अनुसंधान

Anusandhan

NDIM's Journal of Business and Management Research

Vol II, Issue 1, February 2020
ISSN No.: 2581-8120

ज्योतिर्वृणीत तमसो विजानन्
Guru Gobind Singh
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NDIM's Journal of Business and Management Research

(Biannual Peer Reviewed Academic Journal)

Published by : Mrs. Bindu Kumar for and on behalf of New Delhi Institute of Management

Link for details of editorial policy: http://www.ndim.edu.in/anusandhan-guidelines

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Competitive Advantage of Intel In the Segment of Microprocessor

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***Abstract**: The present work has the objective of analyzing how the company Intel Corporation has developed worldwide and what is its competitive advantage with respect to competitors in the market. The analysis will be made from an industry-based point of view, identifying the five forces of Michael Porter, which provides an assessment of the strengths of external factors to the company in order to define strategies against threats. What is Intel's competitive advantage given its current dominance in the personal computer segment in the face of technological changes and new segments of the semiconductor industry? The hypothesis: Intel has a competitive advantage over production volume, alliances with PC manufacturers, own factories (Fabs) for the production of processors, which allows it to enter with greater ease the new technology segments, and as a goal: to analyze Intel's competitive advantage through Porter's five forces.*

***Keywords**: Market, strategy, oligopoly, industry*

Introduction

This document is intended for the analysis of the company Intel and as it has been developing as a leader in the semiconductor market, Intel processors can be found on personal computers. Due to its high production, quality, innovation that it has been managing for several years since its foundation, it has positioned itself as a leading company in its field, in addition to consolidating itself as a company recognized worldwide. Together with Intel there is AMD (Advanced Micro Devices), this being the main competence for Intel in the personal computer field. Semmler places Intel as a company that due to its market structure is classified as an oligopoly, which will be explained more in detail, deepening in the points that this author points out.

It also analyzes how Intel Corporation has performed to obtain a competitive advantage over its rivals, and as a reference, it will take Michael Porter who makes his contribution in this methodology with this research, which studies the analysis techniques of the industry called thus the five forces or also called Porter diamonds, which are identified as: rivalry between competitors, threat of a potential entry, the bargaining power of suppliers, the bargaining power of buyers, and threat of substitute products These forces will be analyzed later in order to understand what each of them consists of and to be able to identify the characteristics that each one possesses and how they are related and implemented by the company Intel Corporation.

This research concludes with an analysis of the advantages that Intel currently has and how it is preparing to enter new markets that are booming as a technology portfolio focused on data for artificial intelligence, analysis and the cloud.

Background

Intel Corporation is a leading semiconductor manufacturer in the world. This American company is the creator of the series of x86 processors, said processors are commonly found in most personal computers (Intel 2019). The company was established in 1968 by Robert N. Noyce, co-founder of the integrated circuit and Gordon E. Moore, a colleague of Noyce's of Fairchild Semiconductor companies that existed at that time. Since the name of Moore Noyce was already registered as a brand, they opted to call the company Intel which is an acronym for "Integrated Electronics"(Intel 2019).

Mission: To use the power of Moore's law to bring intelligent devices, connected to every person on earