are facing the commodity future market. The main purposes of future commodity market are 'Price Risk Management' and 'Price Discovery'. Future market in India initially started to benefit farmers so that they can hedge against the risk of price movement. And again looking at the future prices they can take decision of what to produce. None of these purposes are getting fulfilled. Farmers are not getting benefited. Instead because of speculation and manipulation bunch of people are making money and majority of participants (farmers, new entrants etc) are losing it.

Because of all these there is a serious need for government to take regulatory steps in order to tackle the challenges faced by the future market. And most importantly, government has to take care of farmers who are supposed to get benefited the most out of all this.

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UNICORNS AND THEIR ESCHEWMENT OF IPOs

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ABSTRACT

The paper explores the concept of unicorns, the billion-dollar private-funded start-ups. It begins with introducing the concept of unicorns and discuss the emergence of Indian unicorns. We then discuss the issued of valuation of private companies and the reasons why, and how, unicorns can sustain and grow without raising capital through initial public offerings. The paper concludes why private equity investors show such faith in unicorns

INTRODUCTION

Unicorns are privately-funded start-ups that have been valued at USD 1 billion or more. The term was coined by Aileen Lee, founder of Cowboy Ventures, in 2013. Lee explained she coined the term unicorn as the mythical creature is very rare even in mythology and the term has connotation with sci-fi which is consistent with the tech-entrepreneurs (Rodriguez, 2017). As on February 18, 2018, CrunchBase estimates there are 278 unicorns who have raised capital of approximately USD 202.60 billion and are valued at USD 971.40 billion (Crunchbase, 2018). The top ten unicorns, based on value, are:

Unicorns			
(as on February 18, 2018)			
Rank	Company	Value (USD Billion)	Funds Raised (USD Billion)
1	Uber	69B	10.7
2	ANT Financial	60B	4.5
3	Didi Chuxing	56B	17

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4	Xiaomi	45	1.1
5	Airbnb	31	3.4
6	Meituan-Dianping	30	8.34
7	Space-X	21.5	1.6
8	Palantir Technologies	20.3	2
9	Toutiao	20	3.1
10	WeWork	20	8.85

Source: (Crunchbase, 2018)

1. The Indian Unicorns

According to Grant Thornton, India, with around 10000 start-ups is amongst the top five countries in the world in terms of start-ups; the list being led by the USA (83000+), China (10000+), the UK (7900+), and Canada (6100+). Of the 10000 odd start-ups in India, 43 per cent are in technology sector, e-commerce being the most common followed by B2B and consumer internet. In the non-technology space, most of the start-ups are in engineering goods, construction, agricultural products. The average age of the start-up is around 28 years and 81 per cent of the founders are men (Grant Thornton, 2016).

Billion-dollar privately-funded start-ups have arrived in India. At present we can count around ten unicorns in India (Sharma, 2017). Inc42, a media and information platform, estimates that the Indian unicorn club, is expected to expand on a massive rate to add at least 34 new tech start-ups under its wings by 2020 (Inc42, 2018). The top five Indian unicorns are presented in the table below.

Indian Unicorns				
(as on February 18, 2018)				
Indian Rank	World Rank	Company	Value (USD Billion)	Funds Raised (USD Billion)
1	13	Flipkart	11.6	6.12
2	21	One97 Communications	8	2.5

Unicorns and their Eschewment of IPOs

3	26	Snapdeal	6.5	1.6
4	28	Ola	6	2.85
5	100	InMobi	2	0.22

Source: (Crunchbase, 2018)

A brief overview of the top five Indian unicorn are discussed below.

a. Flipkart

Flipkart Online Services Private Limited, an e-commerce marketplace, was incorporated on October 14, 2008 by two ex-Amazon IIT-trained engineers, Sachin Bansal and Binny Bansal. It's a zero-debt having a paid-up share capital of Rs. 143 crores (Tofler, 2018). The company claims eight million shipments per month, 100 million registered users, ten million visits on its website, 21 warehouses, and 100,000 sellers (Flipkart, 2018). The company has raised USD 17.12 in approximately 15 rounds of funding (Crunchbase, 2018).

Started with an initial investment of Rs. 400,000 (Rai, 2010), the company raised an undisclosed amount of funding from Ashish Gupta (founder of Junglee) and Helion Venture Partners (ET Bureau, 2016). The first disclosed funding from a VC was an investment of USD 1 million by Accel Partners in 2009 (Gutka, 2012). When Tiger Global invested USD 10 million in 2010, the company was value at USD 50 million but by the time the same VC invested USD 20 million in June 2011, the valuation was USD 1 billion (ET Bureau, 2016). The last funding round took place in October 2017 when eBay invested an undisclosed amount (Crunchbase, 2018). In December 2017, the company completed a share-buyback programme worth USD 100 million from 3000 of its employees at an approximate valuation of USD 9-10 million (Sen, 2017).

b. Paytm (One97 Communications)

Paytm, operated by One97 Communication Limited) is India's largest mobile commerce platform and a payment solutions provider to e-commerce merchants. (One97 Communications Limited, 2018). The company was founded in 2000 by Mr. Vijay Shekhar Sharma (aged 38), who is its Chairman, Chief Executive Officer and Managing Director. The NOIDA-based company, employing 772 employees has operations in India, Afghanistan, Nigeria, and Bangladesh (Bloomberg, 2018). The company has raised Rs. 2.5 billion in three rounds of funding (Crunchbase, 2018).

c. Snapdeal

Snapdeal is an online marketplace, with an assortment of 60 million plus products across 800 categories from regional, national and international brands and retailers. It was founded on February 2010 by Kunal Bahl along with Rohit Bansal. The company claims to have millions of users and more than 300,000 sellers, making deliveries to 6000+ cities and towns in India. The company has partnered with several global marquee investors and individuals such as SoftBank, BlackRock, Temasek, Foxconn, Alibaba, eBay Inc., Premji Invest, Intel Capital, Bessemer Venture Partners, Mr. Ratan Tata, among others (Snapdeal, 2018).

d. Ola

Ola is a mobile app for transportation that integrates city transportation for customers and driver partners onto a mobile technology platform. As one of India's fastest growing companies we ensure convenient, transparent and quick service fulfilment using technology to make transportation hassle free for everyone. Olacabs started its operations in 2010 from Mumbai under the name of ANI Technologies Private Limited by Bhavish Aggarwal and Ankit Bhati. Ola's offerings on its platform ranges from affordable AC cabs on the Ola Micro range to the superior luxury offering from Ola Lux as well as localized offerings like the ubiquitous Auto-rickshaws to Shuttle buses for daily commute. Using the Ola mobile app, users across 102 cities can conveniently book from over 450,000 vehicles available to them (ANI Technologies Private Limited, 2018).

SoftBank, Tencent Holdings, Tekne Capital, Falcon Edge Capital, Vanguard, Baillie Gifford, DST Global, Sequoia Capital, Steadview Capital, and Tiger Global Management are some of the private equity and VCs who have provided finance to Ola (CrunchBase, 2018).

e. InMobi

InMobi was founded as mKhoj in 2007, an SMS-based search and monetization business in Mumbai. The founders were Naveen Tewari, Abhay Singhal, Amit Gupta and Mohit Saxena. They began their entrepreneurial journey in Mumbai. Its first major funding came from KPCB & Sheralo Ventures when they invested USD 8 Million in 2010. In 2010, Softbank invested USD 200 million in InMobi. The company reaches over 1.5 billion unique mobile devices worldwide and is recognized among Fast Company's "2016's Most Innovative Companies in the world (InMobi, 2018).

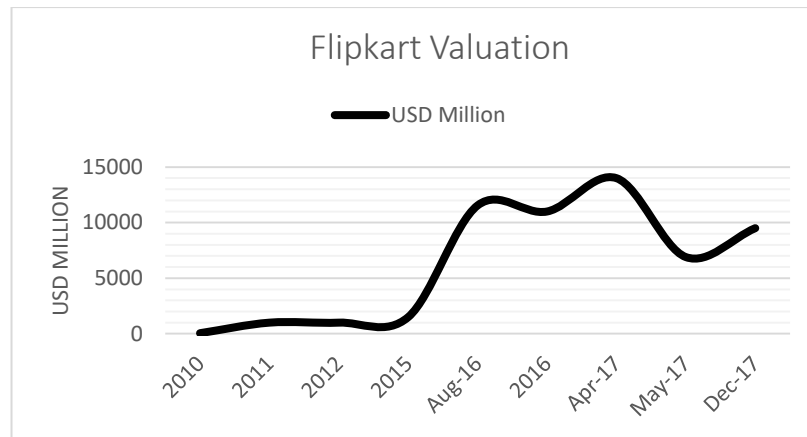
2. The Valuation Game

Value is the defining dimension of measurement in a market economy. People invest in the share of a company with the expectation that when they sell, the value of each investment will have grown by a sufficient amount above its cost to compensate them for the risk they took.

The value (market capitalisation) of listed companies is measured by the product of market price per share and the number of equity shares outstanding. For unlisted companies¹ it is the value assigned by the venture capital (VC) investors during the last round of funding. Ge, Mahoney and Mahoney identify four approaches adopted by VCs in valuing unlisted companies. They state: Venture capitalists typically value a new venture higher if: (a) the new venture is in an industry with higher product differentiation and faster growth; (b) the founder(s) has top management experience and start-up experiences before founding the current venture; (c) the new venture was founded by a team of founders rather than a solo founder and, major management functions are covered by a complete management team; and (d) the new venture has external partners (Ge, et al., 2005).

By its very nature, the valuation of unlisted companies has been questioned. The characteristic response is one by Sanjay Nayar, CEO of KKR India: "Entrepreneurs raised money at crazy valuations. All over-stated and over-estimated consumption and growth. Very few succeeded. If you don't make money, how do you value a company?" (Dubey, 2017). A case in point is Flipkart, the value of the company has seen to be fluctuating with every round of funding, ESOPs, and share buybacks. The following chart is representative of the variability of valuation.

¹ We use the term unlisted company instead of the popular term private company because in India a public company is not necessarily a listed company.



3. Why Unicorns Eschew IPOs?

One of the definitional features of unicorns is that they prefer raising funds privately and eschew initial public offerings (IPOs). This is a unique phenomenon; not long ago there was only so much that a company could grow with private funds. High growth companies would be planning and launching an IPO at the first available opportunity. Generally, companies choose to go public for many reasons such as raising of additional capital, enhancing the status and financial standing of the company, increasing public awareness and public interest in the company and its products.

Traditionally, several reasons are cited for avoiding IPOs: (a) loss of confidentiality: listed companies need to disclose a lot of information about its operations as they operate under a scrutiny of its public shareholders and the regulating authorities; (b) added cost: the cost of IPO offering as well as complying with on-going regulatory requirements can be very high. For example, IPO costs can climb to as much as 15 per cent of the offering deal. Some of the additional costs include the accounting fees, legal fees, and professional adviser fees; (c) added liability exposure: there is an increased risk of exposure to civil liability for public companies, executives and directors for false or misleading statements in their prospectus. Officers may face liability for misrepresentations in reports filed with the regulatory agencies or for disclosing false information; (d) loss of control: listed companies are faced with the pressures of the market. This would likely cause them to focus more on short-term results rather than long-term growth. Furthermore, listed companies are at greater risk of takeover attempts due to its public trading of shares; (e) reporting and fiduciary responsibilities: public companies must continuously file reports with the regulatory agencies and comply with exchange listing agreement and statutory requirements. This is not only costly but also provides information to competitors; (f) time consuming: converting into a listed company is

also a tedious and time-consuming process. Thus, business operations may be disrupted if senior management is too much caught up in the IPO process. Companies that go public between the ages of six and ten years generate almost 95 per cent of all value created post-IPO (Ramadan, et al., 2016).

In addition to the usual reasons for avoiding IPOs, there are some unique reasons applicable to unicorns. We can identify the special reasons why unicorns eschew IPOs: (a) short-termism; (b) impairment of innovation culture; (c) complex governance structure; and (d) flow of private equity funds.

a. Short-Termism

One consequence of making an IPO is that the company must play by the rules of the stock market. Stock markets expects the company to earn consistent profits. This entails the companies to care about meeting quarterly profits rather than focus on the core business of the company. Many start-ups content with having developed a breakthrough product. They wish to exploit the market. IPOs make perfect sense for such companies. But, as Roger Martin (Dean of Rotman School of Management at the University of Toronto) says, exploitation has diminishing returns.

The problem is, exploitation has diminishing returns. And by focusing on what it already does, the company puts itself at risk of missing new opportunities and avoiding disasters that come from big changes in the environment (Martin, 2010).

Unicorns are different. Most of the unicorns led by visionaries are serial entrepreneurs; they would rather explore new vistas. An IPO would tie them up and this is not acceptable to them.

b. Impairment of Innovation Culture

Another casualty of the stock market's insistence on consistent performance and an orthodoxy is the innovation culture. Innovation culture is the work environment that leaders cultivate to nurture unorthodox thinking and its application. An IPO and consequent listing of securities necessitate falling in line, curtailment of flamboyance and become financially 'reliable'.

Contrary to this, unicorns foster a culture of innovation; they generally subscribe to the belief that innovation is not the province of top leadership but can come from anyone in the organization. Innovation cultures are prized by unicorns who compete in markets defined by

rapid change; maintaining the status quo is insufficient to compete effectively, thus making an innovation culture essential for success.

In a report published in the Mint it was reported that:

The documents, accessed by Mint, show there are three entities registered in Singapore as 100 per cent subsidiaries of FPL: Flipkart Marketplace Pvt. Ltd, Flipkart Logistics Pvt. Ltd and Flipkart Payments Pvt. Ltd. These companies, in turn, hold stakes in five Indian entities: Flipkart India Pvt. Ltd, the wholesale cash-and-carry entity; Flipkart Internet Pvt. Ltd, which owns Flipkart.com and provides technology platform to e-commerce companies; Digital Media Pvt. Ltd, currently a dormant company, formerly known as Digital Marketplace Pvt. Ltd; Digital Management Services Pvt. Ltd that ran Letsbuy.com; and Flipkart Payment Gateway Services Pvt. Ltd, which ran payments product Payzippy and is currently in middle of restructuring its operations and will continue to focus on payment services (Verma, 2014).

Such complex structures are not consistent with the expectations of public shareholders.

c. Complex Governance Structure

Most Unicorns have adopted a complex governance structure. Some of the reasons for this complex structure is an attempt to side-step regulatory restrictions, the demands of private equity investors, and tax issues. A typical case is that of Flipkart. It started by incorporating It is just one measure of how different things are now that the original entity, Flipkart Online Services Limited, no longer does any significant business. The business is operated by Singapore-incorporated Flipkart Private Limited which controls several subsidiaries.

d. Flow of Private Equity Funds

The biggest reason unicorns avoid IPOs because they can raise funds from private equity relatively easily. David Cogman, a McKinsey partner, said: “Fundamentally, unicorns have taken the decision to stay private for longer because that was possible! (McKinsey, 2016).

4. The Flow of Private Equity

Private equity flows in a region are determined by various factor, principally, the existence an entrepreneurial culture, a vibrant entrepreneurial ecosystem, and an enabling regulatory environment (Kelly, 2010).

a. Entrepreneurial Culture

An entrepreneurial culture is an environment where someone is motivated to innovate, create and take risks. Parents who encourage their children to take risks and teach them the value of self-employment may raise kids who become future entrepreneurs. (Reference, 2018).

In 1985, Peter Drucker had written in, *Innovation and Entrepreneurship*, identified seven sources for innovative opportunity. He classified these seven sources into those that lie within the enterprise, or the industry, such as: (a) the unexpected—the unexpected success, the unexpected failure, the unexpected outside event; (b) the incongruity—between reality as it is and reality as it is assumed to be or as it “ought to be”; (c) Innovation based on process need; (d) changes in industry structure or market structure that catch everyone unawares. The second set of sources for innovative opportunity, a set of three, involves changes outside the enterprise or industry: (a) demographics (population changes); (b) changes in perception, mood, and meaning; and (c) new knowledge, both scientific and non-scientific (Drucker, 1985).

Some people in the West are decrying that Drucker’s prediction that in future work would transition from bureaucratic practices; management would focus on innovation and new opportunities, generating an entrepreneurial spirit throughout entire organizations; the whole of society itself would become entrepreneurial has not been realised (Denning, 2016).

However, in India, the winds of change are visible conforming to Drucker’s second set of factors. India is expected to be the largest individual contributor to the global demographic transition ahead and there is expected to be a large and significant growth impact of both the level and growth rate of the working age ratio (Aiyer & Mody, 2011). There is a perceptible change, especially amongst the young in India towards risk, security, jobs and business. And, Indian entrepreneurs are devising lower cost versions of existing products, leveraging existing resources to serve more people, and leapfrogging traditional western models and practice to create more impact.

b. Entrepreneurial Ecosystem

Entrepreneurship doesn't happen in a vacuum. It's the result of countless complex interactions in a community. No single organization can provide sufficient help to all the entrepreneurs in a community. Ecosystems help entrepreneurs thrive at each step. Just as the complex biological system of soil, water, sunlight, flora and fauna in a rainforest allows individual plants to flourish, so the ecosystem for entrepreneurs is essential to their success. Healthy

ecosystems allow talent, information and resources to flow quickly to entrepreneurs as they need it.

The Organisation of Economic Cooperation and Development (OECD) defines an entrepreneurial ecosystem, as follows:

Entrepreneurial ecosystem a set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organisations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g. the business birth rate, numbers of high growth firms, levels of ‘blockbuster entrepreneurship’, number of serial entrepreneurs, degree of sell-out mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment (Mason & Brown, 2014).

India ranks at 104th place in the GEI (Global Entrepreneurship Index). This is below all the BRICS economies. The index stands on three pillars: entrepreneurial attitude, entrepreneurial aspiration, and entrepreneurial ability.

While it is worthwhile to notice that the present government has for the first time introduced a Ministry of Entrepreneurship (with Skill Development), the fact remains that India's record is at best poor at nurturing entrepreneurs and creating an entrepreneurial ecosystem (Sharma & Kapoor, 2015).

Things are beginning to change: education institutions have started encouraging independent thinking amongst our students, and our society has come to accept failure as a part of the learning curve and a stepping stone to future success. People are at the centre of an entrepreneurial ecosystem. They are its fundamental building blocks. All the ideas, incubators and capital in the world will not create anything valuable without talented people putting them to good use. Slowly, but surely, the entrepreneurial ecosystem is taking shape in India.

c. Regulatory Changes

Several measures have been taken in recent years towards creating an enabling regulatory environment in which start-up could be nurtured and thrive. Some of the recent initiatives include:

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- **MAKE IN INDIA, SEPTEMBER 2014.** The intent of the campaign is to attract foreign investments and encourage domestic companies to participate in the manufacturing, thereby contributing to the country's growth story. To promote manufacturing sector, government is giving impetus in the form of single-window clearances, minimal procedures and cutting out of any red-tape-ism to set up businesses
- **STAND-UP INDIA, AUGUST 2015.** The campaign aims at promoting entrepreneurship among women and scheduled castes and tribes. Some of the salient features include: (a) loans under the scheme would be given for greenfield projects in the non-farm sector; (b) intention of the scheme is to facilitate at least two such projects per bank branch; and (c) the scheme is expected to benefit at least 250,000 borrowers in 36 months from the launch of the scheme.
- **DIGITAL INDIA, JULY 2015.** The vision of the program is to transform India into a digitally empowered society and knowledge economy. The program aims to ensure that government services are made available to every citizen through an online platform. Private sector has committed funds at the launch of this initiative to fund new ventures, representing a huge business opportunity for start-ups.
- **MICRO UNITS DEVELOPMENT REFINANCE AGENCY (MUDRA), APRIL 2015.** The Indian government launched Mudra Bank to boost the growth of small businesses, manufacturing units and small entrepreneurs. Under the scheme, the bank would provide credit facility of up to INR 50,000 to small businesses, loan of up to INR 500,000 to little bigger businesses and loan of up to INR 1,000,000 to the MSME sector at low rates. In January 2016, the Union Cabinet gave approval for the conversion of MUDRA Ltd to MUDRA Small Industries Development Bank of India (SIDBI) and for the creation of a credit guarantee fund for MUDRA loans. This scheme is expected to benefit 1.73 crore people.
- **INDIA ASPIRATION FUND, AUGUST 2015.** The finance minister also announced the India Aspiration Fund to encourage the: (a) start-up ecosystem and allocated INR 400 crore to various venture funds. Another programme called SMILE (SIDBI Make in India Loan for Small Enterprises) was also launched with an allocation of INR 10,000 crore. The objective of the scheme is to offer soft loans in the form of quasi-equity and term loans on soft terms to MSMEs.
- **START-UP ACTION PLAN, 2016.** This is an initiative of the Government to build a strong eco-system for nurturing innovation and Start-ups in the country. The action

plan covers three aspects: (a) simplification and handholding; (b) funding support and incentives; and (c) industry-academia partnership and incubation.

Partly because of these and other measures, India has jumped 30 positions to become the top 100th country in terms of ease of doing business ranking this year as per ranking released by the World Bank. The World Bank has attributed the change in India ranking to the sustained business reforms it has undertaken by the government (Mathew, 2017).

5. Conclusion

The emergence of Unicorns is an exception development of our age. It is testament to the maturity and foresight of venture-capital investors that they have faith in the business models of the unicorns. The value of these companies is debated. Valuation at the best of the times is a treacherous activity and it is especially true of unlisted companies. But what lends credence to the valuation is that it is done by investors who are not merely expressing their opinion but also contributing their own money. Innovation and entrepreneurship have truly become global; the emergence of more than ten Indian unicorns is a proof of this. The unicorns can eschew raising funds through IPOs, and avoid the attendant constrictions, as they have the confidence of private equity investors. This confidence of private equity investors is significant in India as it reflects the conditions in our country have become conducive to the nurturing and sustenance of unicorns.

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Reinforcement Of Small Scale Industries In Western Maharashtra: A Step Towards Sustainable Development

JBIMS Spectrum
Vol. VI, No. 1, January-June 2018
ISSN: 2320-7272
Page 237 - 245

**REINFORCEMENT OF SMALL SCALE INDUSTRIES IN WESTERN
MAHARASHTRA:
A STEP TOWARDS SUSTAINABLE DEVELOPMENT**

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ABSTRACT

Small Scale Industries (SSI) plays a significant role in Indian manufacturing sector and has become an engine of economic growth in India. They are now moving ahead with their effective, efficient, flexible and innovative entrepreneurial spirit. The sector is generating the highest rates of employment growth and account for a major share of industrial production. It is estimated that SSI's account for almost 90% of industrial units in India and 40% of value addition in the manufacturing sector.

In India, Small Scale Industries have a crucial role to play in the overall growth of industrial economy. In recent years, the Small Scale Industries have consistently registered higher growth rate compared to the overall industrial sector. In India Small Scale Industries contribute nearly 45% to manufacturing and about 40% to the Indian export sector. Their contribution to the Indian GDP is 8% and the sector has registered growth rate of 10.8%. The competitive paradigm is changing continuously due to liberalization and globalization. Therefore, Small Scale Industries need to identify and build competitive strength to achieve sustainability.

This paper attempts to bring to light the present scenario of SSI's in Western Maharashtra and steps to be taken in reinforcing Small Scale Industries with an aim towards sustainable development.

KEYWORDS

SSI, GDP, sustainability, entrepreneur, economic growth and development.

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INTRODUCTION

India is predominantly an agricultural country. Apart from agriculture, small scale & large scale industries have been also developed. Small scale industries are the backbone of our industrial structure as they provide a variety of non - traditional, low technology products. They are also engaged in the processing, preserving, manufacturing & servicing activities and play a vital role in balanced and sustainable economic growth. Thus, a proper development of small scale industries is essential for the healthy growth of economy.

The primary object of developing small scale industries in rural areas is to generate better employment opportunities, raise income levels & standards of living of people. Small Scale Industries are essential for providing subsidiary or alternate occupations and utilization of local labour & raw materials. They facilitate an effective mobilization of resources of capital and skill and also stimulate the growth of industrial entrepreneurship. Thus, the development of small scale industries is an integral part of the overall economic, social and industrial development of a country.

There is common thought among policy makers and business experts that SSI's are the key drivers of economic growth. A healthy SSI sector contributes prominently to the economy through creating more employment opportunities, generating higher production volumes, increasing exports and introducing innovation and entrepreneurship skills.

The SSI sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. SSI's not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural & backward areas, thereby, reducing regional imbalances. SSI's are complementary to large industries as ancillary units. They contribute enormously to the socio-economic development of the country. Fast changing global economic scenario has brought up various opportunities and challenges to the SSI's in India. On one hand many opportunities have opened up for this sector to enhance productivity at national and international level and on the other hand there is an obligation to upgrade their competencies in various fields like marketing, finance, business development, operations, technology etc. Indian SSI's have moved up the value chain from manufacture of simple goods to manufacture of sophisticated products. In line with the overall growth in Indian economy, SMEs have entered the services sector as well. SSI's in India are facing a number of problems like underutilization of capacity, technological obsolescence, supply chain inefficiencies, increasing domestic and global competition, fund shortages, change in manufacturing strategies. To survive with such issues and compete with large and global enterprises, SSI's need to adopt innovative approaches in their working culture.

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Definition: The Small Scale Industries Board (1955)

“A unit employing less than 50 persons if using power and less than 100 persons without the use of power and with capital assets not exceeding Rs. five lakhs.”

Government of India (2000)

“Small scale undertakings are those which are engaged in manufacturing, processing or preservation of goods and in which investment in plant and machinery (original cost) does not exceed Rs. 1 crore.”

CLASSIFICATION OF SMALL SCALE INDUSTRIES

Small scale Industries in India are divided as under

Traditional sector

- 1. Handicrafts**
- 2. Handlooms**
- 3. Khadi, village and Cottage industries**
- 4. Coir**
- 5. Sericulture**
- 6. Jaggery**
- 7. Leather (Kolhapuri Chappals)**
- 8. Silver ornaments**
- 9. Foundry**
- 10. Ancillary units**

Modern sector

- 1. Power loom**
- 2. Residual SSI**
- 3. Technical Textiles**

Sustainable development is an organizing principle for human life on a finite planet. It shows a desirable future state for human societies in which living conditions and resource-use meet human needs without undermining the sustainability of natural systems and the environment, so that future generations may also have their needs met.

SSI's need to devise strategies to build competitive advantage and utilize opportunities in the present business environment for sustainable development.

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OBJECTIVES

1. To analyse the performance of SSI's
2. To evaluate the employment opportunities created by SSI's
3. To carry out a SWOT analysis of SSI's in Western Maharashtra from a strategic point of view
4. To suggest strategies for sustainable development of SSI's

This paper tries to analyze SSI's according to four pillars of SWOT in order to find ways to increase their potential towards growth, job potential, export potential and social progress. If SSI's are developed to their full potential, they can shape the face of Indian economy and help in achieving the developed status. The number of failures and wastage in terms of money, effort, manpower and intellectual worth in SSI's is very high. If this can be converted into success, the contribution of SSI's will increase tenfold.

METHODOLOGY

The strategic tool of SWOT analysis has been used in this paper. The study focuses on SSI's in Western Maharashtra only. The paper is conceptual in nature, based on judgment and analysis of the researchers.

Secondary data has been collected and analysed from various sources such as: books, journals, research papers, World Bank report, SSI Development Act 2006,

The data collected was then classified and categorized under different heads of Strength, Weakness, Opportunity and Threat. The data was also analysed to identify various PESTEL factors (Political, Economical, Social, Technological, Environmental and Legal). Finally, solutions to convert weakness into strength and threat into opportunities were identified and mentioned as suggestions in the paper.

Importance of ssi's in terms of production, employment and investment in the economy

The importance of the small business sector is recognized in economies world-wide. Their contribution towards economic growth and development, employment generation and social progress is highly acclaimed. Contribution of SSI's to economic development is highly remarkable comparing to any other sector of the economy. Its role towards Investment, employment generation, export, GDP, industrial production etc in every area is highly significant. SSI's sector has registered a very high growth rate. This is mainly due to its various advantages comparing to other sectors. The Indian economy is more close to SSI's environment in terms of cheap local resources, local talent, high demand etc. Moreover, the socio – economic

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policies adopted by India since the industries development & regulation Act, 1951 have laid stress more on SSI sectors as a vehicle to develop Indian economy. Second five-year plan gave more emphasis on industrial development and to adopt various policies for proper development of this sector. SSI's contribution towards employment generation is remarkable comparing to any other sectors employment generation capacity.

The SSI's in Western Maharashtra reflect the following SWOT:

Strengths

1. Flexibility: Indian SSI's are better to adapt to the changing conditions of business environment, craftsmen skills and ability help to produce a wide variety of products. The units range from the entire spectrum of modern industry to shoes, agarbatti, pickles, ceramics, garments etc. The quick response to the changing environment is a special advantage of SSI's.
2. Owner's management and better policy implementation: the enterprise is mainly managed by one or more entrepreneurs in proprietary concern or jointly as partners. The units are mainly traditional, located in rural and semi urban areas. Since the management and control is with the owner, there is better management and less delays in policy implementation.
3. Abundant labour: Indian SSI's are labour intensive and generate large employment.
4. Less overheads: SSI's have comparatively less overheads than the large industrial setups.

Weakness

1. Lack of skilled manpower: Indian SSI's are unable to contribute much from the labour as expected due to inefficient labour. Level of education is low and therefore they are not able to cope up with the challenges of modern production system.
2. Low access to credit: SSI's are not able to generate large amount of resources due to poor financial image. They also lack systematic way to approach to the capital market.
3. Inadequate infrastructure: Indian SSI's are also facing problem due to inferior machinery and equipments.
4. Little R&D: one of the biggest weaknesses is obsolete technology. The units lack latest technology. R&D effort is a costly affair and there are not enough funds to finance such programmes.
5. Less access to market: small scale industries of India do not have proper access to domestic and global market.

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6. Lack of proper work culture: Indian SSI's lack proper working environment. Since the units are mainly labour intensive, there is lack of proper development programmes and motivational tools.

Opportunities

1. Less operational cost: the low operational cost can be used as a tool or opportunity to face competition. Price competition can help in getting an upper edge over the competing players in the market.
2. Government support and tax relief: Government support and impetus to this sector in terms of easy credit availability, tax relief, and additional grants.
3. Ancillary to large business: SSI's are ancillary units and support to large business firms. They bridge the gap between the agriculture and industrial sector. They contribute significantly to the manufacturing output which leads to diversification of industrial sector too.
4. Abundance art and skills: Artistic skills and cultural heritage can be explored used to improve the performance of Indian SSI's and to promote exports of the country. Innovations can be done in the products offered.

Threats

1. Competition: There are many competing players in the market. Sustained price competition is required. There is a threat from private firms producing better quality and standardised products.
2. Employee motivation: Lack of motivation, development and welfare programmes for the employees and workers can be a resulting factor in the downfall of quality and the total productivity.
3. Poor knowledge of payment recovery: It is a common practice to avail credit from seller. Indian SSI's lack the skills of bargaining and payment recovery. This creates the problem of working capital and has also resulted in sick units.

RECOMMENDATIONS/STRATEGIES

1. Building awareness is essential about adopting latest and better technology to produce better quality goods and to fight global competition.
2. SSI's should also try to incorporate the knowledge on legal aspects to have global presence.
3. Support in terms of market development, export promotion, loan disbursement is required for sustainability.

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4. Private public partnership (PPP) can be one solution to join hands and combine specific qualities of both resulting in speedy work and better performance.
5. Tax system must promote and must be consistent with the national market.
6. There must be initiatives to support and build infrastructure and instrumental set-up.
7. The increasing role of banks and financial institutions is required to enhance credit availability to SSI's.
8. There must be simplification of labour laws in particular to SSI sector.
9. The SSI's must focus to improve competitive advantage and increase complete skills.
10. Efforts must be made to create awareness and commercialise local and global knowledge.
11. R&D efforts to be increased to foster inclusive innovation.
12. Improving quality standards and testing and quality services.

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12. Improving quality standards and testing and quality services.

CONCLUSION

The Small Scale Industries are an important segment of the Indian economy. They contribute towards the development of the economy in terms of production, employment, investment, social benefits, GDP etc. Although many SME's have closed due to bankruptcy and many are restructuring every year. The challenges are mainly related with the PESTEL factors (social, legal, economic, political, and technological). Coupled with these issues, globalization has also increased the level of competition. Hence, SSI's require emphasizing on adoption of better technologies and equipment along with human skills to produce world quality goods. Overall contribution of the sector has showed a positive response. The future growth can be made in up growing areas like in food processing, biotech and pharma sector. If the government support continues and the SSI's thrive to perform better, the success can be remarkable.

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CHANGING FREQUENCY IN ADVERTISEMENTS-HINDI CHANNEL RURAL

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ABSTRACT

The indicators such as TRP, GRP, Produced by broadcasters, at negotiated prices, Bought by advertising agencies on behalf of advertisers, are an interesting examination. Television audience measurement systems seems to be an indicator for the purpose marketing Ad space. The Selling of ad spot, depends on independent constructs of the viewers, that relies on entirely at assumptions and operational definitions. Components of variance in audience measurement is the present frame of the study, searching for the patterns of standard errors in audience estimates.

Identification of the Target audience, and then making an attempt to Reach them for viewing as viewers. Reach, frequency are the ultimate objectives of the Media planning process. The Broad Cast audience Research council india has been releasing weekly Data across various Genre. The Hindi Entertainment channel has segments such as HEC (Urban), HEC(Rural). The scope of the study is in Hindi Rural viewership for examining the How many were exposed to the channels ranked. Two research questions remain interesting, Planners find vehicles (channel) that reach number of prospects for a product category, alternatively ,the second question is media experts finding the vehicle that delivers the greatest concentrations of prospects even though if there are relatively few viewers.

KEY WORDS:

Reach, Frequency, Viewers, Adspace, Audience, TRP, GRP. Audience estimates.

Changing Frequency in Advertisements-Hindi Channel Rural

Catching Customer attention has become an important component, with product manufacturers, marketing managers, media planners, Advertisement agencies, Advertisement and media researchers. Media vehicles such as print media, electronic media are developing how to catch the attention of readers and viewers. Developing Ad content for ensuring the customer, prospective customers, exposed to many times can be called as Frequency. Appealing Ad content with punch line words, so as to ensure the product features reaching to Cognitive Ease of the viewers is a competitive task. It was an Still an Exposure appealed in Indian (consumers) Viewers, from “THANDURUSTEE KI RAKSHAA KARTHAA HAI LIFE BOY.....” to “DOONDHTHEY REHJAAVOGI”. Indian television industry Channel exposure, Product appealing punch line words, Programme viewing interests are changing from the past, present and future.

According to a recent study 47% of the social media usage in india has been consumed in 4 top metro cities. 25% has been consumed in next 4 metros, 23% has been consumed in small metros, 4%has been found consuming non metros, 1% has been observed in small towns.

These are bases for the advertisement competition among the many channels in Indian television industry. Broadcast audience Research council India a organization conceived in 2015 for regulating the Television Advertisement industry is working unbiased collecting the weekly data and arranging transparently Every Saturday to Friday on weekly basis. Channel members projecting before advertisers about their “Reach”, but BARC data is helping for little more accuracy of numerical. Some parameters, indicators of BARC methodology about the Television measurement dictionary can be an interesting for enhancing the scientific thinking is as follows Table:1.1

The TV Measurement Dictionary

<p>Rat '000 Number of individuals in '000s of a target audience who viewed an event, averaged across minutes. Also known as TVT. = $\text{rat}\% \times \text{total individuals in the target audience ('000s)}$ 100</p>	<p>Ats (viewer) Average Time Spent by viewers of the “Event” = $\frac{\text{Total minutes viewed by all viewers of the “Event”}}{\text{Total number of viewers of the “Event”}}$</p>	<p>Ats (univ) Average Time spent on the “Event” by all individuals in the Universe = $\frac{\text{Total minutes viewed by all viewers of the “Event”}}{\text{Total number of individuals in the Universe}}$</p>	<p>Cov% %of the universe that viewed at least one of the events in a set of events. Also known as Cume reach%</p>
<p>Rch '000 Stands for Reach in '000s. Number of individuals who viewed the Event for at least 1 minute. Viewing based on attribution rules</p>	<p>Cov'000 Number of individuals ('000s) in the Universe that viewed at least one of the events in a set of events. Also known as Cume Reach in '000s</p>	<p>Shr% % share of the “Event” to Total TV = $\frac{\text{Rat}\% \text{ of Event}}{\text{Total TV rating (atr}\%)}$</p>	<p>Rch% Stands for reach in % of individuals who viewed the Event for at least 1 minute Viewing based on attribution rules = $\frac{\text{Number of individuals who viewed with the event at least 1 minute} \times 100}{\text{Total universe}}$</p>

Source: Broad Cast Audience Research Council India.

The above mentioned TV measurement dictionary concepts are being made available with annexure:”A”. This frame work of the study around is numerical, indicators, readings of Television ads

INTRODUCTION:

Conscious Consumerism is changing towards market behaviors which are largely affected by media planners construct modals, Market approached modals. These modals also worked in Indian context. The media communications response with millenials while getting exposed to the advertisements frequently is an interesting study. Media vehicles like Television, Internet ads, Mobile ads, delivered exposures and their receptivity by the Millennials generation, was reconfirmed by many Indian studies. Communications scholars observes this phenomenon as learning quotient changed in comparison of 20 years back to present scale of 10 years. This trait among consumers is essential ingredient for the sake observing the changes in psychographics. Many psychographics studies Conceptually claims, receptivity as learning quotient.

Audience measurement means 1)Newspaper readership = How many people are reading the newspaper per publication, similarly to the Magazines weeklies, Monthlies, quarterlies. Next area of 2) media vehicle is Radio, How people are listening to the per programme. Thirdly Mobile ads viewership, web visitors, besides 4)Television viewers. In some parts of the world the resulting relative numbers are referred as “Audience share”., in other parts of the market place used the broader term as “Market Share” is used. Now we can consider in enhanced term called as “Audience Research”.

THEORETICAL FRAME WORK OF THE STUDY:

Rating point is indicator which signifies the measure of viewership for a particular Television programme. One single television rating point 1% of the television households in a surveyed area per minute. For example, in United states in 2004 as per Neilson study there were 1,09,000 households, then the concept a single national rating point is 1% of 1,09, 000 households. According to the Broadcast Survey of India 2017 report total population with television connect were 183 Million. Rating points are used for the sake of exhibits of demography. Higher the rating point higher is viewership, Lower the rating point lower is the viewership for a particular time slot. The evidence in Indian context Famous film star Akshaykumar”s Television channel has been closed due to the fact lower rating points.

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2.2 Gross Rating point (GRP): Gross rating points the “**concept**” mainly used to measure the Television based advertisement campaigns of each commercial spot. Let us say “Kumkum Bhagya’ a serial successfully telecasted both in Urban and Rural Channels. Selecting a serial for inserting an ad is necessary. How the Ad campaign can accommodate media Planning objectives, such as Reach and Frequency, or to change the frequency is research questions? If the serial viewers are growing The demand for the spot increases. As per the evidence of BARC, understanding a sample in a tabular modal

Serial/Spot Details of Impressions	Week 51: From: Sat16Dec2017 To: Fri22 Dec2017	Week 52; From: Sat23Dec2017 To: Fri 29 Dec2017	Variations
KumkumBhagya (urban)	69,48,000	70,11,000	63000 (Increase)
KumkumBhagya (Rural)	60,26,000	71,79,000	11,53,000(Increase)
Gross increase/Decrease	9,22,000 Decrease	1,68,000 increase	

Source: BATC Weekly Data program ranking Based Average Rating Across All Original airing.

The technical aspects of the Study observations are 1) New Consumer Classification system (NCCS), prime time 1800 -2330 hrs, has estimated as 2+individual are viewing the above top 5 Hindi GEC programs. Thereby the variation in impressions multiply by 2 individual stands for spot viewed (Week 51 to Week 52in urban 1,26,000 customers(63000 Multiply 2 Individual), 23,06,000 customer viewers in rural (11,53,000 Multiply 2individual).

The Research question needs an interesting study is there change in average time spent by viewers on spot? With increase or decrease by week/ or with increase or decrease by spot? There it has been hypothetically found the Limitations of GRP seemingly, changing academically.(Read the theoretical definition in Annexure.”B”)

LITERATURE REVIEW:

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Media scholars examined many times about the changes in demographics and Psychographics has a direct impact on the viewers. Viewership changes with media vehicles.3.1)Recent study of By Jean Paul Colaco, Senior Vice president, Advertising Hulu. Expressed, that “ As consumers are watching their favorite Television Shows on internet-Connected devices, measurement in this area has become very critical to the industry.

3.2) Kumar Nagarajarao, Peng Feiye, Seema Varma Srivistava, Peter Campbell Doe, Paul Donato, Mainak Muzumdar, David wong,(March,2.2015) assigned by Nielson Company (US), research,

A method defined in their claim 1, where is the first duplicated audience research was an indicative of audience members of both media vehicles such television and the internet publisher audience for the demographic group exposed to media campaign. Therefore the present Concept of “GRP” is under critical academic research studies. The proof was the concept of “OTS” – Opportunity to See, for the sake of conceptual clarity discussion, means Television channel reach is for example 10,000 audience, for KUMKUMBHAGYA Serial Programm on a specific slot, The same slot is being viewed on Internet by this 10,000 viewers or 10,000 + another 100 or another 1000 viewers the same time or subsequent time, is academic question in view of the Plurality of viewership.

3.3) John D Leckenby (working Paper1998), University of Texas, along with Guohua wu, and Jongpil Hong, Doctoral students studied found “That reach/Frequency estimation methods can provide accurate estimates of the audiences of media”, at the beginning of the research report. The scholars deserves special thanks for studying in details about various methods such as 1.Binomial Distribution, 2.Beta binomial Distribution, 3. Conditional Beta Distribution, 4.Sequential Aggregation Distribution, 5. Dirichlet Multinomial Distribution, and 6. Hofmans Beta Binomial Distribution. These six models served as the basis of performance comparisons in Media Vehicle-1) Magazines and another media Vehicle-2) Television, on the context of Web reach study.

Impressive observations were made by the scholars on the research context very valuable for further study such as performance evaluation criteria on the definition of **error** in evaluating the different models. Two different error factors were 1). Error in reach estimation (AER) , 2) Error

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in Exposure distribution,(APE). They followed the prior research by the scholars and adapted while making slightest change in concepts titles. Kishi and Leckenby 1982, and Leckenby and Kishi 1984, Danher 1992. The original concepts were named as 1) Relative error in Reach (RER), and 2) Error in exposure probabilities over schedule reach,(EPOR). There by let us consider for a while that there are also some error in estimation in reach, and also error in exposure distribution. As of Week 3 of the Indian context Four channels expressions in their reach estimations have been studied in this, without naming directly, while making Channel 1, Channel 2, Channel 3, Channel -4, were collected data from the other internet media vehicle Data, which have shown the above errors.

3.4 Todd Spangler of Newyork Digital editor describes (May,16, 2017), that Facebook identified Self declared Advertisements Audience measurement with **errors**. This occurrence was second time in 2017, as it was earlier in 2016. The facebook claimed the error has caused to 0.04% of the total billed impressions, for which advertisers paid. Salutations to the the Great decision makers of face book who not only tendered apologies, but also assured of refund on the concept of Pay per click what can be called as errors in exposure distribution. The reason was conceived as “ the error has occurred with misattributed clicks on video carousal ads as link clicks (for which advertisers)

Besides face book has assured the Tie up with Nielson for delivering the superior ad measurement report services. This establishes the Error in estimates or Error in exposure Distribution, despite technological Superior support companies.

3.5 In India Television ratings are collected by two main organizations. 1. TAM media research and 2. Audience measurement analytics limited. These organizations use to put the people meter at the households and collects the Data. The Validity and methodology has now, since 2016 certified with Broadcast audience Research council India. CESP an international organization has certified the methodology of collected data recently with Broad Cast audience research council India, hence The BARC data has now in proper following.

4.Research Method : Broadcast audience research council india has Up loading the Collected Data in their web site every Thursday about audience measurement at various channels. It ranks the data in top ten Hindi general entertainment channel with clusters such HEC Rural, HEC Urban. Both cluster of top ranked channel insertions are put to descending order. The collected Data and its Validity has been recently certified by CESP recognition of methodology.

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The distribution has been found non Normal distribution, hence Mann-Whitney – U test has considered for the study and calculations. According to the study of the Literature review and other scholarly works the hypothesis has been developed among the two segments in Hindi General entertainment channel. Technically mentioned as Hindi (GEC). There is a Exposure of Programs like Kumkum Bhaghya which was mostly viewed serial with a net result of ad exposure to the hindi urban and hindi rural audience considered for the study, as sample The Broad cast research audience council india recently certified validity of collecting the data is the motivation behind this study. To the best of ability of these researchers attempted an unbiased approach towards development of Hypothesis

Hypothesis-1 H0 There is no significant difference in Hindi rural viewers and Urban viewers not withstanding to the Volumes.

Hypothesis-2 HA There is significant difference in Hindi rural viewers and urban viewers not withstanding to the volumes.

So as to verify the error projections by the channel members dominance on each other in competition with advertiser clients, abs marketing of Advertisements spot marketing

DATA COLLECTION AND ANALYSIS:

Data collected from the sources of BARCindia site.

5.1 : Total Population Defined. According to the secondary data from the Broacast survey of India, 183 Million. The word Parameters is to read as “Indicator”, in below table for this study.

Parameters	2013	2017	Growth %
Penetration	54%	64%	10%
TV Viewing Universe (in million)	675	780	16%
Total TV Owning Homes (in million)	153.5	183	19%
TV Owning Homes - Urban (in million)	-	84	-
TV Owning Homes - Rural (in million)	-	99	-

Source: BARC Broadcast Survey of India 2016. Fieldwork of Survey - Nov 2015 to Feb 2016. Total 3 lakh households.

5.2: Test, Poplulation described: Mann Whitney “U” test has found suitable for the Computations. The relevance of Mann Whitney U test is useful to establish whether the two independent samples have been drawn from the population. The independent Groups are

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Hindi(GEC) Rural viewers and Hindi(GEC) Urban viewers, can be as Sample Population, of independent groups.

The Concept of total Population of Television households is 183 million according to the Broad cast survey of India. It would also help in establishing whether the samples drawn are from the two different groups of sample populations having the same distribution. The volumes of distributions of impressions claimed by (Channel members to advertisers) as reach,. During the computations of mean, median, mode, one of the them didi not met the conditions. Mean derived, median was found not applicable. And hence the distributions observed as NON Normal distributions. Therefore Non Parametric Test assumptions and conditions were fulfilled. Therefore Mann Whitney “U” test has been administered.

5.3 Computation and analysis: Secondary Data from Broad Cast audience Research Council India Week 41 for the period Saturday 07 Oct 2017 to Friday 13 October 2017, Hindi(Rural), Hindi (Urban), from Hindi GEC segments Data along with Week 42- Sat 14 Oct 2017 to Sat 20 Oct 2017, Week 43 – Sat 21 Oct 2017 to Fri 27 Oct 2017, has been considered for computations. Top ten ranked insertions/ impressions data was combined with three week ten data points. Again ranks has been assigned to 30 data points for Hindi (GEC) Rural, 30 data points for Hindi(GEC) Urban. The U_1, U_2 , has been calculated with the formula $n_1 \times n_2 + (n_1(n_1 + 1)/2) - R..$ Variance and Standard deviations have been computed. Z test computations Calculated value 1.54 is less than table Value 1.94, with level of 5% significance. Hence H_0 is accepted. That is there is no significance difference in viewership of Hindi (Rural) viewers, and Hindi(Urban) Viewers not withstanding to the Volumes. Alternatively hypothesis H_A There is significant difference in Hindi(GEC) Rural viewers and Hindi (GEC) Urban viewers not withstanding to the Volumes has been rejected. Here it is very very important to mention that H_0 has been accepted with Type 1 errors due to Technology based data numericals that was Channel insertions were recorded with people meters, as scholars call this categorical variable. With all due respects and salutations to the Scholarly Experts of Broad Cast Audience Research Council India, The Neilson company Limited Patented research report by Scholars mentioned above, the inference derived is that there is no significant difference in Hindi(GEC) Rural and Hindi (GEC) Urban viewers, not withstanding to the volumes, because an exposure to the individual, is it from same media vehicle that was Television?, or Is it from Other media Vehicle

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(Other than Television)?, hence Type – 1 error is also significant, which continues the Question of frequency as well as both concepts of “Reach”, and “Frquency”.

CONCLUSIONS:

The Vision behind this working paper development has been motivated by the theme that was “inclusive growth vis-à-vis Globalization and reverse Globalization”. Growing Startups, Small and medium enterprises participation, Governments initiative towards entrepreneurial development with Television media industry, can be possible Just like Facebook, Self-Identified errors, Compensation to errors in Reach and Frequency could be able to contribute further growth of television media industry.

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Annexure "A"

Conceptual clarity considered for this study: 1). Rating in "000", Number of audience in the target audience who has viewed the event, averaged across minutes = is also equivalent to % of Total Individuals .

2). ATS (Viewer): Average time spent by viewers of the Event = Total minutes viewed by all viewers of the event.

3) ATS(Universe): Average time spent on the event by all individuals in the universe = Total minutes viewed by all viewers, of the event.

4) Cumulative reach% (COV%): Percentage of the universe that viewed at least one of the events in a set of events also known as cumulative reach%.

5) Rch "000": Means Reach in thousands. (denoted "000"), number of individuals who viewed the event at least once or 1 minute. BARC defined this concept viewing based on Attribution rules by BARC

6) Cov"000 : Number of individuals (000's) in the universe that viewed at least one of the events, also known as cumulative reach in 000's.

7) Shr%: Percentage of share of the "event", to the Total Television = Rate percentage of the event.

8). RCH %: Reach is percentage of the event for at least 1 minute viewing, based on BARC developed attribution rules = Number of Individuals who viewed with atleast 1 minute Multiply 100, the whole is divided by Total Universe.

Annexure: B

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Definitions clarity considered for this study:: GRP Gross Rating point. According to the Scholar Jim Surmanek, The sum of all ratings delivered by a given list of media vehicles. For example, if one commercial is scheduled in each of two TV programs, each with a 10.0 rating, that will accumulate 20 GRPs.. The reason for using the word “Gross” is to indicate that there is (or probably is) duplication between the Two ratings: Some of the people who viewed program”A”, might also have viewed program”B”. Therefore, the two programs combined “Do Not” – “Reach” 20percent of people. The concept can be more easily seen in the purchase of combination of programs, whose combined ratings exceed 100. Because a rating is a percentage of percentage of population Universe, it is impossible to reach more than 100 percent of that universe. GRPs are synonymous with TRPs (Target Rating points). When the concept of GRP originally came in to being, Only House hold data was available. In time, ACNielsen and others began to study people viewing TV Programs, Now in Indian context Broad cast audience Research council India is studying. To distinguish between Household and people ratings, advertisers began to differentiate between two by using GRPs to designate households(HH), and TRPs to designate a specific Target audience. Today these terms are used interchangeably. Regardless of which term is used, A demographic must stated in and every context such as House hold TRP or GRP, Women ages 18 Yrs to 34 Yrs GRPs or (TRPs), So that the analyst, media planner, have clear understanding of the dimension.

Frequency (Media term frequency)): According to Jim Surmanek, the number times the person/individual with target audience has an opportunity to be exposed advertiser”s message with in specified time period. The person/Individual is 1) a part of the group that was reached by the scheduled media -- that is, people not reached by the scheduled media are not counted in the frequency/ average.(2) Designated as average only to indicate the weighted midpoint of the frequency.

A STUDY OF CONSUMER PREFERENCES OF AIRLINES IN INDIA

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ABSTRACT

Deregulation in the airlines sector in India has led to increased choices and reduced airfares for customers. More competition in this sector has led to better connectivity which in turn increases tourism, trade and investments. The economic liberalization of the 1990's saw the opening up of the aviation sector to private participation. The government encouraged Public Private Partnerships in airport construction which has resulted in airport modernization and an improvement in regional connectivity. The entry of private airlines, adoption of low cost models and improvement in service has resulted in growth in this sector. Airlines in India started international operations, foreign airlines got into joint ventures with airlines here, and the government allowed airlines to import aviation turbine fuel (ATF) directly, thus helping them to reduce costs by avoiding sales tax. This research paper studies consumer preferences of the Scheduled airlines in India. A survey of 175 respondents was conducted at Mumbai airport to understand consumer preferences towards airlines. This paper studies reasons for travelling, destinations travelled, most preferred airlines, most frequently travelled airlines, and factors most important to consumers. Airlines, even those that are leading today have to use every strategy to remain competitive. Descriptive statistics and cross tabulation has been used to study and understand variables. Reports state that India, with a market size of approximate 16 Billion US\$, is currently the 9th largest aviation market in the world. This is a market worth fighting for.

KEYWORDS: Airlines, Aviation, Consumer Preferences

INTRODUCTION

Economic benefits are created due to air transport in terms of contribution to GDP, jobs created, and tax revenues generated. Value is also created by this industry for customers i.e. the passengers and the shippers using this service.¹ Connections between different cities create new markets. Connectivity has improved together with a steady fall in the cost of air transport services. Air transport has steadily become more competitive relative to other modes of transport. It is estimated that its relative cost has been falling by around 2.5% a year

since the 1990s (Hummels, 2007).ⁱⁱ Studies have shown that India's air transport network is a critical asset to business and the economy. Aviation has a significant footprint in the Indian economy, supporting 0.5% of Indian GDP and 1,723,000 jobs or 0.4% of the Indian workforce.ⁱⁱⁱ This paper aims to study consumer preferences towards airlines in India, reasons for travelling, destinations travelled, most preferred airlines, most frequently travelled airlines, and factors most important to consumers. Airlines, even those that are leading today have to use every strategy to remain competitive. Reports state that India, with a market size of approximate 16 Billion US\$, is currently the 9th largest aviation market in the world. This is a market worth fighting for.

REVIEW OF LITERATURE

In 1932 Jehangir Ratanji Dadabhoy the 'Father of Indian Aviation', established India's first licensed commercial carrier.^{iv} Tata Airlines was based out of Mumbai and transported both mail and passengers across India. In 1946 it changed its name to Air India. Two years later, the Indian Government acquired 49% of the company, and fully nationalized the airline in 1953 pursuant to the Air Corporations Act, 1953.^v This law not only allowed the Government to gain control over the erstwhile Tata Airlines, but also nationalized the entire sector. All existing airlines were merged into either Indian Airlines Corporation or Air India International.^{vi} With economic liberalization in the 1990s the Indian aviation sector was opened up to private participation. In 1994 the Air Corporations Act (1953) was repealed and private players were permitted to operate scheduled airlines. In 2001 Aviation Turbine Fuel (ATF) prices were decontrolled. Air Deccan started operations as India's first Low Cost Carrier (LCC) in 2003. The year 2007 saw industry consolidation. In 2012 Government allowed direct aviation turbine fuel (ATF) imports. Indigo launched one of the largest IPOs in Indian history in 2015.^{vii}

With the advent of low cost carriers (LCC), foreign direct investment (FDI) norms changing and penetration of information technology (IT), the Indian aviation sector is set to be in the top five air travel market by 2030.^{viii} Studies have focussed on the economic benefits of air transport, its contribution to the economy, the opportunities offered, and the challenges faced by this sector. Other studies have focussed on the impact of regulation and policy framework on this sector. With the opening up of the skies to both domestic and international players competition has increased. This has led to increased choices for air travellers. This paper attempts to study consumers preferences of airlines and provide actionable insights. Such insights derived will help airlines improve their offering and thrive in this cut throat market.

METHODOLOGY

A survey conducted at the domestic and international airports in Mumbai. Data was collected through questionnaires filled by a sample of 175 air traveller respondents. Data collected was analysed statistically through univariate, bivariate, and multivariate analysis. This helped to understand the extent of association and or variation between variables.

FINDINGS AND DISCUSSION

4.1 Age of Air Travellers: The largest numbers of air travellers in this study belong to the 26-35 years group (50.3%) followed by 36-45 (20.0%) following which there is a sharp drop in those above 46 years (9.1%) travelling by air (See **Table 4.1**).

A Study of Consumer Preferences of Airlines in India

Table 4.1
Age of Air Travellers

		N	%
1	< 20 Years	5	2.9
2	21- 25 Years	31	17.7
3	26-35 Years	88	50.3
4	36-45 Years	35	20.0
5	Above 46 Years	16	9.1
6	Total	175	100.0

4.2 Gender of Air Travellers: Male air travellers constitute the largest number (66.9%) with females at a paltry (33.1%) (See Table 4.2)

Table 4.2
Gender of Air Travellers

		N	%
1	Male	117	66.9
2	Female	58	33.1
3	Total	175	100.0

4.3 Profession of Air Travellers: Professionals (i.e. Doctors, Engineers, Lawyers, Consultants, Architects, Interior Designers, Chartered Accountants) constitute the largest category (33.1%) followed by persons in Service (35.4%) (See Table 4.3)

Table 4.3
Profession of Air Travellers

		N	%
1	Service	62	35.4
2	Professional	58	33.1
3	Student	26	14.9
4	Business	17	9.7
5	Homemakers	12	6.9
6	Total	175	100.0

4.4 Family Income of Air Travellers: Predictably the largest number belongs to the highest income group of Rs 10 Lakhs and above per annum. It is promising to note that even those in the category of Rs 250001 - 500000 are travelling by air (9.1%). This reflects a deepening market for airline travel (See Table 4.4).

Table 4.4
Family Income of Air Travellers

		N	%
1	Upto 250000	4	2.3
2	250001-500000	16	9.1
3	500001-1000000	71	40.6
4	1000001 and above	84	48.0
5	Total	175	100.0

* Per Annum

4.5 Purpose of Travel: Vacation (54.9%), Meeting Friends and Relatives (37.7%), and Office / Business (30.9%) are the main reasons for travelling (See Table 4.5).

Table 4.5
Purpose of Travel

		Vacation		Meeting Friends Relatives		Office / Business		Medical Tourism		Education		Others*	
		N	%	N	%	N	%	N	%	N	%	N	%
1	Yes	96	54.9	66	37.7	54	30.9	13	7.4	13	7.4	2	1.1
2	No	79	45.1	109	62.3	121	69.1	162	92.6	162	92.6	173	98.9
3	Total	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0

*Sports,
Honeymoon

4.6 Destinations: Travelling to other parts of India (41.1%) constituted the largest number with those travelling to Tier 1 Cities and those travelling abroad at (29.7% & 29.1%) respectively (See Table 4.6).

The Government, recognizing the need for better regional connectivity had announced, in the 2016 budget speech, that the Central Government will partner with State Governments in order to implement a new Action Plan that included identifying non-operational airstrips and developing them in consultation with State Governments. Under the said Action Plan, State Governments are expected to support airport development by providing state tax exemptions to airports and airlines, and reimbursement for reoccurring utility expenditures incurred for airport operations. The maintenance, repair, and overhaul (MRO) business of Indian carriers was approximately Rs 5,000 crore, 90% of which is spent outside India in countries like Sri Lanka, Singapore, Malaysia, and UAE. With the growth in India's aviation sector together with India's technology and skill base, the Government is eager to develop India as an MRO hub in Asia, for both domestic and foreign airlines.^{ix}

The International Air Transport Association (IATA) had reported that the total annual passengers in India will increase to 367 million by 2034, and overtake the United Kingdom to become the 3rd largest market by 2031.^x

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Table 4.6
Destinations

		N	%
1	Rest of India	72	41.1
2	Tier 1 Cities	52	29.7
3	Abroad	51	29.1
4	Total	175	100.0

4.7 & 4.8 Airline Currently Travelling and Most Preferred Airline for Travelling: Indigo (28.6%), Air India (25.7%), with Jet Airways trailing at (12.0%) are the airlines that respondents were currently flying. This taken in conjunction with Most Preferred Airline for Travelling (See Table 4.8) shows that a slightly larger number prefer Indigo (29.7%) and Air India (26.3%) for travelling. First Time Travellers constitute (12.0%). This shows an expanding market for air travel (See Table 4.7 & 4.8).

Table 4.7
Airline Currently Travelling

		N	%
1	Indigo	50	28.6
2	Air India	45	25.7
3	Jet Airways	21	12.0
4	Spice Jet	20	11.4
5	Go Air	17	9.7
6	Singapore	10	5.7
7	Fly Emirates	9	5.1
8	Lufthansa	1	.6
9	Etihad	1	.6
10	Saudi Air	1	.6
11	Total	175	100.0

Table 4.8
Most Preferred Airline For Travelling

		N	%
1	Indigo	52	29.7
2	Air India	46	26.3
3	Jet Airways	21	12.0
4	Spice Jet	9	5.1
5	Go Air	8	4.6
6	Singapore	7	4.0
7	Fly Emirates	6	3.4
8	Lufthansa	2	1.1
9	British Airways	2	1.1
10	Etihad	1	.6
11	First Time Travel	21	12.0
12	Total	175	100.0

4.9 Airlines Flown Earlier: Although Indigo (29.7%), Air India (26.3%), followed by Jet Air (12%) are most preferred for air travel, the airlines Flown are Air India (48.6%), Spice Jet (46.3%), and Jet Air (44.0%). If both categories of Most Preferred and Flown are taken together the national carrier Air India leads at (74.9%), followed by Indigo at (64.6%) and Jet Air (56.0%) (See Table 4.9)

Table 4.9

	Airlines Flown Earlier																					
	Indigo		Air India		Jet Air		SpiceJet		GoAir		Singapore Airlines		Fly Emirates		Lufthansa		British Airways		Etihad		AirAsia	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1 Most Preferred	52	29.7	46	26.3	21	12.0	9	5.1	8	4.6	7	4.0	6	3.4	2	1.1	2	1.1	1	.6	nil	nil
2 Flown	61	34.9	85	48.6	77	44.0	81	46.3	62	35.4	1	.6	13	7.4	10	5.7	19	10.9	nil	nil	21	12.0
3 Not Flown	62	35.4	44	25.1	77	44.0	85	48.6	105	60.0	167	95.4	156	89.1	163	93.1	154	88.0	174	99.4	154	88.0
4 Total	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0	175	100.0

4.10 Class of Airline Seats Travelled: Economy is the most preferred class with (91.4%) passengers travelling. Economy class travel makes air travel cheaper to those who are willing to spend that much extra to move from train travel within the country to airlines (See Table 4.10).

Table 4.10
Class of Airline Seats

		N	%
1	Economy	160	91.4
2	Business	15	8.6
3	Total	175	100.0

4.11 First Time Travellers: The market for air travel is increasing with (12.0%) respondents being first time travellers (See Table 4.11).

Table 4.11
First Time Travellers

		N	%
1	Yes	21	12.0
2	No	154	88.0
3	Total	175	100.0

4.12 Method of Ticket Booking: Online booking of air tickets has caught on tremendously with (62.9%) preferring this mode of booking. Companies must ensure their websites are user friendly, quick to load, easy to book from, and safe to make payments through them (See Table 4.12).

Table 4.12
Method of Ticket Booking

		N	%
1	Online	110	62.9
2	Tours & Travel / Agents	43	24.6
3	Airport	18	10.3
4	Others	4	2.3
5	Total	175	100.0

*Booking through Company

4.13 Crosstabulation: Age By Method of Ticket Booking. Of those booking online the largest numbers belong to the 26-35 years age group (50.9%). A considerable number in those booking directly at airports (61.1%) also are of this age group. This reflects the ease that consumers have at booking at airports and the confidence in air travel which may be likened to those making travelling plans last minute to travel by the railways, and book tatkal tickets, a decade or so ago (See Table 4.13).

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Table 4.13

Crosstabulation: Age By Method of Ticket Booking

		Method of Ticket Booking							
		Online		Tours & Travel / Agents		Airport		Others	
1	< 20 Years	1	.9%	3	7.0%	1	5.6%		
2	21- 25 Years	20	18.2%	7	16.3%	2	11.1%	2	50.0%
3	26-35 Years	56	50.9%	21	48.8%	11	61.1%		
4	36-45 Years	26	23.6%	8	18.6%	1	5.6%		
5	Above 46 Years	7	6.4%	4	9.3%	3	16.7%	2	50.0%
6	Total	110	100.0%	43	100.0%	18	100.0%	4	100.0%

% within Method of Ticket Booking Others: Booking by Company

4.14 Crosstabulation: Airline Currently Travelling By Method of Ticket Booking. Indigo (70.0%), Air India (57.8%), Spice Jet (80.0%), Go Air (82.4%), airlines have the largest number of their passengers booking online. Jet Airways fliers (47.6%) are booking through Tours & Travel / Agents (See Table 4.14).

Table 4.14

Crosstabulation: Airline Currently Travelling By Method of Ticket Booking

		Method of Ticket Booking									
		Online		Tours & Travel / Agents		Airport		Others		Total	
1	Indigo	35	70.0%	11	22.0%	4	8.0%			50	100.0%
2	Air India	26	57.8%	14	31.1%	3	6.7%	2	4.4%	45	100.0%
3	Jet Airways	8	38.1%	10	47.6%	3	14.3%			21	100.0%
4	Spice Jet	16	80.0%	3	15.0%	1	5.0%			20	100.0%
5	Go Air	14	82.4%			3	17.6%			17	100.0%
6	Singapore	4	40.0%	1	10.0%	3	30.0%	2	20.0%	10	100.0%
7	Fly Emirates	5	55.6%	3	33.3%	1	11.1%			9	100.0%
8	Lufthansa	1	100.0%							1	100.0%
9	Etihad			1	100.0%					1	100.0%
10	Saudi Air	1	100.0%							1	100.0%

% within Airline Currently Travelling Others - Booking by Companies

4.15 Crosstabulation: Class of Airline By Method of Ticket Booking. It is of interest to note that those who have had their bookings done through their companies have been booked on the economy class. Both business class (73.3%) and economy class (61.9%) are comfortable booking online. Tour & Travel / Agents have lost their prominence and business with online ticketing becoming available and popular (See Table 4.15).

Table 4.15
Crosstabulation: Class of Airline Travelled By Method of Ticket Booking

Method of Ticket Booking		Class of Airline Travelled			
		Business		Economy	
1	Online	11	73.3%	99	61.9%
2	Tours & Travel / Agents	3	20.0%	40	25.0%
3	Airport	1	6.7%	17	10.6%
4	Others	0	0.0%	4	2.5%
5	Total	15	100.0%	160	100.0%

% within Class of Airline Others - Booking by Companies

4.16 Crosstabulation: Reasons for Travelling By Family Income. What is extremely heartening to see is that even in the low income group of upto Rs 2,50,000 per annum there is a move towards travel for education purposes. Those amongst the highest income group of above Rs 10,00,001 per annum travel mainly for business purposes (51.2%). Sizeable numbers amongst the Rs 2,50,001 - 5,00,000 per annum (68.8%) and the Rs 5,00,001 - 10,00,000 per annum income groups travel for vacations. This shows a marked trend towards enjoying experiences and creating memories. Of note too is the highest income group of above Rs 10,00,001 per annum travel for medical tourism reasons (See Table 4.16).

Table 4.16
Crosstabulation: Reasons for Travelling By Family Income

Reasons	Family Income Per Annum										
	Upto Rs 250000		Rs 250001- 500000		Rs 500001- 1000000		Above Rs 1000001		Total*		
1	Office Business	1	25.0%	1	6.3%	9	12.7%	43	51.2%	54	30.9%
2	Friends Relatives	1	25.0%	6	37.5%	27	38.0%	32	38.1%	66	37.7%
3	Medical Tourism	0	0.0%	0	0.0%	3	4.2%	10	11.9%	13	7.4%
4	Education	1	25.0%	0	0.0%	9	12.7%	3	3.6%	13	7.4%
5	Vacation	2	50.0%	11	68.8%	48	67.6%	35	41.7%	96	54.9%
6	Other	0	0.0%	0	0.0%	1	1.4%	1	1.2%	2	1.1%

% within Family Income

Respondents have stated more than one reason for travel

Total* refers to the total of each Reason category Other reason - Honeymoon

4.17 Crosstabulation: Profession By Class of Airline Currently Travelled By Family Income. Predictably those of the lowest income group earning less than Rs 2,50,000/- per annum travel by economy class only. Of those belonging to the income group of above Rs

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10,00,001 per annum travel by business class across all categories of profession (See Table 4.17).

Table 4.17
Crosstabulation: Profession By Class of Airline Currently Travelled By Family Income

Family Income Per Annum	Profession	Class of Airline			
		Business		Economy	
Upto Rs 250000	Service	0	0.0%	2	50.0%
	Student	0	0.0%	2	50.0%
	Total	0	0.0%	4	100.0%
% within Class of Airline Travelled		Class of Airline			
	Profession	Business		Economy	
Rs 250001 - 500000	Service	1	100.0%	4	26.7%
	Professional	0	0.0%	4	26.7%
	Student	0	0.0%	7	46.7%
	Total	1	100.0%	15	100.0%
% within Class of Airline Travelled		Class of Airline			
	Profession	Business		Economy	
Rs 500001 - 1000000	Service	0	0.0%	25	36.8%
	Professional	0	0.0%	21	30.9%
	Student	2	66.7%	14	20.6%
	Business	0	0.0%	3	4.4%
	Homemaker	1	33.3%	5	7.4%
	Total	3	100.0%	68	100.0%
% within Class of Airline Travelled		Class of Airline			
	Profession	Business		Economy	
Above Rs 1000001	Service	4	36.4%	26	35.6%
	Professional	1	9.1%	32	43.8%
	Student	1	9.1%	0	0.0%
	Business	4	36.4%	10	13.7%
	Homemaker	1	9.1%	5	6.8%
	Total	11	100.0%	73	100.0%
% within Class of Airline Currently Travelled					

4.18 Crosstabulation: Efficiency of Reservation By Airline Currently Travelling By Method of Ticket Booking. This helps to pinpoint which airlines need urgent effort to rectify their processes. Go Air has fliers complaining about online efficiency of reservation with (7.1%) ranking it poor. Efficiency of reservation at airport sees fliers complaining about Air India (33.3%), and Jet Airways (33.3%). Jet Airways should also be concerned about efficiency of reservation through Agents with (10%) of fliers complaining. Further study is needed to find out if the problem is with the agents or with the agents inability to access quick and efficient service from the Jet Airways website connections (See Table 4.18).

Table 4.18
Crosstabulation: Efficiency of Reservation By Airline Currently Travelling
By Method of Ticket Booking

Method of Ticket Booking		Airline Currently Travelled									
		Indigo		Air India		Jet Airways		Spice Jet		Go Air	
Online - Efficiency of Reservation	Excellent	7	20.0%	1	3.8%	0	0.0%	3	18.8%	3	21.4%
	Good	25	71.4%	23	88.5%	6	75.0%	11	68.8%	7	50.0%
	Average	3	8.6%	2	7.7%	2	25.0%	2	12.5%	3	21.4%
	Poor	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	7.1%
	Total	35	100.0%	26	100.0%	8	100.0%	16	100.0%	14	100.0%
		Indigo		Air India		Jet Airways		Spice Jet		Go Air	
Airport - Efficiency of Reservation	Excellent	1	25.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Good	3	75.0%	2	66.7%	2	66.7%	1	100.0%	3	100.0%
	Average	0	0.0%	1	33.3%	1	33.3%	0	0.0%	0	0.0%
	Total	4	100.0%	3	100.0%	3	100.0%	1	100.0%	3	100.0%
		Indigo		Air India		Jet Airways		Spice Jet		Go Air	
Tours & Travel / Agents - Efficiency of Reservation	Excellent	3	27.3%	2	14.3%	1	10.0%	0	0.0%		
	Good	7	63.6%	12	85.7%	7	70.0%	3	100.0%		
	Average	1	9.1%	0	0.0%	1	10.0%	0	0.0%		
	Poor	0	0.0%	0	0.0%	1	10.0%	0	0.0%		
	Total	11	100.0%	14	100.0%	10	100.0%	3	100.0%		
		Indigo		Air India		Jet Airways		Spice Jet		Go Air	
Others - Efficiency of Reservation	Good			2	100.0%						
	Total			2	100.0%						

% within Airline Currently Travelled Others - Company Booking

4.19 Crosstabulation: Efficiency of Staff By Airline Travelling. Barring Jet Airways all the other airlines have some fliers complaining about the efficiency of staff and ranking it poor - Indigo (2.0%), Air India (2.2%), Spice Jet (10.0%), and Go Air (17.6%). This is a cause for concern to the respective airlines. (See Table 4.19)

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Table 4.19

Crosstabulation: Efficiency of Staff By Airline Travelling

Efficiency of Staff		Airline Currently Travelled									
		Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1	Excellent	12	24.0%	10	22.2%	4	19.0%	4	20.0%	2	11.8%
2	Good	36	72.0%	31	68.9%	14	66.7%	10	50.0%	11	64.7%
3	Average	1	2.0%	3	6.7%	3	14.3%	4	20.0%	1	5.9%
4	Poor	1	2.0%	1	2.2%	0	0.0%	2	10.0%	3	17.6%
5	Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.20 Crosstabulation: Baggage Handling By Airline Currently Travelled. Indigo (4.0%), and Go Air (11.9%) have received a poor ranking for baggage handling (See Table 4.20).

Table 4.20

Crosstabulation: Baggage Handling By Airline Currently Travelled

Baggage Handling		Airline Currently Travelled									
		Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1	Excellent	20	40.0%	11	24.4%	10	47.6%	5	25.0%	3	17.6%
2	Good	28	56.0%	26	57.8%	10	47.6%	13	65.0%	10	58.8%
3	Average	0	0.0%	8	17.8%	1	4.8%	2	10.0%	2	11.8%
4	Poor	2	4.0%	0	0.0%	0	0.0%	0	0.0%	2	11.8%
5	Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled Pre Flight Baggage Handling

4.21 Crosstabulation: Cabin Cleanliness By Airline Currently Travelled. Jet Airways (4.8%), and Go Air (5.0%) have fliers complaining about cabin cleanliness. A large number of fliers have ranked Air India (22.2%), and Go Air (23.5%) average on this parameter too (See Table 4.21).

Table 4.21

Crosstabulation: Cabin Cleanliness By Airline Currently Travelled

Cabin Cleanliness		Airline Currently Travelled									
		Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1	Excellent	12	24.0%	7	15.6%	6	28.6%	2	10.0%	1	5.9%
2	Good	36	72.0%	28	62.2%	13	61.9%	17	85.0%	12	70.6%
3	Average	2	4.0%	10	22.2%	1	4.8%	0	0.0%	4	23.5%
4	Poor	0	0.0%	0	0.0%	1	4.8%	1	5.0%	0	0.0%
5	Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.22 Crosstabulation: Seat Pitch And Recline By Airline Currently Travelled. No fliers have give a poor ranking to any airlines. But Go Air has (41.2%) of its fliers ranking it average which is a sizeable number and is a cause of concern for it (See Table 4.22).

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Table 4.22

Crosstabulation: Seat Pitch And Recline By Airline Currently Travelled

Seat Pitch & Recline	Airline Currently Travelled									
	Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1 Excellent	8	16.0%	6	13.3%	2	9.5%	2	10.0%	0	0.0%
2 Good	36	72.0%	32	71.1%	16	76.2%	16	80.0%	10	58.8%
3 Average	6	12.0%	7	15.6%	3	14.3%	2	10.0%	7	41.2%
4 Poor	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5 Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.23 Crosstabulation: Courtesy of Cabin Crew By Airline Currently Travelled. All airlines have some fliers ranking them poor on courtesy of cabin crew - Indigo (2.0%), Air India (2.2%), Jet Airways (9.5%), Spice Jet (5.0%), and Go Air (17.6%) (See Table 4.23)

Table 4.23

Crosstabulation: Courtesy of Cabin Crew By Airline Currently Travelled

Courtesy of Cabin Crew	Airline Currently Travelled									
	Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1 Excellent	11	22.0%	8	17.8%	3	14.3%	3	15.0%	4	23.5%
2 Good	30	60.0%	30	66.7%	14	66.7%	11	55.0%	10	58.8%
3 Average	8	16.0%	6	13.3%	2	9.5%	5	25.0%	0	0.0%
4 Poor	1	2.0%	1	2.2%	2	9.5%	1	5.0%	3	17.6%
5 Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.24 Crosstabulation: Quality of Meals By Airline Currently Travelled. Air India and Jet Airways have no fliers giving poor ranking about the quality of meals served on board. But both have their fliers give an average ranking Air India (11.1%), and Jet Airways (9.5%) quality of meals served (See Table 4.24).

Table 4.24

Crosstabulation: Quality of Meals By Airline Currently Travelled

Quality of Meals	Airline Currently Travelled									
	Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1 Excellent	9	18.0%	5	11.1%	4	19.0%	1	5.0%	1	5.9%
2 Good	31	62.0%	35	77.8%	15	71.4%	11	55.0%	11	64.7%
3 Average	9	18.0%	5	11.1%	2	9.5%	6	30.0%	3	17.6%
4 Poor	1	2.0%	0	0.0%	0	0.0%	2	10.0%	2	11.8%
5 Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.25 Crosstabulation: Cleanliness of Washroom By Airline Currently Travelled. Indigo has (2.0%) fliers giving a poor rank to their washroom cleanliness. All the airlines have fliers who have given average ranking on this parameter. This should raise a red flag and airlines need to improve in this area (See Table 4.25).

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Table 4.25

Crosstabulation: Cleanliness of Washroom By Airline Currently Travelled

Washroom Cleanliness	Airline Currently Travelled									
	Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1 Excellent	7	14.0%	7	15.6%	3	14.3%	1	5.0%	2	11.8%
2 Good	37	74.0%	33	73.3%	18	85.7%	15	75.0%	12	70.6%
3 Average	5	10.0%	5	11.1%	0	0.0%	4	20.0%	3	17.6%
4 Poor	1	2.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5 Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.26 Crosstabulation: Inflight Entertainment By Airline Currently Travelled. Spice Jet has (15.0%) fliers ranking it poor on inflight entertainment (See Table 4.26).

Table 4.26

Crosstabulation: Inflight Entertainment By Airline Currently Travelled

Inflight Entertainment	Airline Currently Travelled									
	Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1 Excellent	3	6.0%	4	8.9%	1	4.8%	0	0.0%	0	0.0%
2 Good	33	66.0%	35	77.8%	17	81.0%	9	45.0%	10	58.8%
3 Average	13	26.0%	6	13.3%	2	9.5%	8	40.0%	7	41.2%
4 Poor	1	2.0%	0	0.0%	1	4.8%	3	15.0%	0	0.0%
5 Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.27 Crosstabulation: Overall Experience By Airline Currently Travelled. Large number of fliers have ranked Spice Jet (15.0%), and Go Air (17.6%) poor on the overall experience (See Table 4.27).

Table 4.27

Crosstabulation: Overall Experience By Airline Currently Travelled

Overall Experience	Airline Currently Travelled									
	Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1 Excellent	2	4.0%	3	6.7%	1	4.8%	0	0.0%	2	11.8%
2 Good	44	88.0%	38	84.4%	18	85.7%	11	55.0%	10	58.8%
3 Average	3	6.0%	3	6.7%	1	4.8%	6	30.0%	2	11.8%
4 Poor	1	2.0%	1	2.2%	1	4.8%	3	15.0%	3	17.6%
5 Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.28 Crosstabulation: Post Flight Baggage Service By Airline Currently Travelled. Fliers have ranked Indigo (2.0%), Air India (2.2%), and Jet Airways (4.8%) poor. These fliers may probably have suffered a bad experience in respect of their baggage post their flight (See Table 4.28).

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Table 4.28

**Crosstabulation: Post Flight Baggage Service
By Airline Currently Travelled**

Baggage Service	Airline Currently Travelled									
	Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1 Excellent	5	10.0%	7	15.6%	2	9.5%	4	20.0%	2	11.8%
2 Good	34	68.0%	31	68.9%	18	85.7%	13	65.0%	11	64.7%
3 Average	10	20.0%	6	13.3%	0	0.0%	3	15.0%	4	23.5%
4 Poor	1	2.0%	1	2.2%	1	4.8%	0	0.0%	0	0.0%
5 Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled Post Flight Baggage Handling

4.29 Crosstabulation: Professionalism of Call Centre By Airline Currently Travelled. Jet Airways (4.8%), Spice Jet (5.0%), and Go Air (5.9%) have poor ranking on the professionalism of their call centres (See Table 4.29).

Table 4.29

Crosstabulation: Professionalism of Call Center By Airline Currently Travelled

Professionalism of Call Center	Airline Currently Travelled									
	Indigo		Air India		Jet Airways		Spice Jet		Go Air	
1 Excellent	1	2.0%	1	2.2%	0	0.0%	1	5.0%	0	0.0%
2 Good	39	78.0%	37	82.2%	19	90.5%	10	50.0%	11	64.7%
3 Average	10	20.0%	7	15.6%	1	4.8%	8	40.0%	5	29.4%
4 Poor	0	0.0%	0	0.0%	1	4.8%	1	5.0%	1	5.9%
5 Total	50	100.0%	45	100.0%	21	100.0%	20	100.0%	17	100.0%

% within Airline Currently Travelled

4.30 Average Ranking of Factors Considered Most Important During Air Travel: Price of ticket is the most important factor to air travellers (84.36%), followed by Service (71.64%), and then Flight Attendants Behavior (57.29%). Price of the ticket depends on variables which may or may not be under the control of airlines. But Service and Flight Attendants Behavior are factors which airlines can control and improve through training and motivating their employees (See Table 4.30).

Table 4.30

**Average Ranking of Factors Considered
Most Important During Air Travel**

	*Score	%
1 Price of Ticket	1181	84.36
2 Service	1003	71.64
3 Flight Attendants Behavior	802	57.29
4 Meals	791	56.50
5 Legroom	710	50.71
6 Seat Comfort	702	50.14
7 Window Seat	682	48.71
8 Aisle Seat	445	31.79

*Each out of a Maximum Score of 1400 with Valid N=175

4.31 Crosstabulation: Profile of Fliers Preferences: Top Three Most Preferred Airlines.

The top three factors which are price of tickets, service, and flights attendants behavior are the most important ones which airlines need to focus on continuously improving. Indigo has the maximum (90.4%) fliers ranking price of tickets as high in importance, followed by Jet Airways (85.7%) and last Air India (78.3%). On the service parameter all three airlines consumer choices are close to each others (See Table 4.31).

Table 4.31

Profile of Fliers Preferences: Top Three Most Preferred Airlines

Ranked in Importance	Indigo															
	Price of Ticket		Service		Fit Attendants Behaviour		Meals		Legroom		Seat Comfort		Window Seat		Aisle Seat	
1 Low in Importance	5	9.6%	14	26.9%	25	48.1%	30	57.7%	30	57.7%	29	55.8%	30	57.7%	45	86.5%
2 High in Importance	47	90.4%	38	73.1%	27	51.9%	22	42.3%	22	42.3%	23	44.2%	22	42.3%	7	13.5%
3 Total	52	100.0%	52	100.0%	52	100.0%	52	100.0%	52	100.0%	52	100.0%	52	100.0%	52	100.0%

% within Most Preferred Airline for Travelling: Indigo Each out of Valid N=175

Ranked in Importance	Air India															
	Price of Ticket		Service		Fit Attendants Behaviour		Meals		Legroom		Seat Comfort		Window Seat		Aisle Seat	
1 Low in Importance	10	21.7%	11	23.9%	19	41.3%	23	50.0%	23	50.0%	24	52.2%	29	63.0%	41	89.1%
2 High in Importance	36	78.3%	35	76.1%	27	58.7%	23	50.0%	23	50.0%	22	47.8%	17	37.0%	5	10.9%
3 Total	46	100.0%	46	100.0%	46	100.0%	46	100.0%	46	100.0%	46	100.0%	46	100.0%	46	100.0%

% within Most Preferred Airline for Travelling: Air India Each out of Valid N=175

Ranked in Importance	Jet Airways															
	Price of Ticket		Service		Fit Attendants Behaviour		Meals		Legroom		Seat Comfort		Window Seat		Aisle Seat	
1 Low in Importance	3	14.3%	5	23.8%	11	52.4%	4	19.0%	13	61.9%	14	66.7%	14	66.7%	20	95.2%
2 High in Importance	18	85.7%	16	76.2%	10	47.6%	17	81.0%	8	38.1%	7	33.3%	7	33.3%	1	4.8%
3 Total	21	100.0%	21	100.0%	21	100.0%	21	100.0%	21	100.0%	21	100.0%	21	100.0%	21	100.0%

% within Most Preferred Airline for Travelling: Jet Airways Each out of Valid N=175

4.32 Market Share of Scheduled Domestic Airlines Year 2017: The performance of domestic airlines data shows that Indigo is leading in market share (%) which supports the findings of this study. Indigo carried 108.39 lakh passengers in the Ist Quarter and 117.96 lakh passengers in the IInd Quarter of 2017. Indigo led in the market share it captured (Ist Quarter 39.7% & IInd Quarter 40.80%) amongst all the airlines flying at the time.

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Table 4.32

Market Share of Scheduled Domestic Airlines (Year 2017)

Passengers Carried (in Lakhs) / Market Share (%)

Month & Year		Private Air Carriers		
		Air India	Jet Airways	Indigo
Jan	Pax Carried	13.50	14.48	38.09
	Market Share	14.10	15.50	39.80
Feb	Pax Carried	11.71	13.67	34.19
	Market Share	13.50	15.80	39.50
March	Pax Carried	11.80	13.97	36.11
	Market Share	13.00	15.40	39.90
Ist Qtr	Pax Carried	37.01	42.49	108.39
	Market Share	13.6	15.6	39.7
April	Pax Carried	11.80	13.90	37.79
	Market Share	12.90	15.20	41.40
May	Pax Carried	13.23	15.51	41.91
	Market Share	13.00	15.20	41.20
June	Pax Carried	12.49	14.58	38.26
	Market Share	13.10	15.20	40.00
IInd Qtr	Pax Carried	37.52	44.00	117.96
	Market Share	13.00	15.20	40.80
July	Pax Carried	12.29	15.12	36.99
	Market Share	13.50	15.80	38.70
Aug	Pax Carried	12.82	15.38	36.78
	Market Share	13.20	15.90	38.00

Market Share is calculated for all the airlines flying at the time i.e. Also Including Jet Lite, Spice Jet, Go Air, Air Costa, Air Asia, Vistara, Zoom Air, Trujet, Air Carnival which have not been shown in this table

Source: Performance of domestic airlines for the year 2017

<http://dgca.nic.in/reports/Traffic-ind.htm>

STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT) ANALYSIS AND MANAGERIAL IMPLICATIONS

Efficiency of Reservation / Staff / Baggage Handling, Cabin Cleanliness, Seat Pitch And Recline, Courtesy of Cabin Crew, Quality of Meals, Cleanliness of Washroom, Inflight Entertainment and Professionalism of Call Centre if well managed are strengths of airlines and have to be maintained to the highest standards. Conversely those airlines which have scored badly on these parameters see what can be strengths turn into areas of weaknesses. In these days of social media, complaints which earlier were restricted in their ambit, are now amplified and can snowball into a social conversation which is a tirade against the airline resulting in loss of business and reputation.

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The Central Government and State Governments partnering in order to implement a new Action Plan that included identifying non-operational airstrips and developing them will open up new areas to fly to. The International Air Transport Association (IATA) had reported that the total annual passengers in India will increase to 367 million by 2034 which presents an opportunity to grow this sector. Passengers requiring flying on domestic routes (in the rest of India apart from main cities) also constitute a sizeable segment that can be captured. Companies always have to be on the lookout for new entrants either domestic or from abroad which can constitute a threat to their businesses.

Price of ticket is the most important factor to air travellers (84.36%) (See Table 4.30). The pressure to hold prices down is hence important for airlines. Price wars are common in the airline industry. But with each airline reducing prices only the customers' benefit and this does not engender any stickiness or loyalty amongst fliers. Airlines have to improve their non price factors such as service, flight attendants behaviour, meals, and legroom also. The important question is whether there are sufficient number of customers who are willing to pay more for these services.

CONCLUSION:

The statistics provided by IATA which project that India will have the world's third largest civil aviation sector in the next 15 years^{xi} is promising for investors and the fact that tourism is a focus of the government makes investment in this area worth it.

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**Impact of Environmental Uncertainty and Supply chain Disruptions on
Supply Chain Practices and Performance: A Conceptual Model**

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ABSTRACT

The purpose of this paper is to review the literature in supply chain management (SCM) and propose a model to understand the impact of environmental uncertainties and supply chain disruptions on supply chain practices and performance. With predictions that natural disasters, socio-political unrest, and many other risks are on the increase, it's ever-more urgent that companies identify, monitor, and plan in advance for events capable of damaging productivity, destroying profit, and disrupting their supply chain. With increasing globalization and outsourcing, and with leaner yet more complex supply chains, the level of risk is steadily rising. With alternative transportation, sourcing materials from alternative suppliers, and coordinating cross-network responses to disruptive events, companies can stay ahead and turn a disruption into a competitive advantage. Supply chain practices adopted by firms and their performance may be influenced by the uncertainty in which the firm operates and also the disruptions in the supply chain. Discrete studies have explored the influence of such market uncertainties on supply chain practices and performance. Very little research has been done in India on the impact of Supply Chain Practices on Supply Chain performance, in the presence of environmental uncertainty and supply chain disruptions. This has left a gap in the studies done in this regard. The methodology is based on critical review of research papers from high-quality, international refereed journals. Issues are explored under four categories viz.

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environmental uncertainty, supply chain disruptions, supply chain practices and supply chain performance. This study is a synthesis of the aforesaid factors and thus a new model is proposed, which can be explored in any industry.

KEYWORDS: Environmental uncertainty, Supply chain disruptions, Supply chain practices, Supply chain performance.

INTRODUCTION

Supply chain is a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate and finished products and distribution of these finished products to customers (Barratt 2004). Supply Chain Management focuses on the optimization of all movement of goods and/or services and the flow of information, starting with the suppliers' supplier all the way through to the customers' customer (Plenert, 2002). Efficiency and effectiveness of supply chain operations needs to be assessed as inefficiencies may be costly for the firm's competitive advantage. Environmental Uncertainty has become the major force impacting the Supply Chain. Most of the Environmental Uncertainty research is based on the works of Flynn et.al.2016, Boon-itt and Wong 2011, Davis 1993, Miller 1986, Miles and Snow 1978. Li Suhong (2002), Zhang (2001), Ettl and Reza (1992) envision uncertainty as unexpected changes in customers, suppliers, competitors, and technology. Globalization and outsourcing add greater complexity to a supply chain and compound its disruption risk (Yang et al. 2009). Srinivasan *et al.* (2011) and Ellis *et al.* (2010) link environmental factors with disruption risk.. Their findings state that the relationship between Supply Chain partnership quality and SC performance is weakened under high environmental uncertainty but strengthened in the presence of disruption risk. However, the relationships between the environmental uncertainty and risk are not directly investigated in their study. Disruptions may have costly consequences for supply chains. Companies lose 2.88 percent in stockholder wealth in days surrounding disruptions (Kumar et al,2014). In the recent past, many researchers have reported on supply chain disruption (Christopher and Peck, 2004, Norrman and Jansson, 2004) and severity of its impact on the firm and the supply chain (Oke and Gopalakrishnan, 2009). In the light of these studies, a highly resilient supply chain, which can respond to such market uncertainties, is imperative

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for any organization. Supply chain management practices makes a supply chain to perform under uncertainty, by making it more agile, resilient and integrated (Craighead et al. 2007, Faisal et al. 2006, Sheffi 2005, Giunipero and Eltantawy 2004, Christopher and Peck 2004, Geary et al. 2002 , Chandra and Kumar 2001, Hoyt and Huq 2000). Sukati *et al.* (2011) indicate that Supply chain practices improve Supply Chain (SC) responsiveness, which will enlarge Supply Chain competitive advantage and thus lead to perceived organizational performance. Very little research has been done on the impact of Supply chain disruption and Environmental uncertainty on Supply chain practices and performance. Most studies have focused on metrics and individual performance issues of firms. The paper's contribution is in conceptualizing the effects of particular Supply chain practices on Supply Chain performance under market uncertainties. The rest of the paper is organized as follows: Section 2 describes the review methodology, Section 3 draws out the theoretical development Section 4 explores the relationship between the constructs. Section 5 concludes and suggests future research directions.

REVIEW METHODOLOGY

The method adopted for the review was the search of articles in the *Proquest and Ebsco* database, which allows the access to works that were published in the most important international periodicals. Studies that investigated the relation between Supply Chain practices and Supply Chain performance, influence of Supply Chain disruption on Supply chain practices and performance, impact of Environmental uncertainty on Supply Chain practices and performance were searched for, by typing the expressions “*supply chain*”, “*performance*”, “*supply chain disruption*” and “*environmental uncertainty*” in the databases. The results showed works published in very important periodicals. Each article published between 1965 and 2016 was individually evaluated, collecting information on the objective of the study (specifically if it correlated the variables under the study), the concepts and variables it used, the method of data analysis and its main results.

THEORETICAL FRAMEWORK

Supply Chain Management

Sahay (2003) pointed out that “effective supply chain management (SCM) can make or break a company. Apple, Amazon, Dell and P&G are some of the top companies making use of

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effective Supply chain strategies and enjoying competitive advantages in the marketplace, both in terms of cost and customer satisfaction. In order for the Supply Chain to perform effectively, good supply chain practices are to be in place. Supply chain practices vary with industry and organizations. Adoption of the same is influenced by environmental uncertainty and disruption factors which may also lead to variations in Supply chain performance. Hence a research framework has been developed describing the causal relationship between these constructs with a comprehensive literature review. The four proposed constructs in the model include Environmental Uncertainty, Supply chain disruptions, Supply chain Practices and Supply chain performance.

Environmental Uncertainty

Environmental uncertainty refers to events and variables that have a random and unpredictable variation, impacting the very existence of a business (Turner 1993, Lenz 1980). Some researchers classify uncertainty on the basis of the source of the uncertainty. Miller and Droge (1986) have classified uncertainty into the following five sub dimensions - volatility in marketing practices, product obsolescence rate, unpredictability of competitors, unpredictability of demands and tastes, and change in production or service modes. Li Suhong 2002, Zhang 2001, Ettlie and Reza 1992, envision uncertainty as unexpected changes in customers, suppliers, competitors, and technology. Davis (1993) suggests that there are three different sources of uncertainty in supply chains: demand uncertainty, supply uncertainty and technological uncertainty.

Supply chain disruption

Supply disruptions may be caused by various factors, like supplier bankruptcy, labor strikes and machine breakdown (Sheffi 2005). Complexity of a supply chain and disruption risks are compounded with globalization and outsourcing (Yang et al. 2009). Stecke & Kumar (2009) provide an extensive list of various sources of disruption and classify them. These risks include extreme weather related risks (Helferich and Cook, 2002, Hardaker et al., 2004.), biological related risks (Palinskas and Szekely 2008), environment related risks (Meuwissen et al. 2001,) and market related risk (Murphy 2007, McKinnon, 2006, Juttner, 2005, Nagurney et al., 2005, Fitzgerald 2005). Rosales et.al (2015) classifies the risks into four categories: (i) risks internal to the firm, (ii) risks internal to the supply chain, (iii) risks external to the supply chain, and (iv) product risk.

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Supply Chain Practices

Supply Chain practices integrate between business units, suppliers and customers in order to promote effective SCM (Khang et al., 2010). Supply Chain practices are defined as “the set of activities undertaken in an organization to promote effective management of its supply chain” (Donlon, 1996, Li et.al. (2006,2005). Donlon (1996) outlined four dimensions in Supply Chain practice such as supplier partnership, outsourcing, cycle time compression and information technology sharing. Li et.al.(2005) has put forward a validated measure for studying Supply chain practices, with six dimensions: 1) strategic supplier partnership, 2) customer relationship, 3) information sharing and 4) information quality,5)internal lean practices and 6)postponement. Strategic supplier partnership is long term cooperation between the firm and its suppliers aimed at achieving increased productivity and efficiency at both ends (Monczka et al 1998, Sheridan 1998, Noble 1997, Stuart 1997, Balsmeier and Voisin 1996). It emphasizes joint planning and problem solving (Gunasekaran et al 2001). Customer Relationship is the set of practices that binds the firm to its customers aiming to build customer satisfaction and loyalty (Tan et al 1998, Claycomb et al 1999, Aggarwal 1997, Noble 1997). Information Sharing refers to the amount of sensitive information that is willingly shared among partners (Monczka et al 1998). Information is to be shared with both upstream and downstream partners. Information quality includes such aspects as the accuracy, timeliness, adequacy, and credibility of information exchanged (Monczka et al., 1998). While information sharing is important, the significance of its impact on SCM depends on what information is shared, when and how it is shared, and with whom (Holmberg, 2000, Chizzo, 1998). Lean System is the practice of improving productivity to enable a reduction in inventories across in the plant and hence across the supply chain. Lean implies minimum input and maximum output. Logistics practices are the practice of working jointly with logistics providers with a long term perspective to improve supply chain cohesiveness (Bechtel and Jayaram 1997) Logistics act as glue connecting various entities in the supply chain.

Supply chain performance

SC performance is defined in the existing literature as the extent to which the supply chain is able to meet customer requirements with on-time delivery (Tarafdar and Qrunfleh 2016, Li et al. 2002, Beamon 1999, Vickery, Dröge, and Markland 1997). A trend of increasing attention on Supply chain performance, both in practice and literature, are emphasized in the works of

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Gunasekaran and Kobu (2007). Their review classifies the literature based on the following criteria: balanced scorecard perspective, components of measures, location of measures, decision levels, nature of measures, measurement base, traditional versus modern measures. This idea is also supported by McCormack et al. (2008). Rexhausen et.al.(2012) proposes supply chain cost, service level and flexibility as SC performance measures. Yao and Liu (2006) suggest an integrated approach for measuring supply chain performance, combining economic value added (EVA), the balanced scorecard (BSC) and activity based costing (ABC), clearly emphasizing the need of overhead handling and a balanced approach.

LITERATURE REVIEW

While studying SCM, it is important to analyze the impact of various constructs proposed on each other. To understand the supply chain better, a framework is established describing the relationships between Environmental uncertainty, SC disruption, SC practices, and Supply chain Performance. All activities cumulatively result in good or bad supply chain performance. Each factor also can have a positive or a negative impact on the other factors.

Environmental Uncertainty and Supply Chain Practices

Environmental Uncertainty has been well recognized as an important driver for an organization to adopt supply chain practices (Franks 2000; Chandra and Kumar 2000; Claycomb et al 1999; Collins and Bechler 1999 and Lawrence, 1997). As the markets become more and more uncertain, firms resort to various practices like better supplier relations, more information sharing, lean practices and better logistics to reduce the impact of the uncertain markets. Any uncertain demand has to be offset by good strong relationships with logistics providers.

Supply chain disruption on Supply Chain Practices and Supply chain performance

Risk events at any stage of the chain can cause disruption and consequently undermine the performance of the chain. Previous studies indicate numerous supply chains risks in general could lead to a detrimental effect on the chain performance (Kumar et al. 2015, Hendricks and Singhal, 2005). They provide empirical evidence of the association between supply chain glitches announced by publicly traded firms and their operating performance. Ellis *et al.* (2010) and Srinivasan *et al.* (2011) has established a link between environmental factors and risks. Srinivasan *et al.* (2011) focus on environmental uncertainty which refers to product obsolescence, predictability of demand, action by competitors and technology change. Their findings state the relationship between SC partnership quality and SC performance is

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weakened under high environmental uncertainty but strengthened in the presence of risk. However, the relationships between the environmental uncertainty and risk are not directly investigated in their study.

Supply chain practices and Supply chain performance

The relationship between various Supply chain practices and supply chain performance measure is an extremely popular research field, which has contributed to a substantial body of scholarly work such as those of Rexhausen et al. (2012), van der Vaart and van Donk (2008), Gunasekaran and Kobu (2007). Strategic supplier partnership is long term cooperation between the firm and its suppliers aimed at achieving increased productivity and efficiency at both ends (Sheridan 1998, Monczka et al 1998; Balsmeier and Voisin 1996; Noble 1997, Stuart 1997). In an era of globalized competition, effective management of the customer interface is key to sustainable supply chain success. Adherence to Demand management and Distribution management processes and demand segmentation can be the major performance levers in a supply chain (Rexhausen et.al, 2012). Information Sharing refers to the amount of sensitive information that is willingly shared among partners (Monczka et al 1998). Information Quality refers to the accuracy, adequacy, timeliness and credibility of information being exchanged among trading partners (Monczka et al 1998). Lean System is the practice of improving productivity to enable a reduction in inventories across the plant and hence across the supply chain. Lean implies minimum input and maximum output. The lean and agile supply chain with lower inventories, fewer buffers and leaner logistic operations make the supply chains more fragile (Radke and Tseng, 2012). Logistics practices are the practice of working jointly with logistics providers with a long term perspective to improve supply chain cohesiveness (Bechtel and Jayaram 1997) Logistics act as glue connecting various entities in the supply chain. Logistics deals with the movement of materials and goods among the different players in the supply chain.

The review reinforces the need of studying the effects of particular SC practices on SC performance under market uncertainties as the combined effect has not yet been investigated. Hence the model is put forward.

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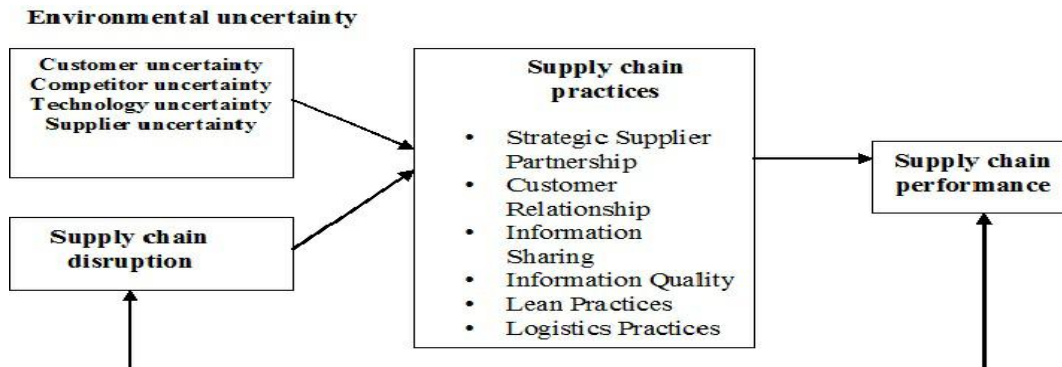


Fig.: 1: Proposed Supply chain framework

FUTURE RESEARCH DIRECTION AND CONCLUSION

Studies focusing on transportation delays and port stoppages (Chapman et al., 2002), accidents and natural disasters (Cooke, 2002), poor communication, part shortages and quality issues (Craighead et al., 2006), operational issues (Chopra and Sodhi, 2004), labor disputes (Machalaba and Kim, 2002), and terrorism (Sheffi, 2001) have all thrown light on the many, potentially negative, impacts of disruptions on various supply chain structures in nearly every industry and market segment. These studies have also illustrated the impact of frequent and/or severe disruptions on individual corporate or overall supply chain performance levels. The management of a highly interconnected supply chain is an ever-increasing challenge in today's competitive business environment. Higher levels of uncertainty in supply and demand, shorter technology and product life cycles, globalization of the market, and the increased use of distribution, manufacturing, and logistics partners all results in a complex international network. Given the complexity of many supply chains, experiencing a disruption is recognized by many organizations as being inevitable. Risk events at any stage of the chain can cause disruption and consequently undermine the performance of the chain. Previous studies indicate numerous supply chains risks in general could lead to a detrimental effect on the chain performance. Hence in a volatile supply chain, effectively managing and mitigating risk is imperative by adopting suitable SC practices, which would lead to performance improvement. The current study can further be extended to empirically examine the validity of the proposed model in any industry.

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GLOBALIZATION, INEQUALITY AND POLITICS

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ABSTRACT

This paper covers three dimensions of globalization: effect on developing nations, effect on developed nations and the resulting disparity in developed nations leading to reverse globalization. Globalization has long been seen as a win-win situation for both developed and developing economies on an aggregate level. However, two other aspect of globalization - redistribution of income and labor immigration, both have had direct social and political repercussions. The per- capita income in most developed nations have stopped increasing as compared to the earlier growth rates. The effects of globalization has been quite substantial in few geographies where labor immigration has led to changes in demographics and is often perceived as a dilution of local culture, by few.

In an attempt to contain the damage, we have seen a shift in political narratives in the recent years. Politicians are highlighting the negative impact of outsourcing, immigration and globalization while downplaying the merits of automation and economies of scale. The success of these campaigns reflects the underlying emotions of the people who feel helpless, left behind and disconnected from their own cultural inheritance.

The questions we are trying to answer is who has benefited from globalization and who has been on the losing side? For our research, we briefly studied the effects of globalization on developing and developed economies. We further tried to identify geographies within the developed nations which have seen an increase/decrease in real incomes due to globalization. In addition, we tried to establish a relationship between the voters' sentiment across geographies and income disparities due to globalization. For this, we analyzed social data and

public records for the 2016 US Presidential Elections, and discovered that the results reflected an expression of anger at a system that promoted globalization.

KEYWORDS

Globalization, Income Inequality, International Trade, Politics of Globalization

INTRODUCTION

Globalization is defined as integration through international trade of markets in goods and services. It originated in a very primitive form when humans travelled and settled in colonies all across the world. As those colonies expanded, division of labor became more commonplace. Eventually colonies started trading goods that they were efficient in producing against the ones that they weren't. This promoted specialization and led to more integrated markets thus leading to the concept of Early Globalization. The 19th century witnessed the modern form of globalization with the advent of industrialization and economies of scale. Since then multinational trade contracts and agreements such as North American Free Trade Agreement (NAFTA), the European Union (EU), World Trade Organization, etc. have significantly reduced the barriers that inhibit trade and globalization.

But has Globalization turned out to be a boon for everyone involved? This has been a long going debate. One school of thought believes that globalization leads to a rise in income which benefits all. Hence even the low income groups can benefit from globalization and come out as winners. According to the successful entrepreneur Jack Ma "We should keep on going along the path of globalization. Globalization is good. When trade stops, war comes". The United Nations has even predicted that the forces of globalization may have the power to eradicate poverty in the 21st century. This positive view is synonymous to the Kuznets Hypothesis which state that economic development initially leads to an increase and then a decrease in economic inequality. The opposing school of thought says that while globalization leads to an increased income, the benefits are not shared by all, therefore causing a widening of income disparity. In addition to raising social and welfare concerns, this effect also limits growth. Kenny Ausubel, an award-winning social entrepreneur, author and journalist says "the greatest weapon of mass destruction is corporate economic globalization". According to an April 2012 survey by pollster IFOP eight out of ten French people saw globalization as hurting employment. Of the 1052 people surveyed, only 22% saw globalization as a good thing for their country. In 2007, the International Monetary Fund

admitted that the rapid pace of trade and financial globalization has led to the rise in income inequality within countries.

According to the data from IMF, if we see the recent trends in globalization, world trade has grown five times in real terms since 1980, and its share of GDP has risen from 36% to 55%. Trade accelerated in 1990s as countries started coming together and trade barriers started dismantling. Financial globalization also grew rapidly over the last two decades as capital started moving across economies. A number of economic issues is studied to measure the degree of global trade openness in countries which is tracked in the Open Market Index (OMI) published by the International Chamber of Commerce (ICC). The OMI grades economic issues into four categories: Trade openness, trade policy settings, openness to foreign direct investment (FDI), and trade-enabling infrastructure. Over the past two decades, trade openness has improved for most nations as a result of globalization and trade liberalization as seen from Figure 2 with major countries having an upward sloping trade openness index. The interpretation of the openness index is that higher the index, larger is the influence of trade on domestic activities leading to a stronger economy.

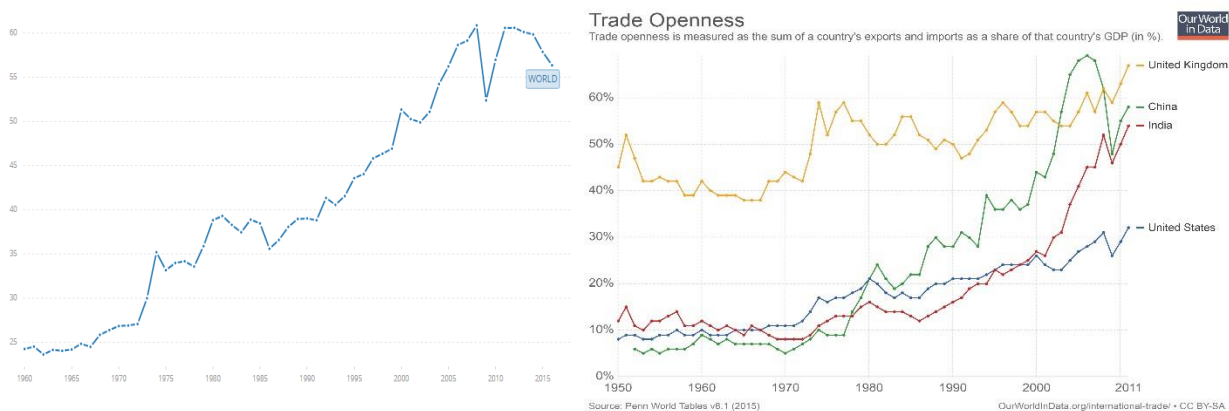


Figure 1: World Trade (as %GDP) Figure 2: Trade Openness of major countries

Against this background, we need to address the question of how globalization is affecting distribution of income within countries and the income of lower segments in particular. Analysis of shifting patterns of globalization and income redistribution suggests that income inequality has risen across most countries over the past two decades. However, at the same time, the average real income has also increases across all regions, segments and income groups. Based on observed changes in Gini coefficient (statistical measure of economic inequality), inequality has risen all over the world at different speeds except in low income

economies like sub-Saharan Africa, Middle-East, and Brazil where the income inequality has remained relatively stable. Since 1980, income inequality has risen rapidly in North America, China, India and Russia while it has grown moderately in Europe. (Figure 3) From a historical perspective this inequality marks the end post war egalitarian period and beginning of the story of 20th century which was marked by remarkable average income growth, although unevenly distributed.

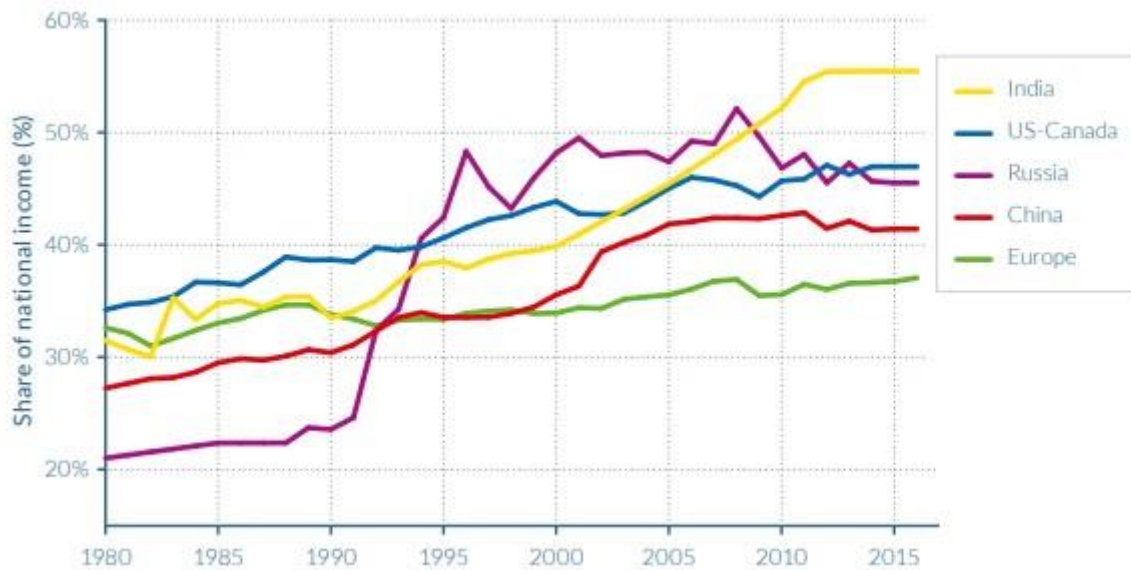


Figure 3: Top 10% income shares across the world, Source: WID.world (2017) wir2018.wid.world

Financial globalization has proceeded at an even faster rate than trade globalization. This has led to a general rise in net private wealth and a decline in the net public wealth of nearly all countries. This impacts the ability of the government to formulate policies to regulate economy, mitigate inequality and redistribute income which gives rise to international trade policies. Globalization has been politicized by many to favor their political agendas. We attempt to look at one such political phenomenon, US Presidential Elections of 2016 to identify the relationship between globalization and politics.

THEORETICAL FRAMEWORK

The proponents of globalization have maintained that even though it might have caused some distress to the rich countries, globalization has hugely benefitted the poor countries. If we see

the world as a whole rather than fragmented countries, it appears that although inequality within countries has increased, global inequality has reduced as per World Bank data from 1988 to 2008. This observation is in contradiction to the predictions of David Ricardo who introduced the concept of competitive advantage. As per Ricardo, a trade can benefit both parties if each of them engaged in the exchange of those goods in the production of which it has a competitive advantage. This would mean that if a poor labor intensive country starts trading globally, demand for its labor will start rising disproportionately. This in turn will boost the wages of low skilled labor relative to high skilled labor thereby reducing income inequality within the country.

But growing inequality in developing countries has invalidated the Ricardian principles. Looking at the current trends in globalization, Nobel Laureate Eric Maskin of Harvard University proposes a different theory in an attempt to explain the rising inequality. Maskin's theory relies on what he calls worker "matching". The better is the skill match between workers, the less is the inequality. Additionally if the skill match takes place within countries or cross countries also matters. He categorizes workers in four classes: skilled workers in rich countries, low-skilled workers in rich countries, high skilled workers in poor countries and low-skilled workers in poor countries. If the high and low skilled workers of a poor country are working together, there will be a transfer of knowledge and ideas from high skilled to low skilled. This will weaken the wage growth of high skilled workers because of a lack of opportunity in the poor country while benefitting the low skilled workers by boosting their wages, therefore pushing down inequality. This was usually the case prior to globalization. However, the post globalization era has jumbled the pairings. A high skilled worker from a poor country can now easily move to work with low skilled workers in a rich country. In this process the low skilled worker from a poor country gets left behind in the globalization process. The result is growing income inequality.

LITERATURE REVIEW

The causal effect of globalization on income inequality is of significant academic interest. While on one hand, globalization presents opportunities to increase prosperity, productivity and variety, on the other hand it is responsible for causing income inequality and unemployment of the low skilled workers. Zhou et al (2011) investigates the impact of globalization on income inequality distribution for 60 developed, transitional and developing countries in 2000. The objective is to provide strong empirical evidence to determine if globalization alleviates or worsens income inequality. Kearney index and principal component

data are used as a measure of globalization index. An empirical model is developed by regressing Gini coefficient on both Kearney and principal component indices and they conclude that globalization decreases income inequality. This result is in direct contradiction to Atif et al (2012) which seeks to examine the relationship between globalization and income distribution for 68 developing countries over the period of 1990-2010. They investigate the hypothesis of positive relation between globalization and income inequality by observing historical variations in economic and social indicators like Gini coefficient, KOF index, and education index for the 68 countries. The research supports a positive relationship between globalization and income inequality. Massey (2009) explains why although globalization creates pressure for inequality throughout the world, the pressures are expressed more fully in the United States. He blames the institutional arrangements that fails to redistribute after-tax income effectively and favor the rich at the expense of lower and middle class. This conclusion appears on the line of Piven (2001) as he argues that politics play a large role particularly in United State for determining welfare policies. He states that rather than being a model country for adapting globalization, America has become adept at adapting to the impact of politics, specifically business class politics as it move to use public policy to build private profits and oppress the larger opposition. This paper describes the impact of globalization in determining trade and public policies which are designed towards benefitting the rich and abusing the poor.

RESEARCH METHOD

We attempt to understand the US Presidential Election of 2016 and Donald Trump victory by linking it to globalization and reverse globalization. For the first time in decades, trade became a highly important issue in the 2016 US Elections. If we analyze the key promises of Donald Trump campaign, one which particularly stands out is his stance on globalization. He promised to bridge the income inequality gap, bring back employment to his fellow Americans and to boost the growth in median household income. In a slew of anti-globalization beliefs, Trump launched an attack on China and Mexico by promising to impose high import tariff on the goods made in those countries. He also pledged to renegotiate terms of trade polices like NAFTA and TPP in order to revitalize manufacturing sector. His strong stance against globalization helped Trump to gain popularity among the white-working class and voters without a degree. He swept voters from old industrial towns, rural countryside and geographies which had been left behind in the wave of globalization. Hillary Clinton on the other hand did not speak outright against trade and globalization. Her

message was more complicated – acknowledging causalities as well as beneficiaries, offering alternatives to the deprived while warning that trade isolation could be more dangerous.

We attempt to establish a relationship between the nation’s sentiment against globalization and Donald Trump victory. We referred the results published by Moody’s Analytics and McKinsey Global Institute (MGI) to identify top 30 global cities within America. MGI, the business and economics research arm of McKinsey and Company, combines the disciplines of management and economics therefore leading to more comprehensive results. These rankings were arrived at by taking into consideration per capita GDP, per capita GDP growth rate, total population, total households, and household income. In order to identify till what extent was the backlash for globalization responsible for Donald Trump victory (keeping other factors constant) we categorized these top 30 cities according to their states. Thereafter, all of the 50 states in America were classified as global/non-global and mapped. We calculate the win percentage separately for Trump and Clinton as follows

$$\text{Global states win percentage} = \frac{\text{No. of global states won}}{\text{Total no. of states won}}$$

This calculation returns the winning percentage for both Trump and Clinton. Based on the value returned, we can conclude if globalization played an important role in driving results of US Presidential Elections, 2016.

DATA ANALYSIS AND RESULT

The result data of the US Presidential Elections, 2016 was analyzed and mapped for a visual representation of the votes received by Hillary Clinton and Donald Trump. The list of top 30 cities as per the analysis by MGI and Moody’s Analytics is as follows:

Rank	Cities	States	Results
1	New York	New York, NY	Hillary Clinton
2	Chicago	Illinois, IL	Hillary Clinton
3	Los Angeles	California, CA	Hillary Clinton
4	Washington DC	District of Columbia, DC	Hillary Clinton
5	Boston	Massachusetts, MA	Hillary Clinton
6	San Francisco	California, CA	Hillary Clinton
7	Miami	Florida, FL	Donald Trump
8	Atlanta	Georgia, GA	Donald Trump
9	Houston	Texas, TX	Donald Trump
10	Dallas	Texas, TX	Donald Trump
11	Philadelphia	Pennsylvania, PA	Donald Trump
12	Detroit	Michigan, MI	Donald Trump
13	Seattle	Washington, WA	Hillary Clinton
14	Pittsburgh	Pennsylvania, PA	Donald Trump
15	Minneapolis	Minnesota, MN	Hillary Clinton

Globalization, inequality and politics

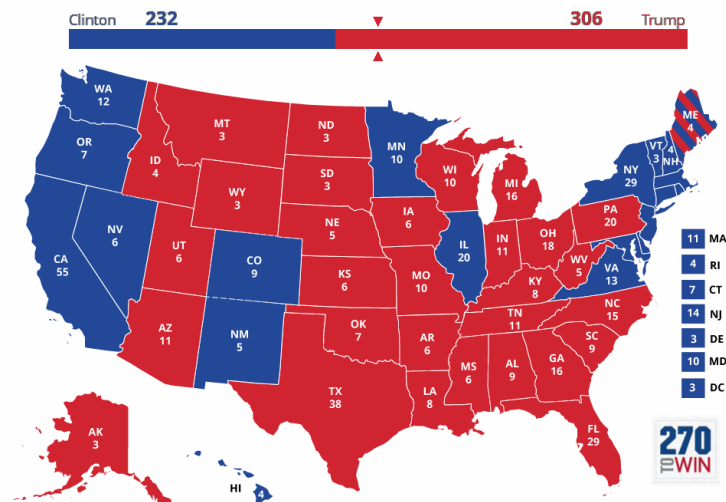
16	St Louis	Missouri, MO	Donald Trump
17	Cleveland	Ohio, OH	Donald Trump
18	Baltimore	Maryland, MD	Hillary Clinton
19	New Orleans	Louisiana, LA	Donald Trump
20	San Diego	California, CA	Hillary Clinton
21	Kansas City	Missouri, MO	Donald Trump
22	Cincinnati	Ohio, OH	Donald Trump
23	Denver	Colorado, CO	Hillary Clinton
24	Milwaukee	Wisconsin, WI	Donald Trump
25	Columbus	Ohio, OH	Donald Trump
26	Hartford	Connecticut, CT	Hillary Clinton
27	San Jose	California, CA	Hillary Clinton
28	Phoenix	Arizona, AZ	Donald Trump
29	Indianapolis	Indiana, IN	Donald Trump
30	Buffalo	New York, NY	Hillary Clinton

An important observation to be made here is that 6 of the top 10 cities of USA voted for Hillary Clinton. Polls in many global states (Figure 4) suggests that Donald Trump faced tough competition from Hillary Clinton and won only by razor-thin margins.

	Trump	Clinton
Florida, FL	49.00%	47.80%
Georgia, GA	51.00%	45.90%
Michigan, MI	47.60%	47.40%
Pennsylvania, PA	48.60%	47.90%
Wisconsin, WI	47.80%	47.00%
Arizona, AZ	49.00%	45.50%

Figure 4: Closely contested states

The following map shows the distribution of votes across the nation in 2016 elections. Donald Trump won the final mandate by securing 306 electoral votes as against Hillary Clinton with 232 votes. The results were astonishing since Clinton had won the popular vote



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by securing 48.5% against Trump with 46.4%

For analyzing the election data, we have classified the states in two categories: Global states Non- global states using the list of top 30 cities by MFI and Moody Analytics. The two categories are also visually represented on the national map. (Figure 7, 8)

Non- global States			Global States	
Oregon, OR	Oklahoma, OK	Delaware, DE	Florida, FL	New York, NY
Nevada, NV	Iowa, IA	New Jersey, NJ	Georgia, GA	Illinois, IL
Idaho, ID	Arkansas, AR	Rhode Islands, RI	Texas, TX	California, CA
Utah, UH	Mississippi, MS	New Hampshire, NH	Pennsylvania, PA	District of Columbia, DC
Montana, MT	Alabama, AL	Vermont, VT	Michigan, MI	Massachusetts, MA
Wyoming, WY	Tennessee, TN	Maine, ME	Missouri, MO	Washington, WA
New Mexico, NM	Kentucky, KY	Alaska, AK	Ohio, OH	Minnesota, MN
North Dakota, ND	West Virginia, WV	Hawaii, HI	Louisiana, LA	Maryland, MD
South Dakota, SD	Virginia, VA		Wisconsin, WI	Colorado, CO
Nebraska, NE	Noth Carolina, NC		Arizona, AZ	Connecticut, CT
Kansas, KS	South Carolina, SC		Indiana, IN	

Figure 6: Classification of states

Using the available data, win percentage for global and non-global states is calculated for Trump and Clinton separately. The results suggests that global states comprised of 50% of the states won by Hillary Clinton (suggesting that her major supporters belonged to global cities), while the same data for Donald Trump was 36.6%. This demonstrates the impact of globalization on politics and reflects the success of the Trump campaign against globalization.

	Donald Trump	Hillary Clinton
No. of global states won	11	10
No. of non-global States won	19	10
Total States won	30	20
%age of global states won	36.60%	50%

CONCLUSION

Since the 1980s the world has changed rapidly with developments in globalization and trade liberalization. As mentioned in the earlier sections, the impact of globalization is twofold, both beneficial and detrimental. With continued lowering of trade barriers and policies of trade promotion inequality has been on the rising slope, both within and across the countries. But the positive effects of globalization are also evident in the rising income capabilities across all segments of the society. This conundrum places a huge responsibility in the hands of the government to ensure that proper policies are enforced which serve the needs of all sections of the society. Being of such significant importance, it is not surprising that political parties are politicizing trade and globalization for the success of their agendas. As we have shown in this paper, Donald Trump election as the President of the United States was one of the by-product of this idea. Future studies can be conducted on Brexit which refers to the withdrawal of Britain from the European Union.

**CRYPTOCURRENCY: INVESTOR PSYCHOLOGY OF INDIAN CONSUMERS
(ECONOMY) WITH RESPECT TO SOUTH MUMBAI**

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ABSTRACT:

The rise of Cryptocurrency has attracted a lot of public interest in the past few years. Unlike traditional financial ledgers, kept by a central institution, the bitcoin ledger (blockchain) is updated and maintained by everyone participating in the network, quite like Wikipedia. This Paper will explore the various opportunities available to Invest in Cryptocurrency. It will examine the factors that affect investment buying behaviour of an investor in evolving economic scenarios. We will understand the Impact of Cryptocurrency on our lives and also understand the Technology behind it i.e. Blockchain.

KEYWORDS:

Cryptocurrency, Digital Currency, Blockchain, Preference, Investor Psychology.

INTRODUCTION:

Cryptocurrency is a digital form of asset which performs as a medium of exchange and which uses cryptography to secure the transactions. Cryptographic forms of money are delegated a subset of computerized monetary standards and are additionally named a subset of elective monetary forms and virtual monetary.

In 2009, Bitcoin became the first decentralized cryptocurrency. From that point forward, various cryptographic forms of money have been made. These are frequently called altcoins, as a mix of bitcoin substitute. Bitcoin and its subsidiaries use decentralized control as opposed to centralized electronic money/centralized banking systems. The decentralized

Cryptocurrency: investor psychology of Indian consumers (economy) with respect to south Mumbai

control is identified with the utilization of Bitcoin's blockchain exchange database in the part of an appropriated record.

REVIEW OF RESEARCH

a) Ruchi Nityanand Prabhu (August 2017) concluded that the world of money and finance is transforming at a massive pace. Cryptocurrency is creating new paradigms for a financial transaction and is creating alternative conduits of capital.

b) C.A. (Dr.) Pramod Kumar Pandey(July 2017) discussed that the universe of virtual currencies is becoming more popular each day and Cryptocurrency neither have any intrinsic value nor have any physical form and are traded on a decentralized platform without any regulations.

c) Akshaya Tamradaman & Sangeeta Nagpure (2017) explained that the development of Digital Currency is at an exceptional rate.

Objectives of the Study

a) To Study the Preference and Investor Psychology of the Indian Economy(Consumers) towards Cryptocurrency

b) To Study the Impact of Cryptocurrency in our Daily Lives.

Sources of Data

a) Primary Source Primary Data is collected with the help of a Structure Questionnaire and 100 Respondents were surveyed to collect the Primary Data.

b) SecondarySource The Secondary source of Data is collected from the Books, Reports and Articles on the Internet.

RESEARCH DESIGN

This Research Paper utilizes Descriptive Research. These are a set of methods and procedures that are used to collect and analyse measures of the variables specified in the research problem. This is the framework that has been created to find solutions to Research questions.

SAMPLING DESIGN

The sample for the survey would be taken on the following basis. Sample Unit: Students, Working Professionals, Businessmen and Housewives

Sample Size: 100 respondents

Time Frame: 2 Months

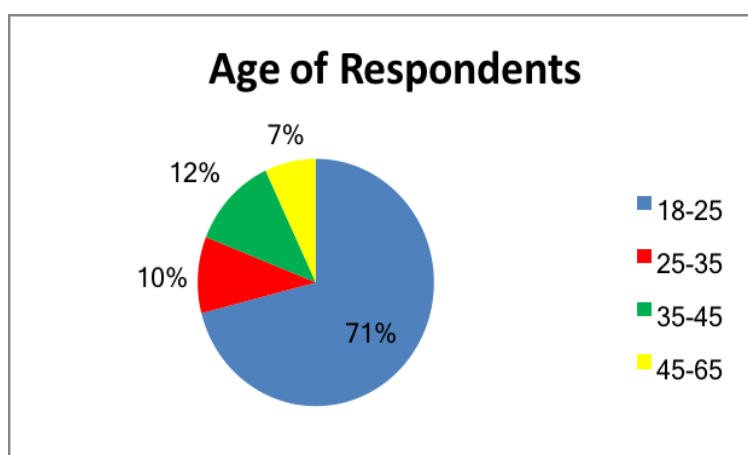
Sampling Tool: Questionnaire

Sampling Method: Convenience Sampling

Statistical Tools: Pie Chart, Bar Chart, and Line Graph

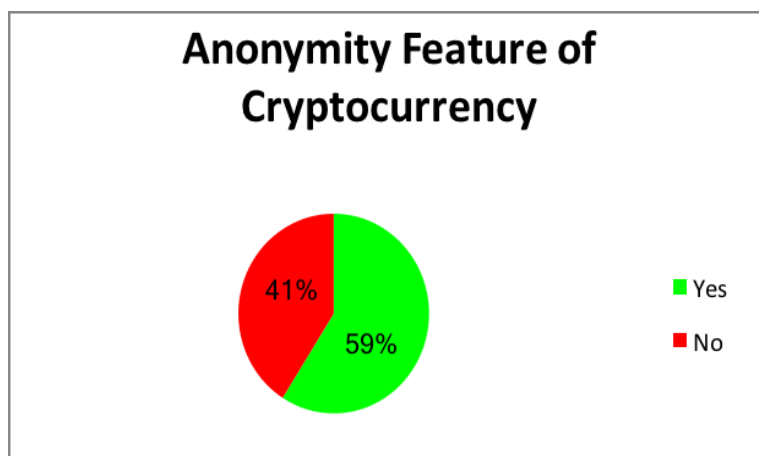
Primary Data Interpretation: To Understand the Investor Psychology of Indian Economy (Consumers) towards Cryptocurrency (Digital Currency) I have taken 100 Respondents Input for the Questionnaire (Attached in the Annexure).

I. Age of Respondents for the Cryptocurrency Questionnaire



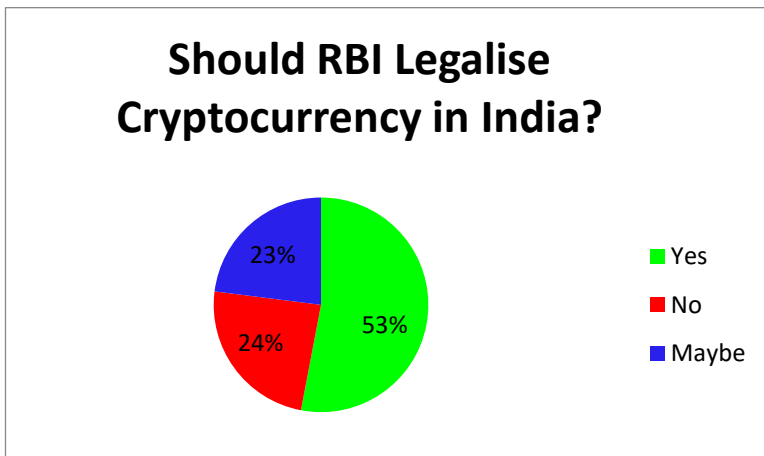
Inference: The Majority of Respondents of the Questionnaire are of the age 18-25.

II. Do you Support the Anonymity of Cryptocurrency?



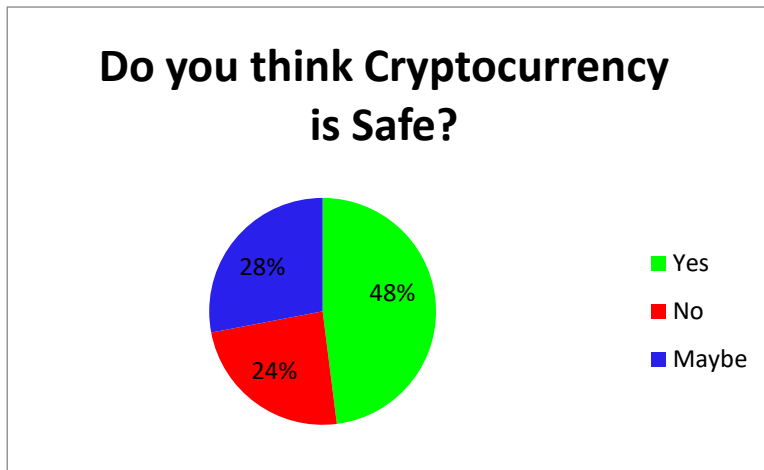
Inference: Majority of the Respondents support the Anonymity Feature of Cryptocurrency with 59% supporting the Anonymity Feature of Cryptocurrency.

III. Should RBI Legalise Cryptocurrency in India?



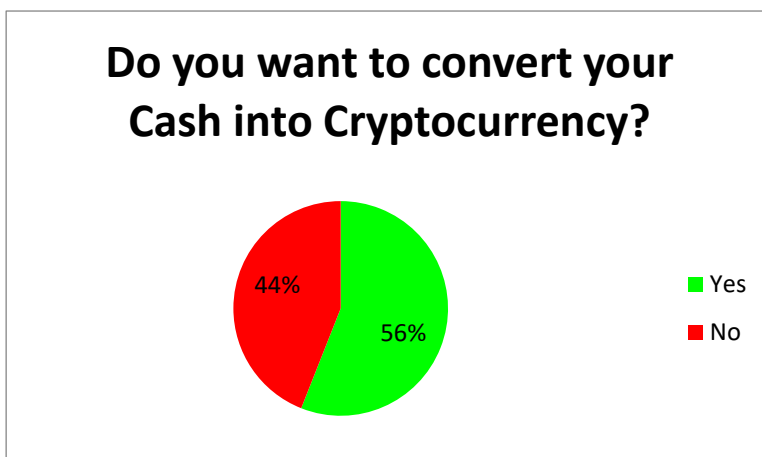
Inference: Majority of Respondents would like RBI to Legalise the Cryptocurrency with 53% support the Legalise Policy of Cryptocurrency and the rest have a differing view.

IV. Do you Think Cryptocurrency is Safe?



Inference: 48% of the Respondents have stated that Cryptocurrency is Safe, 28% have a Negative view of the Cryptocurrency and the rest are indifferent. The Safety Factor is crucial for one to invest in it.

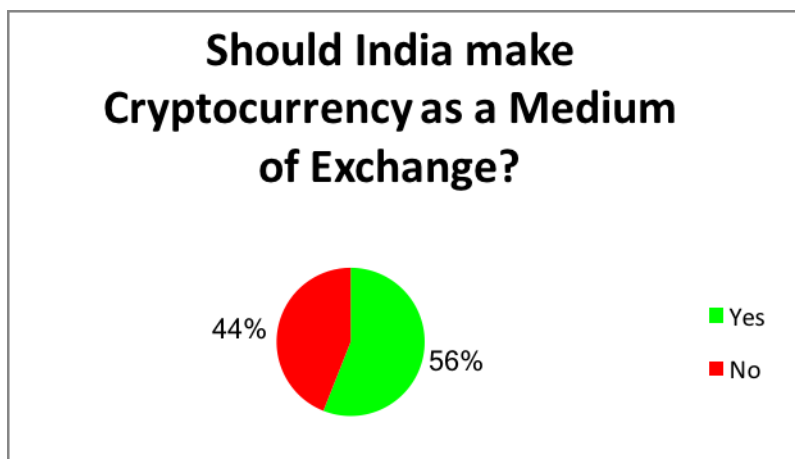
V. Will you want to convert your Cash into Cryptocurrency?



Inference: Majority of respondents (56%) would like to convert their cash into currency while 44% would not want to convert their cryptocurrency. Many

people would want to convert into cryptocurrency because they believe its value will increase over time.

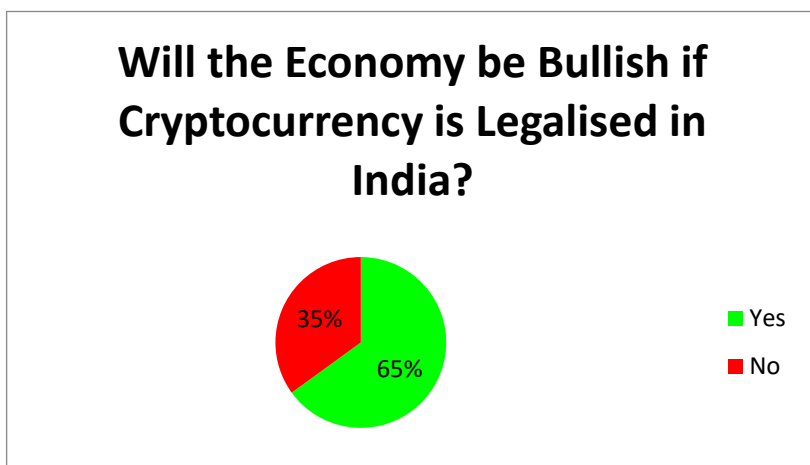
VI. Should India follow Japans footsteps to establish Cryptocurrency as a Medium of Exchange?



Inference: 56% of the Respondents would like to state that Cryptocurrency should be used as a Medium of Exchange. Since Cryptocurrency is a value transfer that takes less time and less cost for the transfer of Value from

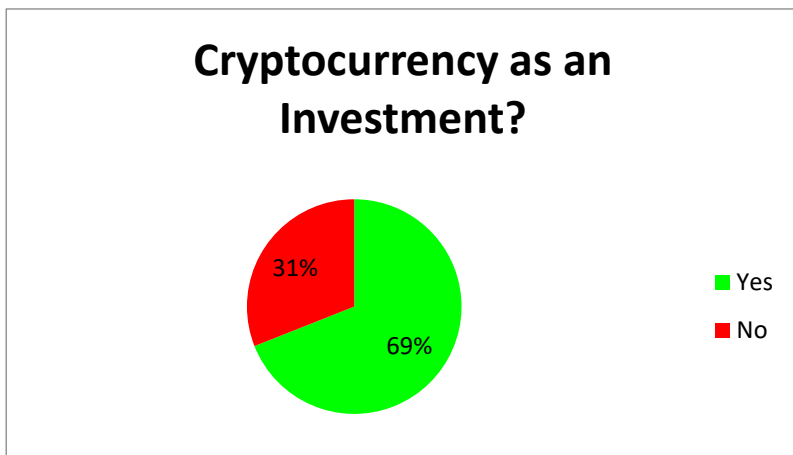
one place to another the Users would like to use it as a Medium of exchange.

VII. Do you think Cryptocurrency will make the Economy Bullish if Legalized?



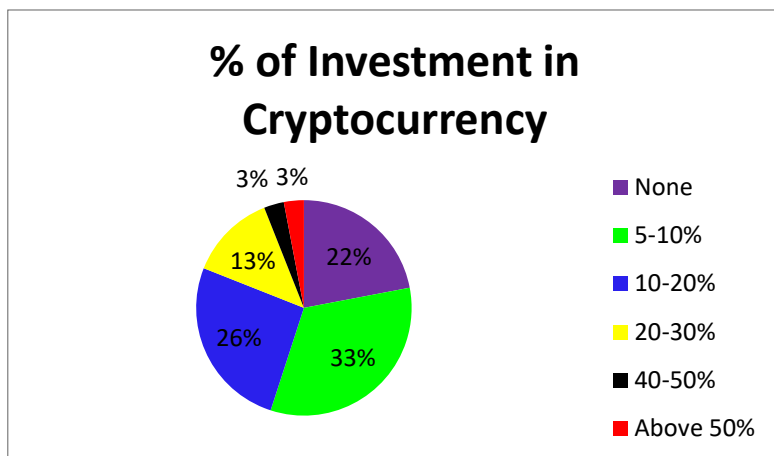
Inference: Majority (65%) feel that Cryptocurrency if legalised, will make our Economy more Bullish.

VIII. Will you buy Cryptocurrency as an Investment?



Inference: 69% of the Respondents would like to Invest in Cryptocurrency as an Investment. Individuals nowadays would like to invest in fields where there is a huge potential for growth, which Cryptocurrency possess.

IX. What % of Investment would you like to Invest in Cryptocurrency?



Inference: This Chart displays that the Majority Respondents would like to Invest in Cryptocurrency with 33%, 26 Respondents would like to Invest at the Rate of 10-20%, and 22% of the Respondents would NOT like to Invest.

Chi Square (χ^2) Testing

For the Hypothesis testing, we are comparing Individuals who agree that Cryptocurrency is Safe and Individuals who feel Cryptocurrency should be legalised.

Where, H_0 = Individuals who agree that Cryptocurrency is Safe

H_1 = Individuals who agree that Cryptocurrency should be Legalised

At 5% level of significance $\chi^2(4, 0.05) = 9.49$

$\chi^2 = 32.60464$

As $\chi^2 > 5.991$,

		Cryptocurrency Legalised			
		Yes	No	Maybe	Row Total
Cryptocurrency Safety	Yes	35	5	8	48
	No	8	14	2	24
	Maybe	10	5	13	28
	Column Total	53	24	23	100

Hypothesis: Legality and Safety Issue of Cryptocurrency are independent of each other.

Observed	Observed	Expected	Expected	(O-E)	$(O - E)^2$	$(O - E)^2/E$
O1	35	E1	25.44	9.56	91.3936	3.592516
O2	5	E2	11.52	-6.52	42.5104	3.690139
O3	8	E3	11.04	-3.04	9.2416	0.837101
O4	8	E4	12.72	-4.72	22.2784	1.751447
O5	14	E5	5.76	8.24	67.8976	11.78778
O6	2	E6	5.52	-3.52	12.3904	2.244638
O7	10	E7	14.84	-4.84	23.4256	1.578544
O8	5	E8	6.72	-1.72	2.9584	0.440238
O9	13	E9	6.44	6.56	43.0336	6.682236
	100		100	0	315.1296	32.60464

$X^2 = \sum (O - E)^2/E = 32.60464 > 9.49$

Since the Total X^2 is Greater than the Standard Significance (0.05) i.e. 9.49

The Hypothesis will be rejected.

Therefore, the Legality and Safety of Cryptocurrency are dependent on each other.

Cryptocurrency Investor Views

Upamanyu Acharya-“Cryptocurrencies, blockchain and distributed ledger technology are going to irrevocably change the future of finance and business operations. The trend of moving towards decentralization, which started with the 'Uberization' of various services, is

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taken one step further with the blockchain - trustless, immutable systems and smart contracts are going to be an everyday reality in our business environment. Cryptocurrency through blockchain economics can incentivize people to maintain public ledgers, reducing legal overheads (through smart contracts) and operational overheads (through trustless blockchain).”

Mitthil Jain-“What was it that took 2017 by storm, Crypto-currency. The virtual currency that has taken everyone bewildered without even coming into existence. A perfect place for those investors who either want to make or break their cash account and come out in the end either as a hero or zero. It's something that has kept even the biggest names confused as to where it's end is.”

Prachi Lulla-“Cryptocurrencies is a disruptive technology which is changing the Business World astronomically. This will change our daily lives and will impact all the individuals. The 2008 Financial Crisis was due to the Banks that collapsed and led to the loss of trillion of dollars of vanishment of wealth and large number of jobs. Cryptocurrencies provide a platform that is not dependent on the Banks.”

Rishabh Sachdev-“Digital Currency will be the future of Transactions. I am a Businessman who does transaction frequently and I feel that Cryptocurrency will help my Business in the way transactions are done”

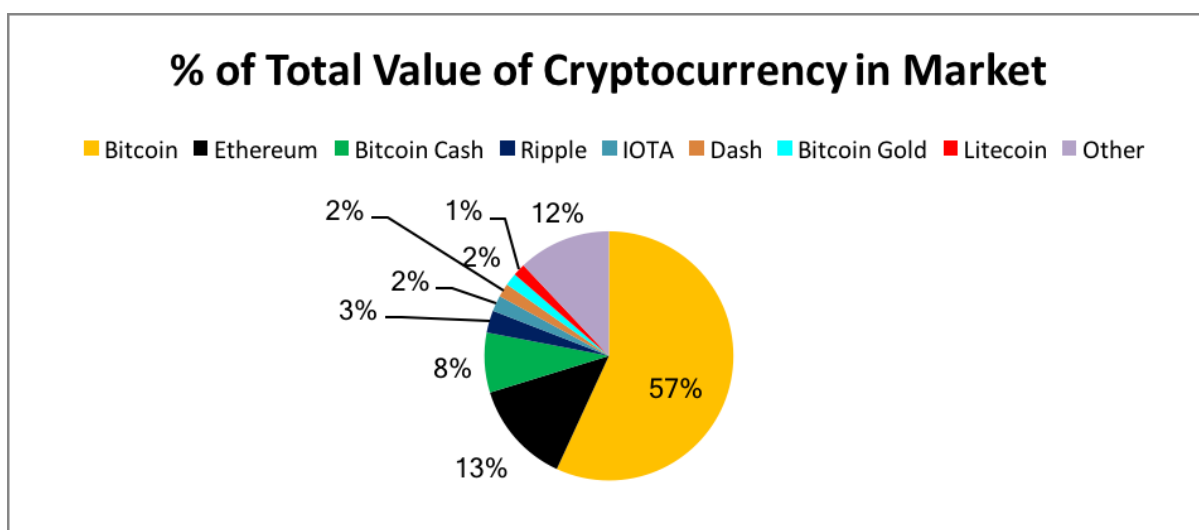
Neharika Mirakhur-“Cryptocurrency is a revolutionary way of transaction which can disrupt the banking industry. The transactions will be more affordable and faster in a couple of minutes. When Banking and Cryptocurrency will integrate well we will see another form revolution.”

Market Capitalization of Cryptocurrency (As on 4th December 2017)

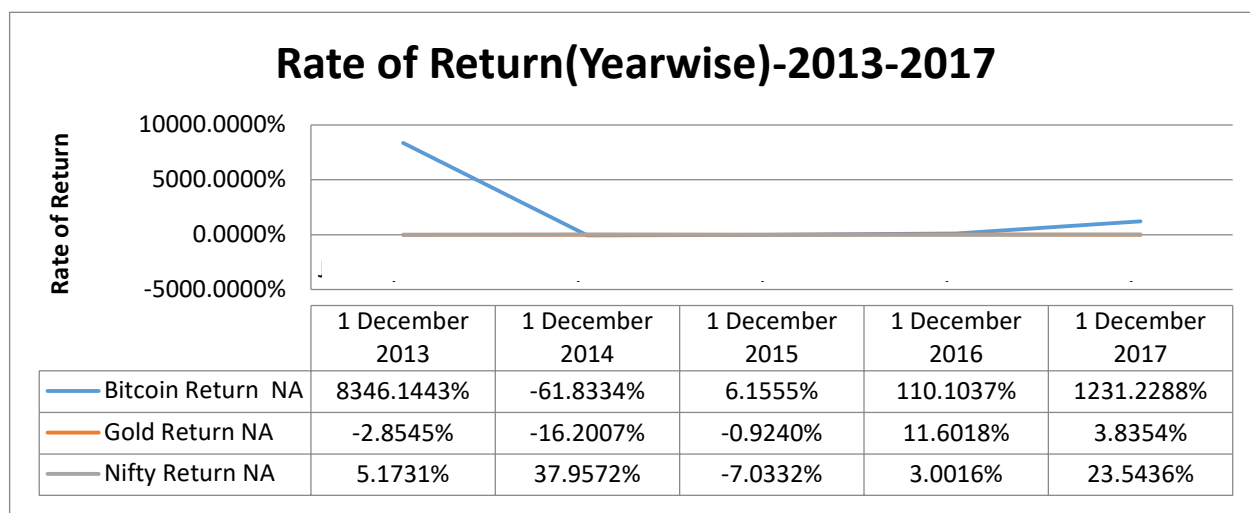
Cryptocurrency	Market Value	%	Unit Price(\$) (As on 4th December,2017)
Bitcoin	\$ 193,567,855,742.00	56.88%	11577.700000
Ethereum	\$ 45,472,968,204.00	13.36%	473.060000

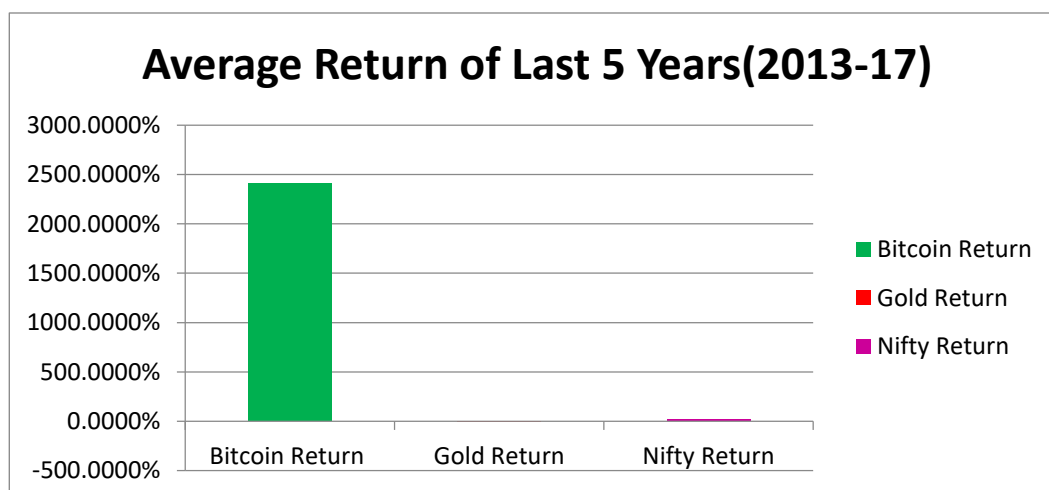
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Bitcoin Cash	\$ 26,450,222,608.00	7.77%	1570.950000
Ripple	\$ 9,815,423,172.00	2.88%	0.254135
IOTA	\$ 6,980,234,400.00	2.05%	2.511300
Dash	\$ 5,985,286,014.00	1.76%	774.038000
Bitcoin Gold	\$ 5,540,608,356.00	1.63%	332.022000
Litecoin	\$ 5,466,439,059.00	1.61%	101.007000
Other	\$ 41,008,405,754.00	12.05%	N/A
Total	\$ 340,287,443,309.00	100%	



Rate of Return on Investment Year-wise (2013-2017)





IMPACT OF CRYPTOCURRENCY IN OUR DAILY LIVES

1. Quicker Transfers

There is most likely that digital forms of money offer a more secure and effective method for settling a constant exchange through their utilization of record innovation.

Cryptographic money, for example, Ripple offers financially savvy and fast exchanges of fiat cash.

2. Faster and more cost-efficient bank transfers

There is nothing more irritating than having to pay exorbitant fees just to transfer money between banks, mainly if the transaction is a cross-country transaction. In genuine terms, the way that banks still exchange money is obsolete – they can take up to seven days.

3. Increase in Global Remittances

Migrants from the third world and developing countries that have moved to western countries, send home **over \$500 billion in remittances** to their families every year. This is a figure that far exceeds foreign direct investment and with fees for international transfers between 6-10%, this is a tremendous burden on some of the world's most vulnerable and less privileged people.

4. Providing Stability in Unstable Currencies

While the idea of digital money is still in their early stages and are in this manner not as stable that develops monetary standards, for example, the EUR or USD, a few nations could absolutely profit by cash, for example, Bitcoin. **In Venezuela for example, inflation has grown a humungous 128%** since the start of 2017 which has led to widespread social and economic unrest. Bitcoin is a more stable currency than the Venezuelan Currency.

ADVANTAGES OF CRYPTOCURRENCY

a) Lower Fees

Cryptocurrency transactions charges are next to Zero because Miners are compensated by the Cryptocurrency Network.

b) Fraud:

Cryptocurrencies are digital and cannot be counterfeited therefore Fraud cannot occur easily.

c) Access to Everyone

Approximately 2.2 billion individuals around the world who have access to the Internet or mobile phones but do not have access to the traditional exchanges; these people are made for the Cryptocurrency market.

d) Identity Theft

When credit card details are provided to a merchant you directly provide him with the authority to your full credit line. Credit cards operate on a “pull” basis, in which the merchant pulls in the payment to their account. A “push” mechanism is utilized by Cryptocurrency which allows the digital currency holder to send only what he or she wants to the recipient.

e) Decentralization:

Worldwide systems of PCs utilize blockchain technology to together deal with the database that records Bitcoin exchanges. That is, Bitcoin is overseen by its system and no one central expert. Decentralization implies the system works on a client-to-client (or shared) premise.

f) Recognition at Universal Level

Since cryptographic money isn't bound by the trade rates, interest rates, exchanges charges or different charges of any nation; in this way, it can be utilized at a universal level without encountering any issues.

g) Quick and easy payments

All you require is the address of the wallet of the individual or undertaking to which you wish to make the payment as well. The sum should credit to the recipient inside a couple of moments to a couple of minutes depending on the type of cryptocurrency that is being in use.

DISADVANTAGES OF CRYPTOCURRENCY

a) Difficult to understand

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Digital Currencies are relatively new and people end up investing in it without the proper prior knowledge and lose money to something they did not understand about.

b) Not Accepted widely

Very few sites and organizations acknowledge Cryptocurrencies yet. Not many nations have legitimized the utilization of digital currencies. It makes it illogical for daily utilization.

c) Uncertainty

Since cryptocurrencies are new, they are highly volatile. This is the reason why mass adoption is taking longer than it should. Many companies don't want to deal with a form of money that is going to go through high volatility.

d) No Valuation Guarantee

Since there is no central authority overseeing Cryptocurrency, nobody can ensure its base valuation. If a large group of merchants decided to "dump" Cryptocurrency and leave the framework, its valuation will diminish significantly which will hugely hurt clients who have a lot of investments in Digital Currency.

e) Potential for Tax Evasion

Governments do not regulate cryptocurrencies and exist outside their direct control and which naturally attract tax evaders.

CRYPTOCURRENCY VOLATILITY

1. The rate of adoption is hampered by bad press

News events that alarm Bitcoin clients incorporate geopolitical occasions and explanations by governments that Bitcoin is probably going to be strictly regulated. The headline that Bitcoin stated the Bankruptcy of Mt. Gox in early 2014 and all the more as of late that of the South Korean Crypto Exchange Yopian Youbit.

2. Too much variance in perceptions of Bitcoin's store of value and method of value

Cryptocurrency instability is determined in substantial part by fluctuating view of the inborn estimation of the cryptocurrency as a store of significant worth and technique for exchange.

3. Large holders of Cryptocurrency

The volatility of Cryptocurrency is driven by holders of large extents of the total outstanding float of the currency. For Bitcoin financial specialists with current property above around \$10M, it isn't clear how they would exchange a position that vast into a fiat position without seriously moving the market.

POPULAR CRYPTOCURRENCY IN INDIA

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a) Bitcoin

Bitcoin is the first and most well-known cryptocurrency. Bitcoin serves as a digital basic standard in the cryptocurrency world and is used as a global means of payment.

b) Ethereum

The brainchild of young crypto-genius Vitalik Buterin which was launched in 2015 has climbed to the second place in terms of Popularity in the Digital Currency World. As Bitcoin, Ethereum blockchain does not only validate a set of accounts and balances but of so-called states, this implies Ethereum can process exchanges as well as unpredictable contracts and projects.

c) Ripple

Ripple is an on-going worldwide settlement network that offers instant, certain and minimal cost international payment. Ripple empowers banks to settle cross-outskirt instalments continuously, with end-to-end straightforwardness and at bringing down costs. Ripple's consensus ledger does not require mining, an element that goes astray from Bitcoin and altcoins.

d) Litecoin

Litecoin was announced in [October](#) 2011 by Charlie Lee with the goal of being the 'silver' to Bitcoin's 'gold'. Litecoin's block time is a quarter of that of Bitcoin of 10 minutes, with an average of 2.5 minutes. This means Litecoin transactions are confirmed faster which means that there's less of a backlog and fees is lower.

RISKS RELATED TO CRYPTOCURRENCY

a) Cyber Attacks and Hacking: "Virtual Bank Robbery"

Assaults by "cyber thieves" are getting frequent, with the progression of time. Particularly Bitcoin, the Bitcoin Community has been hit by such burglaries, more than once. This creates panic in the Bitcoin as a Cryptocurrency, which leads to a decrease in the esteem, of the cash.

b) Price Fluctuation and Inflation

One of the real reasons why today numerous organizations and merchants abstain from utilizing Cryptocurrency as a medium of exchange is that it is new and the volatility of Digital Money leads to a great degree of Uncertainty.

c) Uncertainties in the Government Policies

One of the major risks here is that any government may come around and proclaim it, illicit, leaving the speculators without cure and helpless.

FUTURE OF CRYPTOCURRENCY

The market of Cryptocurrency is quick and wild. Almost consistently new cryptographic forms of money develop, old cryptocurrencies go down and early adopters get rich. Each cryptographic money accompanies a guarantee, for the most part, comes with an intention to turn the world around. Scarcely any survive the first few months and most are pumped and dumped by speculators.

Markets are messy. In any case, this doesn't change the way that cryptographic forms of money are setting down deep roots and are here to change the world. This is as of now happening. Individuals everywhere throughout the world purchase Bitcoin to ensure themselves against the degrading of their national money. Generally, in Asia, a striking business sector for Bitcoin settlement has risen and the Bitcoin utilizing dull nets of cybercrime are prospering. An ever increasing number of organizations find the energy of Smart Contracts or token on Ethereum, the main certifiable use of blockchain advancements develop.

The transformation is already happening. Institutional investors begin to purchase cryptographic forms of money. Banks and governments understand that this development can possibly draw their control away. Digital currencies will change the world. You can either remain close to or watch – or you can turn out to be a piece of history really taking shape.

RECOMMENDATIONS

I would like to recommend that Cryptocurrency should be used in our Financial World and also in other streams where it can bring in disruption to the Next level. It can co-exist with the Current Financial Industry in a Parallel Manner. Cryptocurrencies should be regulated in such a manner in which it will only be used for Good. We are currently seeing a small part of the change Cryptocurrency can bring into our lives, for example, Online Banking and Digital Signatures. We will be looking into the future where Smart Contracts will be used in every industry and increase of Cryptocurrency Disruptions will occur.

SCOPE FOR FURTHER RESEARCH

- a) Correlation Between Cryptocurrency Prices and Google Search
- b) New Uses of Cryptocurrency and Blockchain

CONCLUSION

The world of digital currency is setting down deep roots and as individuals give it esteem as a store of riches its progressive instalment preparing capacity and the capacity to work between countries are for the most part the reasons to keep on using the Cryptocurrency.

By this Study, we have come to a conclusion that Indian Individuals have a Mixed View on the Investment of Cryptocurrency in their Daily Lives. But Majority of the Indian Individuals are willing to invest in Cryptocurrency. And those who are willing to invest in Cryptocurrency support the Anonymity, Safety and also state that Cryptocurrency will make the Indian Economy Bullish. If we (Indians) adopt Cryptocurrency soon we will change how we perform transactions extensively. This will disrupt the Financial World completely.

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ROLE OF HEURISTICS AND BIASES IN DECISIONS ABOUT PERFORMANCE AND PAY: A STUDY OF MODERATING EFFECTS OF SELF EFFICACY ON LOSS AVERSION

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ABSTRACT

This study describes models that have been used in organizations for making decisions and proceeds to highlight the limitations of the rational models of decision making. The bounded rationality model is discussed to emphasize the need of understanding heuristics and biases within the context of organizational decision making. Further, the framework of heuristics and biases used in decision making, initially proposed by Kahneman and Tversky is discussed in the context of performance appraisal and compensation decisions. Subsequently, an empirical study is conceptualized which studies the role of framing on compensation choice with self- efficacy (a stable personality trait) as a moderating variable using a logit regression analysis. Framing was done in terms of a bonus and penalty choice in compensation offered to a group of management students. The proposed scale to measure self-efficacy was New General Self Efficacy (NGSE) Scale. The study also highlights how individual differences in personality can affect decision making behaviour.

KEY WORDS

Decision Making, heuristics, biases, performance evaluation, performance appraisal, framing, rationality, bounded rationality

INTRODUCTION

According to Chester Barnard, decision making is an analytical process; he states “the processes of decision...are largely techniques for narrowing choice” (Luthans, 2011; p. 493).

Decision making may be defined as choosing between alternatives. It may be described as a process where one selects a particular alternative over others to implement.

Evaluation serves as an additional element to choose by either assigning a quantitative value or a certain weightage to each option. It may also provide additional information which may clarify the attributes of the option (Nutt, 1976). Models of organizational decision should include both the evaluation as well as the choice process. In order to understand the process of decision making, researchers have often broken down the concept of decision making as a sequential process. Henry Mintzberg (1976) gave the major phases that lead to the decision making process which included identification, development and selection.

A large number of models have been described in literature to explain the decision making process. In this paper, some existing models of decision making are described which include the bureaucratic model, normative decision theory (NDT) model and behavioural decision theory (BDT) model.

The limitations of the bureaucratic and NDT models are presented and it indicates the need for the BDT model championed by Simon (1967). Some of the ways of making decisions in constrained conditions is by using heuristics and biases which were proposed by Kahneman & Tversky (1974).

Using heuristics and biases as the broad framework, this study shows how organizations make decisions related to pay and performance by highlighting the cognitive mechanisms at work.

The last section of the paper sets up the research question: how effects of framing can influence loss aversion. Here, self-efficacy is used as a moderating variable based on the research gaps identified in the literature. The research methodology, design, analysis and predicted results of the study are also discussed.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Models of Decision Making

While there is no consensus on the number and the type of decision making models that exist, Nutt (1976) tried listing a wide range of decision making models. Some of the

models include; *bureaucratic model*, *normative decision theory model* and *the behavioural decision theory model (BDT)*.

Judgement Heuristics And Biases Model

While Simon's bounded rationality model and the concept of satisficing are important extensions of the rational or normative model of decision making, Bazerman et al. (2000) point out that they do not explain the 'how of judgements'. In order to understand the bounded rationality model in a more precise manner, a framework which identifies specific biases needs to be understood (Luthans, 2011).

This is elaborated in the field of judgement and decision making (JDM) and defined as an area which examines the process by which people make conclusions, evaluations and choose among alternatives (Golstein & Hogarth, 1997).

Tversky and Kahneman (1974) gave the argument that people often assign quantitative probabilities or numerical odds to uncertain events to determine on what basis people arrive at the value of an uncertain event or at an uncertain quantity.

Their work tries to emphasize that people make use of certain *judgement operations* or parameters known as *heuristic principles* to reduce complex tasks to determine certain probabilities and predicting values in uncertain situations. The first few heuristics suggested by them was representative heuristic, availability heuristic and adjustment and anchoring.

Representative Heuristics

Representative heuristic is a rule of thumb people often use while answering many of the probabilistic questions which may be concerned with instances such as whether object A belongs to category B; what is the probability that event A originates from process B. In trying to answer such questions, people typically rely on representative heuristic. In this, the probabilities are evaluated by the degree to which A is representative of B. For example, if A is highly representative of B, one would conclude that A belongs to the category B. Often people may commit errors while making such judgements, this is especially true when insensitivity is shown to sample size.

Availability Heuristics

Availability Heuristics are applied when people evaluate or assess the frequency of or the probability of an occurrence by the ease with which certain events and instances are brought to their mind. Availability is a useful hint because examples of larger classes are brought to the mind more easily than those belonging to smaller classes.

Adjustment and Anchoring

Role of Heuristics and Biases in Decisions about Performance and Pay: A Study of Moderating Effects of Self Efficacy on Loss Aversion

This heuristic is used when people make certain estimates by starting from an initial value, which is adjusted consequently, to yield the final answer. The initial value may be a suggested value given at the beginning of the problem or maybe the result of a partial computation. Often these adjustments are generally insufficient. This is because the starting values are biased towards the initial point. This may be due to a variety of reasons. First, it could be due to insufficient adjustment; there could also be biases occurring from evaluations of disjunctive or injunctive event (Bar-Hillel, 1973).

Judgement and Decision Making in the Context of Performance Appraisal and Pay:

Performance appraisals are almost universally a given in any organization. What is also known is that most of the performance appraisals are subjective in nature and are based on self, peer or superior evaluations (Landy and Farr, 1980). The reason for choosing this paradigm is that it is a well-known fact that performance rating and actual performance do not have a high correlation, and this problem can be understood by the judgement and decision making (JDM) perspective.

While an attempt is made in the organizations to project that the decisions are made in an analytical, rational and systematic process, in reality this is far from the truth. Initial interest in this field came from the works of leniency and halo bias (Landy and Farr, 1980), but over a period of time, interest in this field has declined.

However, today, with the introduction of superior methods of performance ratings and the high importance given to this field, it is a time to re-examine this field. Performance appraisal (PA) is very similar to other tasks of JDM.

Based on some sort of information available regarding the ratee, the rater needs to make a judgement based on a criterion variable which can take on a number of values or make a choice between options such as giving a bonus or not. This can have serious consequences for the employees.

Problems become two-fold when such decisions need to be made in relation to other employees that the person is rating. In times like these, various heuristics guide the judgement of such raters to some information in the environment but not all the information and thus they utilize simple but effective methods. Thus PA can be viewed as a “heuristic process under uncertainty” (Highhouse, Dalal & Salas, 2013; p 15).

Closely related to the topic of PA is the concept of pay. The decisions which the evaluator makes regarding the performance of the employee are likely to impact the compensation of the employee. It is a well-known fact that compensation is one of the most

Role of Heuristics and Biases in Decisions about Performance and Pay: A Study of Moderating Effects of Self Efficacy on Loss Aversion

important attributes that employees look for while making a judgement about a job offer (Rynes, Gerhart & Minette, 2004), yet there is little evidence that an increase in income will lead to higher levels of happiness (Diener & Seligman, 2004).

One of the reasons for this is that people are quick to adapt to a given pay level, and what matters to them is not their absolute levels of pay rather their relative income levels-comparison points being their income in the past or that compared to others.

Using a reference based context, it was also seen that people prefer a wage profile that rises rather than one which is constant or declining, and even if they know that the rising profile has a declining value (Loewenstien & Sicherman, 1991).

Perception based Cognitions in the Performance Appraisal process

Framing Effects

How a decision is framed can have far reaching effects on the option which is finally chosen. Two options which may seem equally logical (70% fat free vs. 30% fat) may also influence decisions. Generally losses are weighed more heavily than gains, leading to the idea of 'loss aversion.'

Research thus needs to look closely on the boundary conditions of such framing effects. It has been seen that a high involvement with respect to the evaluated attribute reduces such effects (Levin, Schneider & Gaeth, 1998).

Framing effects are also reduced if one has to justify their decisions to others (Miller & Fagley, 1991) or if one has personal relationship with the person they need to evaluate (Wang & Johnstone, 1995). Like performance based information, incentive information too can be influenced by the way they are framed. Incentives can be framed in terms of losses or gains.

However, experiments have demonstrated that individuals are likely to accept offers when they are framed in terms of bonuses rather than penalties (Lufts, 1994). Some amount of evidence is also present that loss aversion actually motivates people to work harder and they may actually increase the effort they apply to a task (Church, Libbey and Zang, 2008). This was supported by a similar study done in China (Hossain and List, 2012).

However, it is imperative to note that while loss aversion in certain situations may drive people to work harder, it may give out indications of mistrust in the organization and may lead to decreased satisfaction among the employees. Based on such conflicting results, this study makes an attempt to examine the gap whether negatively and positively framed messages will have an impact on the potential employee's loss aversion.

Loss Aversion and Pay

Role of Heuristics and Biases in Decisions about Performance and Pay: A Study of Moderating Effects of Self Efficacy on Loss Aversion

It has also been studied that pay freezes are not as aversive as pay cuts. Prospect theory holds that ‘losses loom larger than gains’, (Kahneman & Tversky, 1979) while small pay increment may not have significant effects, wage cuts can have significant negative impact on performance by damage to morale and productivity (Bewley, 1999). It has also been seen that if bonuses are not “accounted” into the expected salary, then their receipt is seen as more rewarding (since adaptation does not take place) and not receiving the bonus will be less aversive to pay cuts. Lump-sum bonuses are regarded differently than regular income (Thaler, 1990).

Variable Pay and Risk

Wiseman, Gomex-Mejia & Fugate (2000) state that studies in the area of compensation risk has practically been ignored in the context of compensation literature. Judge, Cable, Boudreau, & Bretz Jr (1994) reported that most students preferred a fixed salary over one which varied from fifteen percent below to twenty five percent over that based on organizational performance. Kuhn & Yockey (2003) in a series of experiments conducted with undergraduate students found that students preferred a fixed salary or one with a lower fixed component, if they got to make some performance bonus contingent upon individual rather than organizational performance, especially if they were high on self-efficacy.

Self-Efficacy

Self- Efficacy was chosen as the construct under study, because its importance has been already established in literature. Human beings are capable of control over their actions, cognitions and feelings. This self-reflection takes place based on one’s external environment and internal self-system. It allows people to make certain evaluations of the self and include an individual’s judgement about his or her ability to fulfil certain tasks and deal with various environment settings (Bandura, 1982).

Bandura (1982) also states that based on whether perceived self-efficacy is high or low, it plays a vital role in determining how much preparation and effort one demonstrates in a task.

Those with low self-efficacy are more prone to self-doubts (Krueger & Dickson, 1994), it was seen that when people were made to believe that they were more competent than others, were likely to take more risks than those who were made to believe otherwise. Since scholars have confirmed that risk taking extends beyond simple logical reasoning, this study tries to look at one aspect of individual personality to study the same.

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Gist (1987) also highlights the fact that self-efficacy is an important organizational variable since often candidates with high self- efficacy are selected for certain jobs and leadership positions.

The present study aims to study how framing influences the judgement at hand and how self-efficacy of participants moderates this decision.

RESEARCH METHODS

Setting the Context

While Deci (1972) claimed external rewards may be counterproductive to motivation since decreases a person's feelings of self-achievement and personal causation, recent trends suggest that people want to be rewarded or at least differentiated from the average and low performers at work.

The concept of pay for performance or what was previously known as incentive plans has existed for many decades and has been discussed by classical economists such as Adam Smith and Karl Marx.

This has had implications for economists, policy makers as well as organizations (Bryson, Freeman, Lucifora, Pellizzari & Virginie Perotin, 2011). Research has also indicated that such recognition for individual work motivates employees, helps them identify with the organization and renders attachment among employees towards the firm they work for (Bryson et al., 2011). According to Keaveny, O'Neill & Inderrieden (2013), the popularity of pay for performance has risen from 47% of the American companies offering the same in 1990 to 88% in 2009.

Heneman's work (1992) also reflects that managers indicate pay for merit as the most important factor while making decisions about pay changes. In another study Kuhn and Yockey (2003) demonstrated by controlled experiments that college students preferred variable pay in individualistic rather than collective terms.

Methodology

Laboratory experiment design was chosen as a research method since it allows a researcher to manipulate variables to affect outcomes and provide rigour to a study. In other words, it is a methodology where the variables are operationalized and accounted for, that allows the researcher to make causal inferences about the data.

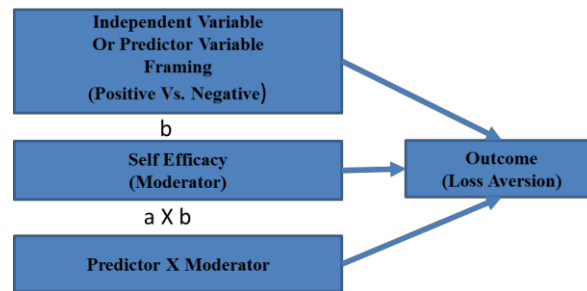
In the present study, it was decided to examine whether self- efficacy influences the relationship of kind of framing (loss or gain) and loss aversion (loss aversive or not loss aversive), i.e., whether self-efficacy moderates this relationship. Thus, the *independent*

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variable is framing. The dependent variable is loss aversion and the moderating variable is self-efficacy as described in figure 1 below:

FIGURE 1

Moderating effects of self- efficacy on loss aversion in conditions of positively and negatively framed compensation



In a controlled experiment, a group of participants is randomly assigned to the treatment conditions. The conditions are that of ‘gain frame’ and ‘loss frame’. Such a random assignment of subjects to treatment conditions allows the researcher to be sure that the affected outcome is due to the treatment itself and not due to factors extraneous to the experiment.

Random assignment means that the participants assigned to the two groups should be almost equal in number and should be homogeneous in nature. They should also be similar on attributes such as age, IQ, sex and other conceivable dimensions- homogenous to the extent possible. This ensures that large differences between the two groups are minimized.

It is also important the sample is fairly representative of the organization; this goal is also met by random sampling where all members in the population have an equal chance of being included in the sample. This can be ensured in the present study as there are seven sections of about 60 people comprising of the post graduate diploma (PGP) or management students in IIM Bangalore and one can ensure all their names are included in list of random numbers generated.

Sample Size

The sample size is determined by the extent of homogeneity in the population under observation. If the population is extremely homogenous, even a sample size of one would work and in a heterogeneous sample one could require a sample varying from 30-100 data points (Levitin, 2002). Since it has been established in this study that the sample size is fairly

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homogenous, it is proposed to have a sample size of 70 students in each condition to make the study robust.

Type of Experiment Design

The study employed a *between-subjects design*, where 70 students are assigned to one condition and another 70 to another treatment condition. It is different from a within-subjects design where all participants are exposed to all treatments and one can infer how each participant reacts to each treatment.

It has certain advantages over within-subjects design. It does not fall prey to *demand characteristics* (i.e., the participants may try to make one condition work out of the multiple conditions they are exposed to) and, second, *carryover effect* (i.e., they may carry some knowledge or experience from one condition to another).

Moderator Variable

According to Baron & Kenny (1986), a moderating variable could be either qualitative or quantitative and it functions such that it can influence the strength and the direction between the independent and the dependent variable.

This experiment employs a moderating variable self-efficacy that seeks to study if it influences the relationship between framing and participant's preference towards loss aversion. A moderating variable should also not be correlated either to the independent as well as the dependent variable.

Where the independent variable is dichotomous (positive vs. negative framed messages) and the moderating variable is continuous (self-efficacy which is measured on a rating scale between 1-5) data should be analyzed using a regression analysis (Baron & Kenny, 1986).

Earlier studies done by Riet, Ruiters, Verrij, and Vries (2009) have also used a similar design to study the impact of framing on health communication and have tried to explore certain moderators that could influence such a relationship. A study conducted by Shaffer and Arkes (2009) also made use of experiments to study participant choice between cash and noncash incentives. All these studies thus guided the present experimental philosophy to study the role of individual differences (self- efficacy) while making decisions about pay.

Method of Analysis

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The specific experimental design that this study employs is a 2x2x2 factorial design. To analyse the data, logit regression analysis was used. The primary goal of this analysis is to understand the relationship that independent variable (IV) has with the dependent variable (DV). Typically, the values of IV are supposed to predict the values of the DV and thus one decipher their relationship.

Along with that, this study also seeks to understand the interaction effects (effect of self-efficacy and framing on loss aversion). Self-efficacy which is the moderator in the experiment will be recorded between (1-5) as a continuous variable in the study. This study will be conducted only when the informed consent of the participants is obtained under conditions of confidentiality. Upon completion of the tasks, the participants will be briefed regarding the reason of the study.

Independent Variable

The IV in this study constitutes the way the incentive has been framed. This is in terms of “loss frame” or “gain frame”. The *loss frame* would refer to the offers of compensation that are made to prospective employees in terms of penalties. Thus, a base pay per hour may be set at Rs. 1000 with a penalty of Rs. 400 for not meeting the standard, while the *gain frame* would constitute that one sets the a base pay of Rs. 600 with a bonus of Rs. 400.

Vignettes for both conditions (loss and gain) are provided in figure 2. An important point to be made at this stage is that both the groups will be presented with a neutral condition of taking only a fixed base pay in order to study their tendencies for loss aversion.

FIGURE 2

Vignettes to be distributed to the two Experimental Groups as a part of the Experiment Design

Offer 1			Offer 2		
Base Pay	Bonus	Neutral	Base Pay	Penalty	Neutral
600	400	600	1000	400	600
Vignette One Company ABC, is pleased to roll out the offer to you for the position XYZ. As per our company policy, we allow you to be in-charge of your compensation. Our compensation policy allows you to either opt for Rs. 1000 if you meet the performance standard at a base pay of bonus of 400 on the base pay. Alternately you can opt for a fixed pay of Rs. 600 without any bonus scheme Do reply to the mail in the next one hour. Regards, Human Resource Management Team			Vignette Two Company ABC, is pleased to roll out the offer to you for the position XYZ. As per our company policy, we allow you to be in-charge of your compensation. Our compensation policy allows you to either opt for Rs. 1000 if you meet the performance standard performance but a penalty of Rs. 400 if you do not. Alternately you can opt for a fixed pay of Rs. 600 without any penalty. Do reply to the mail in the next one hour. Regards, Human Resource Management Team		

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Dependent Variable

The dependent variable would be *loss aversion*, which is how subjects reacted to the bonus and the penalty condition. Those choosing a flat rate over penalties would be more risk averse in both the gain frame as well as the loss frame. This can be measured in terms of how many people opted for the base pay versus the bonus or the penalty condition as described (Lufts, 1994).

Moderating Variable

The moderating variable this paper examines is self-efficacy. In this study, it is assumed that self-efficacy will play a determining role in whether or not the subjects are less or more loss averse. A moderator variable is one “which partitions a focal independent variable (the gain and loss framing) into subgroups that establish its domains of maximal effectiveness in regard to a given dependent variable (loss aversion)” (Baron & Kenny, 1986 ; p. 1).

Thus based on the literature research, the study hypothesizes the following:-

Hypothesis 1: If the job offer is framed in terms of gain then high self-efficacy will lead to less loss aversion as compared to low self-efficacy.

Hypothesis 2: If the job offer is framed in terms of loss, then low self-efficacy will lead to greater loss aversion than high self-efficacy.

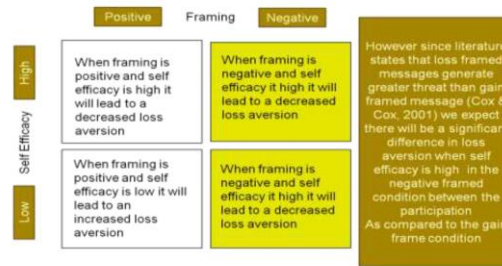
Hypothesis 3: Difference in loss aversion will be greater for the negatively framed condition than for the gain framed condition since negatively worded information is more threatening than positively framed information.

The three hypotheses are illustrated as a matrix as depicted in Figure 3

FIGURE 3

Figure 3: Projected Expected Matrix for the Role of Self Efficacy as Moderator for effects of framing on Loss Aversions

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Participants

One section of the MBA (PGP class) at Indian Institute of Management, Bangalore will be targeted. This group will be chosen since typically a variety of job offers are made to this group every year with different compensation packages. This group is also relatively homogenous on a variety of attributes such as age and education qualification.

Measures Used

While Bandura (1982) proposed that self-efficacy will vary as per situational circumstances, this study will consider a more recent literature that refers to self-efficacy as a trait rather than a state construct (Chen, Gully, & Eden 2001). Since the present work is based on the assumption that self-efficacy is internal and stable to the person, self-efficacy will be used as a trait to measure rather than a state measure. The New General Self Efficacy (NGSE) scale will be used which contains 8 items and makes use of a 7 point likert scale ranging from strongly agree (1) to strongly disagree (5).

DATA ANALYSIS AND RESULTS

When factorial designs are attempted, such as the one in the present study, two classes of effects are being investigated: *Main Effects and Interactions*.

There is a possibility of a main effect with each factor, i.e. effect of framing on loss aversion and that of self-efficacy on loss aversion. An interaction effect exists when the effect of one independent variable on the dependent variable depends on the value (level) of some other independent variable (self-efficacy or the moderator included in the study design).

In other words, the test of an interaction focuses on the question of whether or not the effect of one factor is the same for each level of the other factor. Thus, in order to test the analysis, logistical (logit) regression model can be used. The logistic model and not the linear model, is used since the dependent variable in this study is binary that is Loss Aversion; will be present (1) or absent (0) depending upon the selection made in the vignette.

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Self-efficacy which is the moderator in the experiment will be recorded as a score from (1-5) as a continuous variable as mentioned before. The independent variable in the study, which is framing, once again will be binary, 1 representing positive or bonus framing while negative framing in terms of penalties made will be recorded as a 0.

Statistically, Hypothesis 1 would be:

$$\mu_{HSE \ x \ +} > \mu_{LSE \ x \ +}$$

This implies that the mean of the group with higher self-efficacy (HSE) will be greater than the group with lower self-efficacy in the bonus or positively framed (+) condition.

Statistically, Hypothesis 2 would be:

$$\mu_{HSE \ x \ -} > \mu_{LSE \ x \ -}$$

This implies that the mean of the group with higher self-efficacy (HSE) will be greater than the group with lower self-efficacy in the penalty or negatively framed (-) condition. To check hypothesis one and two (means between the two groups) t-tests would have to be used.

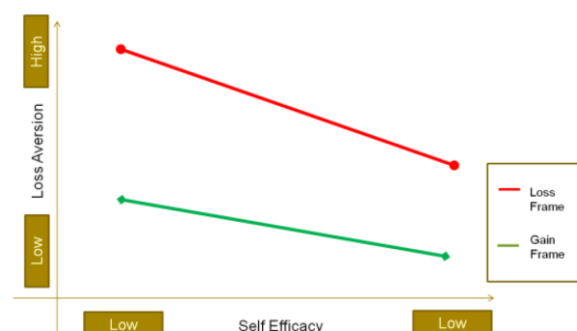
For Hypothesis 3, the slope of the curve for the gain framed and loss framed will be observed to check which slope is steeper; the steeper curve will reflect the bigger difference. The regression equation that will let us know the difference of framing on loss aversion as moderated by self-efficacy will be expressed as:

$$\text{logit (Loss Aversion)} = \alpha + \beta_0 \text{ Framing} + \beta_1 \text{ SE} + \beta_2 (\text{F} \times \text{SE}) + \Upsilon$$

The expected effects are depicted in figure 4 given below. Based on the statistical analysis, the study would be able to conclude whether or not differences between the two groups are significant or not, and if the hypotheses find support.

FIGURE 4

Hypothesized and Expected two way interaction effect of framing and self- efficacy on Loss Aversion



IMPLICATIONS FOR MANAGER AND WORK PLACE

The present study highlights the role of that framing concerning aspects of pay and incentives (loss aversion). Therefore this study has implications both for employers and prospective employees. The employers should be cognizant of the way they roll out the offers, in terms of the way incentives and pay are framed, designed and communicated. Secondly, based on a personality trait, the employer can gauge the efficacy level of the employee and accordingly set forth an offer in terms of bonuses, penalties or a fixed pay.

This is important since pay has important consequences for the organization in terms of attachment, turnover, absenteeism and motivation (Kuhn and Yockey 2003).

CONCLUSION

This paper highlights key constituents of decision making and examines the broad theoretical frameworks in which decisions are made. Beginning with a rational and utilitarian approach to decision making, judgements and decision making have evolved a great deal in numerous contexts. The bounded rationality model highlights the limitations and real life constraints of such a model and highlights the need of short cuts or rules of thumb while making decisions.

The study also highlights that while certain decisions made using these heuristics may be erroneous and biased, they also yield reliable and effective results given the real world settings and constraints within the organizations. The second part of the paper highlights how such heuristics are utilized while conducting performance appraisals or designing compensation in organizations. Areas that could be studied in the future could include whether age and experience can affect the phenomena of loss aversion and how emotions can also influence decision taking regarding compensation. In the last section of the paper, an experiment has been designed to highlight the role of a stable personality variable on loss aversion, given the kind of framing in compensation. The rationale of this empirical study is that there are likely to be individual differences in the way one forms perceptions about framing. An experimental design has been set up in order to check for such effects. Thus, while one may believe that individuals try to take decisions with objective parameters, the role of subjectivity, constraints and individual differences cannot be overlooked.

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**“SUSTAINABLE PROSPERITY THROUGH EQUILIBRIUM GROWTH:
AN ECONOMETRIC STUDY”**

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ABSTRACT

Globalization, as an anthropogenic activity, is as imperative and all-pervasive as global trade for human development. In contrast, *reverse globalization* is a symptom of weakening resistance, and a sign of creeping inefficiency in the cultural fabric of multinational corporations of developed nations. The true purpose of global trade is happiness of all mankind, but “inclusive prosperity” is possible only if benefits of economic growth are equi-distributed among all. Sustainable growth is possible only if the planet is considered as an equal stakeholder in the path of economic development. A long-term solution is the concept of “equilibrium growth” as a preferential option over “inclusive growth”.

This research paper proposes an econometric model based on rational utilization of natural resources, using global data covering key econometric parameters. The environment is the genesis of growth, and economic development is the final outcome. The Principle of Common Ownership of Resources is manifested as *GNRP*, an indicator of economic wealth potential. Common Pricing Mechanism is adapted in order to eliminate the disruptive effects of differential pricing. A Common Global Pool of wealth achieved at the end of a business cycle is proposed through the concept of *UGDP*. Excess wealth created is sought to be distributed back into the economic cycle through an innovative “*Wealth Distribution Model*” mechanism. Global economic forecast analysis is used to derive the Economic-Environmental-Equilibrium balance point.

The aim of this paper is to propose solutions to achieve global prosperity and to eliminate poverty. The success of the proposed mechanism depends on the collaborative stance between followers of GDP as a traditional measure of economic growth, and believers of *GNRP* as an accurate and sufficing⁽²⁾ measure of real economic wealth. The purpose is to achieve inclusive prosperity and long term sustainable growth and well-being, both for mankind *and* the planet.

KEY WORDS: *Globalization, multinationalism, inclusive prosperity, equilibrium growth, GNRP, UGDP, UGNRP, Sustainable growth, E3 concept.*

INTRODUCTION

Globalization seems not so much a matter of nations, as of *multi-national companies*, whose only culture is *economic profit*. The planet itself is the most sustainable and perennial example of globalization, sustaining mankind as a co-species of evolution, as well as sourcing the natural resources for his economic activities. Globalization is defined as an “*economic process of integration*”, with social and cultural aspects. It is the interaction of people, states or countries through flow of *money*, ideas, and culture, involving *economies*, industries, markets, cultures, and policy-making. It is characterized by *rapid* trade expansion, technology growth, *financial* liberalization. While historically, socio-cultural exchanges have been the mainstay of a peaceful and harmonious global world, globalization today over-emphasizes *economic* and *monetary* preferences. Planet earth provides the environment for humanity to coexist with other living species, while the advancement of mankind can be charted through social, economic, and environmental; the three pillars of sustainable growth. Mankind must sustain earth’s carrying capacity by judiciously employing the freely available resources, for achieving inclusive and holistic *sustainable* growth.

RESEARCH PHENOMENA

(i) Globalization and Multinationalism

History of Globalization- National Economies: Presently, the US and UK, traditionally staunch crusaders of open markets, are shifting focus from globalization to localization. Ironically, these very capitalist nations who sought to penetrate the iron curtains of self-sufficient communist and socialist economies, are themselves now retreating into a protectionist shell under the pretext of “*reverse globalization*”, implying sheer incompetency in facing self-created global challenges.

Genesis of the anti-globalization sentiment: The great global depression of 2008-09 affected the economy of the world drastically. Global economic growth declined to 0.9 %, world economy shrank by 2.6 %, world trade by 2.1 %, global job loss stood at 30 mn, and unemployment rate at 7.1 %. As a result of the economic downturn, public sentiment about globalization nose-dived in the United States and other advanced economies and among European political right parties. As the world becomes increasingly flat (Thomas Friedman⁽¹⁾), globalization has slowed down, but not stopped, nor gone into reverse. International activity may stagnate temporarily due to the undercurrents of “*reverse globalization*”, but the world still remains globalized in terms of trade and foreign direct investment. The backlash against globalization is actually a backlash against multinationalization which was in dire straits even under favorable economic conditions.

This research paper suggests an option. As policy leaders underestimate the potential gains from increased globalization and overestimate its harmful consequences, it is necessary encouraging policies that generate global prosperity. A balance between economic growth and environmental decline can be achieved by planning equilibrium growth in a sufficing⁽ⁱⁱ⁾ global economy.

(ii) Growth

Defining Economic Growth

In the history of anthropogenic development, mankind has reached a stage where economic growth is good for “economic” development, but unhealthy for human development. Managing of resources, is an involved process that creates harmony between man and nature, the primary stakeholders. The ultimate purpose of growth is *happiness of mankind*; and an integrated approach is necessary to achieve this goal.

Inclusive growth is a concept that advances equitable opportunities for economic participants during economic growth with benefits incurred by every section of society, while linking macro and micro economic determinants of the economy with growth.

Exclusive Growth: While excessive growth exceeds a normal, usual, reasonable, or proper limit, exclusive growth causes economic imbalance. There is simultaneous co-existence of economic deprivation and immoral gluttony within society, and this inequality causes social misery and unhappiness. UNDP is inexplicably silent about growing economic segregation; the phenomenon of “*Economic Apartheid*”.

Real Growth: Globally, the ever-changing flux of macro dynamics, and the sterile inertness of macro statics cause economic disturbances, giving rise to cyclic business disruptions. The need of the hour is a middle path of macro constancy based on equilibrium economics. This paper proposes a “Wealth Distribution Model” for equitable growth at equilibrium point; *the E3 concept*.

CENTRAL RESEARCH PROBLEM

Research Questions

- *What are the global strategies for multinationals to survive and compete?*
- *How can mankind achieve long-term, all-inclusive growth for sustainable development while preserving natural resources for future generation?*
- *How can the natural resources of the world be utilized optimally for growth?*
- *Can global wealth created from economic activity be distributed equally?*
- *Is it possible to achieve a state of perfect equilibrium between economic growth and environmental decline?*

LITERATURE REVIEW

Indicators of Economic Growth

Simon Kuznets introduced Gross Domestic Product (GDP) as a national accounting measure for of economic activity, but it is increasingly misused and misinterpreted as a measure of human well-being. GDP is an inadequate and inaccurate measure of economic growth (*Ricardo Aguado & Jabier Martinez*⁽³⁾, *Kuznets and Fleurbaey*).

Common Ownership of Wealth and Resources: The planet provides natural resources freely and abundantly to mankind for basic consumption needs. Nations are merely custodians and

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guardians of the resources. All wealth derived from utilization of resources is common property of mankind, and must be distributed equally among all nation for the common good.

Equal Wealth Distribution: Adam Smith ⁽⁸⁾ explains how the “invisible hand” favors income distribution, but not factor-price equalization. Gillian B. White ⁽⁹⁾ discovers that wealth redistribution policies find little support from those very economically vulnerable groups who need income equality the most. Vivekinan Ashok ⁽¹⁰⁾ observes the failure of redistribution methods to resolve increasing inequality.

Cumulative Wealth Potential and Common Wealth Pool: Common ownership of resources and wealth mandates a fair and equal wealth distribution mechanism is required to establish economic justice and parity.

Common Pricing: The *Theory of Utility* supports common pricing. It is proposed to remove the dynamic influence of the “Price” factor (change in price), by introducing the concept of “Constant Pricing” or “Common Pricing”. *This concept is applied in the research by proposing a constant price scalar in order to achieve the proposed equilibrium state.*

PARAMETERS OF THE RESEARCH

Research Need: *Gaps analyzed in review of extant literature suggest that a universal model applicable for all nations of the world, covering all economic systems through lasting periods of times, is yet to be established. This research proposes to cover the gap by introducing a revolutionary economic growth model.*

Rationale of the Research: GDP as an indicator of economic growth is grossly ineffective and inadequate. The proposed econometric growth model based on the concept of macro-constancy is expected to work efficiently at an equilibrium point between economic growth and environmental disruption. The logic of distributive management is applied to this model in periodic consecutive trade cycles of potential and achieved growth, in order to arrive at the point at which the two cumulative values remain equal and constant without external intervention..

Research Aims and Objectives

a. Primary Objectives

1. To propose an alternative indicator of economic growth potential: (*GNRP*)
2. To derive a distributive model of wealth created from economic activity: (*WDM*)
3. To formulate an equilibrium-based econometric growth model: (*E3 model*)
4. To predict the Equilibrium point based on forecast analysis.

b. Secondary Objectives

1. Common Pricing of minerals (*DNA of economic growth*)
2. Cumulative Wealth Pool of nations (*Universal GDP*)

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3. Common Wealth Pool of natural resources (*Universal GNRP*)

Research Design: Research in econometrics involves gathering empirical data and describing the pattern and relationship. The underlying principle of management is the optimal use of resources of the universe for sustainable growth. While applying secondary-sources statistical data to lend empirical support to economic models, the research attempts to express economic theory in mathematical form, equations, and models with regards to measurability or mathematical testing.

Research Approach: This research applies an experimental approach, wherein a simple model with few equations and variables is applied initially.

Type of Research: It is an exploratory type of research using secondary data from panel data framework which makes it possible to allow for differences in the form of unobservable individual country effects and ability to control for individual heterogeneity.

Sampling Method: Non-probability, judgment, convenience sampling.

RESEARCH METHODOLOGY

BC Stage	Year	Business Cycle Process	Decision/Action to be Taken	
Start	1 st	Calculate GNRP of each nation		
		Add all GNRP to give UGNRP		
End	1 st	Calculate GDP of each nation		
		Add all GDP to give UGDP		
		Calculate mean UGDP		
		Compare UGDP with UGNRP	UGDP v/s UGNRP	
			If NOT Equal	If Equal
		Compare GDP with mean GDP	No Action	
		GDP > mean	GDP <= mean	
Start	2 nd	Calculate GNRP of each nation		
			Add Difference	No Action
			Revised GNRP	Original GNRP
		UGNRP= GNRP O + R		
End	2 nd	Calculate GDP of each nation		
		Add all GDP to give UGDP		
		Calculate mean UGDP		
		Compare UGDP with UGNRP	UGDP v/s UGNRP	
			If NOT Equal	If Equal
		Compare GDP with mean GDP	No Action	
		GDP > mean	GDP <= mean	
Start	3 rd	Calculate GNRP of each nation		
			Add Difference	No Action
			Revised GNRP	Original GNRP
		UGNRP= GNRP O + R		

The cycle continues until:

$UGDP_{\text{PREVIOUS CYCLE}} = UGNRP_{\text{NEXT CYCLE}}$
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THEORETICAL FRAMEWORK

Rationale behind the Economic Environmental Equilibrium Growth Model

The basic conceptual framework for the model is derived from *Hervé Boulhol* ⁽¹¹⁾ who uses an augmented *Solow model* about determinants of growth, assuming evolution of factors of production over time for its long-run (steady-state) equilibrium. The “Pooled Mean Group (PMG)” estimator is used which allows for short-run coefficients and the speed of adjustment to vary across countries while imposing homogeneity on long-run coefficients. The role of accelerator and multiplier (*J. M. Clark*) is utilized in the proposed Wealth Distribution model in order to derive the equilibrium point of economic stability. The equilibrium growth rate concept assumed by *Hicks* is used as a benchmark for formulating the Economic Environmental Equilibrium growth model.

Data Analysis

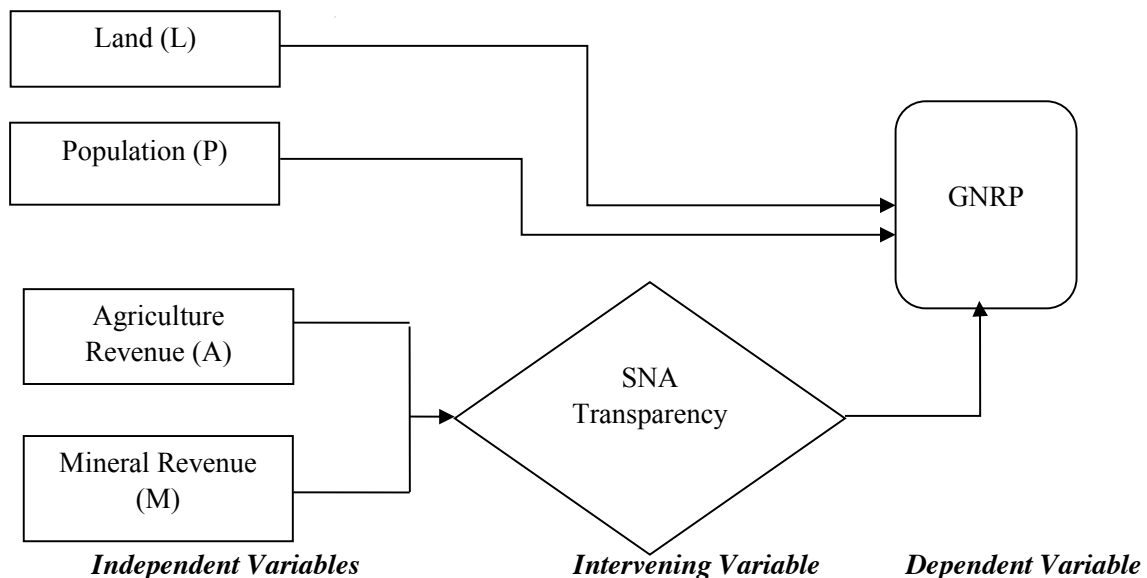
Factors of Production used in Calculating GNRP

The four basic parameters that define a nation’s economy are:

1. *Land Area*: As it remains constant, and produces resources to run the economy
2. *Population*: Not as a divisive factor, but multiplicative, as they are consumers in economy.
3. *Agricultural Revenue (supra-soil asset base)*: Satisfies basic need of hunger
4. *Mineral Revenue (sub-soil asset base)*: Valuation for exchange of resources in economy.

Note: Population of a nation is taken as a multiplicative factor as it adds up to the economic wealth of a nation by actively participating in the economic process as consumers/end-users.

Figure 1: Relationships between Variables/Constructs used in the Model



Data Compilation

a. Data Collection Method: Secondary data is used for statistical analysis of macroeconomic components of the various factors of economics from various sources.

b. Sampling Method

The type of Sampling of sampling used is non-probability sampling. The samples used are convenience samples based on data availability. Judgment sampling is used for selecting nations having significant economic growth in relation to world GDP.

c. Sample Size

i) Database of Nations: The universal sample size is 191 is Countries/Economies. The database contains projected GDP's of the 191 Countries/ Economies in current prices (U.S. dollars) of year 2017 and 2022. Data is based on projection by **IMF outlook April 2017**. Gross World Product in 2017 is projected at \$77.99 trillion, and its GDP (PPP) is forecasted at \$126.69 trillion. Top five economies account for 53.82 %, top ten accounts for approx. 67.19 %, top 20 economies add up to over 80% of World GDP. The sample size for the research is **64 Countries (Economies)**, as this sample size represents 95.63 % of the World GDP (in 2017).

Economy Unit	GDP (USD bn)	% of Ttl
Cumulative 64	74,577	95.63
World	77,988	

ii) Database of Minerals: The total number of commodities/minerals used in the research is 238. Source of Mineral data: Secondary source from “USGS: Mineral Commodity Summaries”, the National Minerals Information Centre website of United States Geological Survey of the U.S. Department of Interior. *Website: <https://minerals.usgs.gov/minerals/>*

Stages in Research Working Process

Stage 1: Define and Calculate GNRP

GNRP (Gross Natural Resource Product) is an alternative measure of economic growth. It is based on the valuation of natural resources of a nation at a preliminary stage before they enter the business cycle of production into consumable goods. GNRP is the economic potential of a nation which is utilized for economic activity. At the end of the business cycle, GNRP is ultimately converted into economic wealth measurable by conventional means like GDP. The factors of production of Economic Wealth used in the research paper are: Mineral Revenue (derived), Agriculture Revenue, Population, Land Area, and GDP (historical).

Common Pricing of Minerals

Pricing structure for each mineral is based on the price per unit. Data is collated from **USGS: Mineral Commodity Summaries, Jan 2017 database**, and the average is calculated as base price.

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Commodity	2012	2013	2014	2015	2016	Average	Unit
Abrasives	988	1030	1020	584	468	818.0	USD/T
Aluminum	101	94.2	104.5	88.2	80	424.5	USD/T
Antimony	565	463	425	327	300	1886.9	USD/T
Arsenic	75	72	75	84	88	1737.2	USD/T
Asbestos	931	1570	1510	1830	1610	1630.0	USD/T
Ball (Clay)	46	43	44	46	45	44.8	USD/T
Barite	187	180	191	197	198	190.6	USD/T
Bauxite	28	27	27	28	29	27.8	USD/T

Commonalised Measurement

In order to commonalise the differential units of measurement between quantitative units and pricing units, a conversion mechanism is adopted as tabulated below:

Unit of Measurement	Unit	Conversion factor	Unit of Measurement	Unit	Conversion factor
cubic meters	T	0.35	flask	lbs.	76
cubic meters	mT	0.39	million cubic meters	MMBtu	42380.00
kilograms	flask	0.02632	million cubic meters	bbl	7634.16
kilograms	T	0.00100	million cubic meters	T	350000.00
kilograms	mT	0.00091	million cubic meters	mT	317515.04
kilograms	ounce	35.27	42-gallon barrels	mT	0.14
kilograms	bbl	0.007	42-gallon barrels	T	0.12
kilograms	carat	5000.00	thousand 42-gallon barrels	mT	136.00
Metric tons	carat	5511550	thousand 42-gallon barrels	T	123.38

Production of Minerals: Sample Nation Algeria

The aggregate production of minerals for sample nation Algeria for few minerals (2010-2014):

ALGERIA- MINERALS						
Commodity	Units	2010	2011	2012	2013	2014
Aggregates, crushed stone	thousand cubic meters	25,381	55,000	72,040	72,898	80,905
Barite, crude	metric tons	42,254	40,000	36,211	30,245	56,829
Bentonite	metric tons	34,126	29,000	26,278	27,668	31,510
Bitumen	thousand 42-gallon barrels	1,279	1,058	1,060	1,000	1,000
Cement, hydraulic	thousand metric tons	19,100	19,000	19,000	18,500	21,000
Common Clay	metric tons	10,973	11,000	10,167	11,829	12,467
Construction sand	thousand cubic meters	3,164	4,100	2,898	2,635	2,998
Distillate fuel oil	thousand 42-gallon barrels	55,618	55,654	51,474	52,533	69,496

Economic worth of Algeria (GNRP)

For Algeria, the product of (i) the quantity of commodity produced, (ii) the average price, and (iii) the Conversion factor, gives the economic value of that commodity for that year.

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Calculating Algeria’s mineral value (USD mn) for the years 2010, 2012, and 2014

LGERIA: MINERALS					Avg Price	Unit of Price	Conversion	Economic Value (USD mn)		
Commodity	Units	2010	2012	2014				2010	2012	2014
Aggregates,	000 cubic meters	25,381	72,040	80,905	8.7	USD/T	353.14	78.07	221.58	248.85
Barite, crude	metric tons	42,254	36,211	56,829	190.6	USD/T	1.10	8.88	7.61	11.94
Bentonite	metric tons	34,126	26,278	31,510	68.8	USD/T	1.10	2.59	1.99	2.39
Bitumen	000 42-gn barrels	1,279	1,060	1,000	404.6	USD/mT	136.00	70.37	58.32	55.02
Calcite	000 metric tons	339	232	335	165.0	USD/T	1102.31	61.58	42.16	60.85
Cement, hydraulic	000 metric tons	19,100	19,000	21,000	48.8	USD/T	1102.31	1026.39	1021.01	1128.49
Common Clay	metric tons	10,973	10,167	12,467	12.2	USD/T	1.10	0.15	0.14	0.17

Economic Value for 2010-2014 for minerals for the nation Algeria is tabulated below:

ALGERIA: Statistics	2010	2011	2012	2013	2014
Total Mineral Value (USD mn)	124822	121594	116003	117107	117014

Derivation of GNRP

Data collection of the other national level statistics data relevant to the research i.e. the Agriculture Revenue, the Population, the Land Area, and the Gross Domestic Product (GDP) for sample nation Algeria (2010-2013) is tabulated below:

Algeria	2010	2011	2012	2013
GDP (Current USD mn)	161207.3	200013.1	209047.4	209783.5
Agriculture Revenue (USD mn)	14556.11	17231.72	19641.63	22329.04
Land Area (Sq. Km)	2381740	2381740	2381740	2381740
Population (in millions)	36.12	36.82	37.57	38.34

Source: The World Bank.

The Total Land Revenue (sub-soil and supra-soil) is the sum of the Mineral Revenue and Agriculture Revenue. It is tabulated for Algeria below:

Total Land Revenue (USD mn)	2010	2011	2012	2013
Algeria	139378	138826	135645	139436

Final Calculation of Gross Natural Resource Product (GNRP)

GNRP = Total Land Revenue * Population factor (Population in thousands)
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The Statistical Data inclusive of derived GNRP for Algeria is tabulated below:

<u>Algeria (Statistics)</u>	2010	2011	2012	2013
Total Mineral Value (USD mn)	124822	121594	116003	117107
Agriculture Revenue (USD mn)	14556	17232	19642	22329
Population (mn)	36.1	36.8	37.6	38.3

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Land Area (Sq. Km)	2381740	2381740	2381740	2381740
Total Land Revenue (USD mn)	139378	138825	135644	139436
GNRP (USD mn pf)	5034	5111	5096	5346
GDP (Current USD mn)	161207	200013	209047	209784

The GNRP value for the few other nations is provided below:

Sr No	GNRP (USD mn pf)	2010	2011	2012	2013
1	United States	159613	177775	187635	189010
2	China	47312822	56170547	47871506	55155726
3	Japan	65422	67664	63990	51297

Stage 2: Deriving Wealth Distribution Model

Defining Cumulative Wealth Potential (UGNRP) and Common Wealth Pool (UGDP)

UGNRP: The cumulative wealth potential of all nations is the sum of the GNRP of all nations. i.e. UGNRP (Universal Gross Natural Product) = SUM (GNRP) of individual nations. *UGNRP is derived at the beginning of the business/economic cycle.*

UGDP: Similarly, cumulative economic performance of all nations is the sum of the GDP of all nations i.e. UGDP (Universal Gross Domestic Product) = SUM (GDP) of individual nations. *UGDP is calculated at the end of the business/economic cycle.*

Important Note: It is necessary to understand the concept of the “**Difference between UGNRP and UGDP**”, as this concept is the basic fulcrum on which rests the idea of equilibrium point between economic potential based on valuation of natural resources (UGNRP), and economic achievement (prevalent concept of UGDP as the value of all goods and services). This elusive point is the sought after Economic-Environmental-Equilibrium Point.

The database for GNRP and GDP (is tabulated below for sample nations:

GNRP	USA	CHINA	JAPAN	GERMANY	UK	INDIA	FRANCE	BRAZIL	ITALY	CANADA	RUSSIA
2009	140775			68883		599635	9396	326996	17320		1420388
2010	159613	47312822	65422	73094	42285	706063	10219	370024	17591	38244	1402766
2011	177775	56170547	67664	73310	42232	758041	10473	402200	17829	40664	1455942
2012	187635	47871506	63990	73253	38580	773691	9516	410432	17732	44469	1567044
GDP(Current)	USA	CHINA	JAPAN	GERMANY	UK	INDIA	FRANCE	BRAZIL	ITALY	CANADA	RUSSIA
2009	14418739			3418005		1323940	2693827	1667020	2185160		1222644
2010	14964372	6100620	5700098	3417095	2429680	1656617	2646837	2208872	2125058	1613464	1524916
2011	15517926	7572554	6157460	3757698	2608825	1823050	2862680	2616202	2276292	1788648	2031769
2012	16155255	8560547	6203213	3543984	2646003	1827638	2681416	2465189	2072823	1824289	2170144

The Cumulative and Mean values of UGNRP and UGDP for 2010-2014 are tabulated below:

Cumulative data	2010	2011	2012	2013	2014
CUMULATIVE GNRP (USD mn)	52005948	60953496	52785407	60267473	56432279
MEAN GNRP (USD mn)	812593	952398	824772	941679	881754
CUMULATIVE GDP (USD mn)	57213537	66370096	58199201	66007905	61914777
MEAN GDP (USD mn)	922799	1070485	938697	1064644	998625

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The difference between GNRP and mean GNRP for sample nations is tabulated below:

GNRP Variation	2010	2011	2012	2013
USA	-640509	-760002	-624479	-738212
CHINA	46512700	55232770	47059392	54228503
JAPAN	-734700	-870113	-748124	-875926

The difference between GDP and mean UGDP for sample nations is tabulated below:

GDP Variation)	2010	2011	2012	2013
USA	13999456	14446371	15061107	15568050
CHINA	5135705	6500999	7466398	8483757
JAPAN	4735183	5085905	5109065	4032250

Operationalizing the Wealth Distribution Model

Check the difference between the GDP and the mean UGDP for a nation for a particular year for the nation/economy (GDP – mean UGDP). If the difference is a positive value, the difference (excess GDP) is to be added to the GNRP of that nation in the subsequent year (INJECT). If the difference is a negative value, no action is to be taken for subsequent year. The addition of excess GDP to the GNRP of that nation in the next year would ensure that the excess wealth created is ploughed back into the nation’s economy for the next year.

How to go about it?

a. Consider the table below for the year 2010 (base year)

DIFFERENCE (GDP-mean GDP) 2010	DECISION	EXCESS GROWTH	
USA	13984411	INJECT	13984411
CHINA	5120659	INJECT	5120659
INDONESIA	-224867	-	0
MEXICO	71168	INJECT	71168

b. The decision for the next consecutive year (2011) for the nations is as in Table below:

nation/economy 2011	GNRP (O)	DECISION	EXCESS GDP	REVISED GNRP
USA	177775	INJECT	13984411	14162186
CHINA	56170547	INJECT	5120659	61291206
INDONESIA	29905	-	0	29905
MEXICO	526477	INJECT	71168	597645

...where GNRP (O) is the original GNRP for the year 2011, and the Revised GNRP is the sum of GNRP (O) and the excess GDP is previous year (2010) for that nation.

c. Similarly, the data for the year 2011 for excess growth is tabulated below:

DIFFERENCE (GDP-mean GDP) 2011	DECISION	EXCESS GROWTH	
USA	14429659	INJECT	14429659
CHINA	6484288	INJECT	6484288

d. Derived data for revised GNRP for subsequent year (2013) is as tabulated below

nation/economy 2013	GNRP (O)	DECISION	EXCESS GDP	REVISED GNRP	GDP
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USA	189010	INJECT	15044042	15233052	16691517
CHINA	55155726	INJECT	7449334	62605060	9607224

e. The data for excess growth for the year 2013 is tabulated below

DIFFERENCE (GDP-mean GDP) 2013	DECISION	EXCESS GROWTH
USA	15550527	INJECT
CHINA	8466234	INJECT

f. Corresponding data for revised GNRP for subsequent year (2014) is as below:

nation/economy 2014	GNRP (O)	DECISION	EXCESS GDP	REVISED GNRP
USA	184761	INJECT	15550527	15735288
CHINA	51525965	INJECT	8466234	59992199
JAPAN	47724	INJECT	4014727	4062451
GERMANY	73086	INJECT	2611524	2684610

Stage 3: Forecasting the Equilibrium Point

This section involves Trend Analysis and Forecasting of the Equilibrium Point based on the forecasts for the year 2017 and 2022.

Step 1. Trend Analysis

The variation between UGNRP (revised) and UGDP is as given below:

YEAR	UGDP	UGNRP (R)	Difference
2010	62717503	52005948	10711555
2011	69649058	95361804	25712746
2012	71117633	90726738	19609105
2013	73023357	99033324	26009967
2014	73850628	96082237	22231609

(Note: all values in USD mn)

Trend of variation in UGDP and UGNRP (R) is given below:

UGNRP vs UGDP 2010		
52005948	<	62717503
UGNRP (Revised) vs UGDP (Act) 2011		
95361804	>	69649058
UGNRP (Revised) vs UGDP (Act) 2012		
90726738	>	71117633
UGNRP (Revised) vs UGDP (Act) 2013		
99033324	>	73023357
UGNRP (Revised) vs UGDP (Act) 2014		
96082237	>	73850628

(Note: All values in USD mn)

Inference: After adjusting for UGNRP (original) with the excess growth factor, the difference between UGNRP (R) and UGDP is seen to be reduced drastically over successive years.

Step 2: Forecast Analysis

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The GDP (*nominal as well as PPP*) forecast as per *StatisticsTimes.com* for the years **2017** and **2022** is as tabulated below:

Projected GDP for World – (Source: <i>StatisticsTimes.com</i>)					
Economy Of World	GDP Nominal (billions of \$)		GDP PPP (billions of Int. \$)		PPP/ Nom
	2017	2022	2017	2022	
		77,988	99,956	126,688	168,202

Imp Note: 1. As the sample size of 64 nations account for **95.63 %** of total World GDP, the predicted UGDP in 2017 is 74580 USD bn (**74579924 USD mn**). Similarly, for 2022, the Projected UGDP is 95,588 USD bn (**95587923 USD mn**)

Projected GDP for Sample Nations					
Economy of Sample 64	GDP Nominal (billions of \$)		GDP PPP (billions of Int. \$)		PPP/ Nom
	2017	2022	2017	2022	
		74,580	95,588	121,152	160,852

Calculating the Growth Rate for Prediction based on Forecast

YEAR	UGDP	UGNRP (R)	Variation
2010	62717503	52005948	10711555
2011	69649058	95361804	25712746
2012	71117633	90726738	19609105
2013	73023357	99033324	26009967
2014	73850628	96082237	22231609
2015			
2016			
2017	74579924	97031077	22451152
Growth Rate	1.0099		(forecast)
2022	95587923	124363213	28775291
Growth Rate	1.2943		(derived forecast)

Units: USD mn

Calculated Growth factor of UGDP from 2014 to 2017 is **1.0099**. Accordingly, the cumulative GNRP (UGNRP) for the sample size of 64 nations is calculated for the year 2017 at **97031077 USD mn**. The difference between the UGDP forecast and the derived UGNRP for the year 2017 is calculated as **22451152 USD mn**.

YEAR	UGDP (USD mn)	UGNRP (USD mn)	Difference
2014	73850628	96082237	22231609
2017	74576946	97027202	22450256
Growth Rate	1.0098		(derived based on forecast)

Calculated Growth factor of UGDP from 2014 to 2022 is 1.2943. Accordingly, the cumulative GNRP (UGNRP) for the sample size of 64 nations is calculated for the year 2022 at **124363213 USD mn**. Accordingly, the difference between the UGDP forecast and the derived UGNRP for the year 2017 is calculated as **28775291 USD mn**.

YEAR	UGDP (USD mn)	UGNRP (USD mn)	Difference
2014	73850628	96082237	22231609

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2022	95587923	124363213	28775291
Growth Rate	1.2943	(derived based on forecast)	

Note: The final aim of the research is to achieve zero difference between UGDP and UGNRP values, projected for the year 2022. Accordingly, the Forecast Table for 2017 and 2022 is presented below:

Variation in UGDP and UGNRP			
YEAR	VAR (USD MN)	YEAR	VAR (USD MN)
2010	10711555	2016	
2011	25712746	2017	22451152
2012	19609105	2018	
2013	26009967	2019	
2014	22231609	2020	
2015		2021	
2016		2022	0
	Indicates Forecast		Indicates Planned

Step 3: Projections based on forecast: For the year 2022, projected World GDP is 99956 USD bn. The sample 64 nations account for 95.63 % of world GDP. Thus, the UGDP for the given sample size is 95587923 USD mn. At 29.4 % Growth rate, the Projected UGNRP for 2022 is 73043 USD bn.

Step 4: Achieving Zero difference

The target of “Zero difference” between UGNRP and UGDP can be achieved in two ways:

Method 1: UGDP value in 2022 equals the UGNRP value.

Method 2: UGNRP in year 2022 must be equal to the planned UGDP value.

Detailed Methodology

Method 1: In the first instance, the forecast table for UGDP (95588 USD bn) will be as follows:

Year	UGDP	Year	UGDP	Year	UGDP	Year	UGDP
2010	62718	2014	73851	2018		2022	95588
2011	69649	2015		2019		Unit: USD bn	
2012	71118	2016		2020			
2013	73023	2017	74577	2021			

Method 2: In the second instance, the forecast table for UGNRP (73043 USD bn) is as follows:

Year	UGNRP	Year	UGNRP	Year	UGNRP	Year	UGNRP
2010	52006	2014	96082	2018		2022	73043
2011	95362	2015		2019			
2012	90727	2016		2020			
2013	99033	2017	97027	2021			

Step 5: Interpretation of the Results

Thus, in order to plan for achieving the Economic-Environmental Equilibrium point in the year 2022, we have two scenarios:

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1. UGDP value in 2022 equals the UGNRP value: Economic growth (UGDP) is planned first, natural resources are utilized to match this value. The natural resources extracted for economic growth must have an economic potential equal to a fixed growth plan. i.e. Projected UGDP = UGNRP = 95587923 USD mn.

2. UGNRP in year 2022 must be equal to the planned UGDP value: UGNRP value is determined first, the economic activity is planned and achieved accordingly. Economic Growth (UGDP) must be planned, regulated, and monitored in such a way as to equal the Economic Potential expected at the beginning of the economic cycle. i.e. UGDP = Projected UGNRP = 73042633 USD mn

CONCLUSION

It is easier to fix the planned economic growth (UGDP) first, and utilize the natural resources (UGNRP) wealth in such a manner as to equal this planned growth. The economic activity can be controlled at micro-level for each nation, so that there is no need for extraction of natural resources in order to achieve economic growth beyond the targeted UGDP.

At this point, we can conclude that equilibrium towards sustainable growth has been achieved.

Interpretation of Results of the Research Process

Observation	Interpretation	Corrective Action	Action Plan
UGDP > UGNRP	Excess growth achieved	Output must be curbed in the next business cycle	i. by utilizing fewer resources ii. cut down agriculture production iii. curb population growth
UGDP < UGNRP	Excess natural resources utilized	Output must be curbed in the next business cycle	i. Extracting fewer resources ii. cutting down excess agricultural production

Inference: Since both scenarios of inequality between UGDP and UGNRP require the same action to be undertaken, that of curbing of the utilization of natural resources and decrease in output of agricultural produce, the cyclic activity will be allowed to continue till the perfect stage of macro-constancy is reached: when UGDP equals UGNRP.

Scope and Limitations of Research

The *scope* of this research covers all nations of the world, and all minerals that contribute to the economic activity and growth of nations. The *Limitations* of the research include data availability, data accuracy and data reliability.

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A STUDY ON THE RETAILING TRENDS IN INDIA: SNAPSHOT 2016.

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ABSTRACT

A Retail study was undertaken in 2016 to understand the Indian Shopper's Buyer Behavior. It was a pan India Study covering a sample of 1600+ consumers in a face to face interview using a digital questionnaire. The study covered a wide range of Retail Categories: Groceries, Men's & Women's Apparel, Pharmaceutical, Consumer Electronics, Personal Care, Home Décor, Luxury and Kid's Apparel. Shopping through retail stores and e-channels was examined. The Indian shopper is definitely evolving as evidenced through the research analysis. The Average retail spend per category was given by consumers. In certain categories the retail store is preferred while the e-channel is fast catching up.

KEY WORDS: Shopping Influences, Retail Categories, Retail spend, Trends in Retail Channel Preferences in india

THE INDIAN RETAIL SECTOR

The Indian Retail Sector is emerging as one of the largest sectors in the Indian economy. It accounts for 10% of India's GDP and 8% of employment (estimated by us at 55 million). As mentioned in several reports, India is the fifth largest global destination in the retail world.

We are currently seeing a significant retail transformation taking place in our country. The face of our streets in several cities is changing with malls and supermarkets coming up across India at

A Study on the Retailing Trends in India: Snapshot 2016.

a pace not seen earlier. A very recent article in a leading financial newspaper reported that the number of Malls in India(As per JLL) is expected to reach a number of 720 in 2016 from 542 in 2014. While malls have had mixed fortunes across the country for various reasons, the pace is expected to pick up. While we expect that it will take a few years to develop consistent footfalls, yet the change is happening.

The Indian Retail Market size is estimated at USD 600 billion with organized retail achieving 8% - USD 48 billion (IBEF estimates). Using a conversion rate of 66 Rs/\$, this size is Rs 3,16,000 crore which is large. The IBEF projection for the retail market in India in 2020 is USD 1.3 trillion.

Market Drivers which are bringing in this acceleration are: Rapid Urbanization, Attitudinal Shifts, a Younger India, More Working Women and a higher consciousness towards Brands.

MISB BOCCONI RETAIL RESEARCH

In 2015-16, MISB Bocconi Center of Excellence for Retail & Luxury collaborated with SDA Bocconi Professors to conduct a large Retail Study in India.

METHODOLOGY AND SAMPLE

The field work was carried out in the period Oct. 2015 – Feb. 2016 using a digital questionnaire and planning a field team at a PAN India Level. Face-to-face Interviews were conducted with the respondents.

Sample Details are:

Sample size	1652
Geography Covered	8 cities + 48 towns
Gender ratio	24% females 76% males
Interview method	face-to-face
Ethnicity	representative of India
Age group	80% of the sample was in the age group of 22-40
Income	38% is within Rs 3-5 lacs
	26% is within Rs 5-10 lacs
	7% is within Rs 10-30 lacs
	1% for 30+ lacs

Retail Categories A wide range of categories which are representative of Retailing were covered in the research: Groceries, Men's & Women's Apparel, Pharmaceutical, Consumer Electronics, Personal Care, Home Décor, Luxury and Kid's Apparel

KEY HIGHLIGHTS OF THE RESEARCH

Top 3 Retail Store Brands by Category as per Sample

This feedback was specifically taken for each category and described as 'Primary Retailer'.

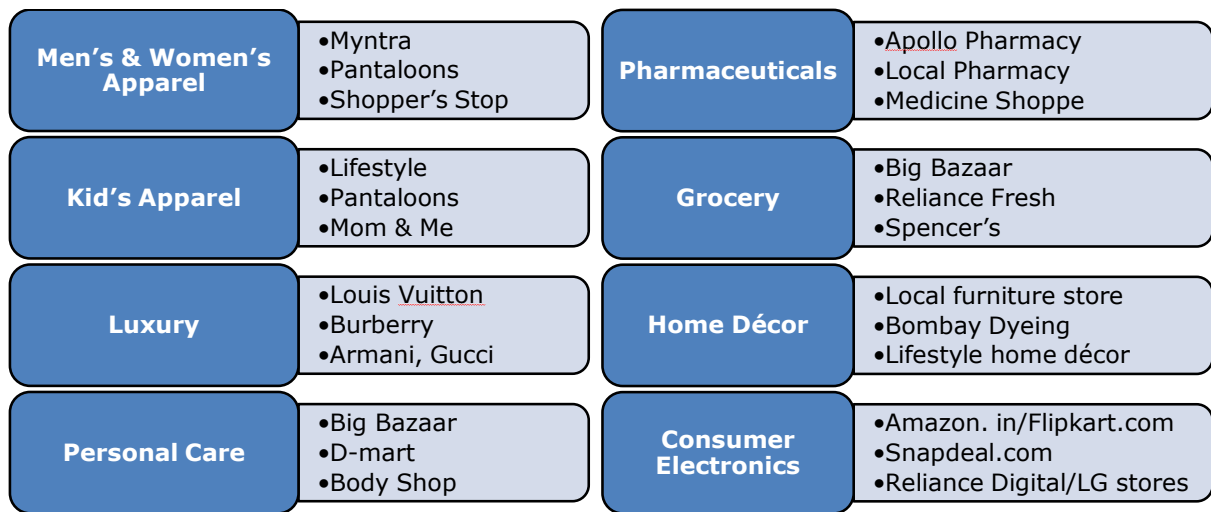


Diagram 1: Top 3 Retail Store Brands by Category as per Sample

SHOPPING INFLUENCES

The Indian Retail Shoppers Store Brand Choice is influenced by Product Category being shopped for. A driving factor, is the availability at the store of generic branded products, national brands or branded products which a shopper is looking for. At the transaction level, a shopper is influenced by factors such as:saving time, selection range, branded products in stock, a sense of belonging and connectedness to the store.

There is high confidence in well known Brands as these imply 'Quality' for the shopper. The Indian Shopper is becoming quality conscious. The degree of confidence in private label is growing.

RETAIL SPEND

The average monthly spend as estimated by a shopper is

Category	Average Spend (Rs)
Men's or Women's apparel	5300

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Youth/Kids/Teen Apparel	3500
Luxury Brand items	10000
Personal Care Products	6500
Groceries	5000
Pharmaceuticals	6400
Home Décor / Appliances	5700
Consumer Electronics	7500

Table 1: The Retail Spend indicated by the Indian shopper on a per month basis

An interesting finding is that 30% respondents spend 2/3rds through the primary retailer.

SHOPPER BEHAVIOR IN RELATION TO CHANNELS

Within the sample, 28% access only store and the balance 72% access through multiple channels (physical store & e-channel).

Search through mobile is high though not equivalent to the amount for purchase. Therefore consumers are being cautious before using mobile technology for actual spend. Analysis indicates that 23% respondents spend via mobile technology. They spend on an average 29% of their retail spend in that category.

CONSUMER PURCHASE MOMENT

The research shows that at the time of Purchase after searching for the necessary information, purchase is mainly done through retail stores (59%) and 34% from e-channels, of which e-commerce and mobile technology / m-commerce have almost equal share.

After search, key reasons for non-purchase online are (more than 40% respondents say)

- Lack of ability to see/touch/experience
- Lack of ability corresponding to satisfactory interaction at the time of purchase

ADVOCACY

Top 3 influences which impact purchase are:

- Recommended by Family / friend (42% said No 1)
- Customer reviews on a retailer website (40% said No 2)
- Customer reviews on an independent website or social network (34% said No 3)

Local shops enjoy high advocacy and will be recommended to family and friends.

INDIAN SHOPPING HABITS

Interestingly, Indian Shoppers tend to shop during Sales. The data indicates that 71% do so during sales. Shopping during the year is very high during Festive seasons (approx. 64%). Indians shop with immediate family and friends. So, shopping is a group activity for many families in India (60-70% of the respondents said so). This factor impacts retail strategy.

TRENDS IN RETAIL CHANNEL PREFERENCES BY CATEGORIES

The Trends in Retail Channel Preferences are an outcome of analytical insights from the data. The Indian shopper is evolving.

- In apparel and home appliances (including consumer electronics), the e-channel is emerging as a preferred channel versus the retail store.
- In the categories of personal care , pharma, grocery , luxury, home décor, it is the retail store which is the preferred channel over e-channel.
- In the purchase of personal care products the preference is for big retail chains. (both Big Bazaar and D-Mart: more than 21% of the respondents)
- In Pharma, branded retail pharma outlets and the local pharmacy equally dominate the consumers' choice (Apollo Pharmacy 28.1%, Local Pharmacy 16.4% and Medicine Shoppe 11%)
- In Grocery, the consumer is moving to the big chains, the local kirana is a competitor to the big chain. E-delivery channels are catching up.(Big Bazaar 31.6% and Reliance Fresh 28.3%)
- For Home décor, local furniture stores continue to dominate the category (24.4%)
- For Home appliances and consumer electronics, e-commerce channel shows high preference followed by the branded stores (Amazon 20%, Flipkart 17.6%)

For further details on the Research Study,
Contact-coe.retail.luxury@misbbocconi.com

LEGENDS:

Tables or Diagrams	Details
Table 1	The Retail Spend indicated by the Indian shopper on a per month basis
Diagram 1	Top 3 Retail Store Brands by Category as per Sample

Sources:

- Business Standard Report and JLL
- IBEF Report

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Special Thanks

We extend our gratitude and thank our students from MMS-1 &MMS-II for their assistance and hard work in formatting the papers, consolidating and designing the journal and coordinating with the authors.

Abhishek More

Amita Rathod

Amogh Talwar

Ankit Gupta

Anuj Pappulwar

Divya Kallakuri

Harsh Agarwal

Lagnajit Das

Niket Pawar

Omkar Patil

Prajyot Chakrawarti

Raj Dhakan

Samrat Gaikwad

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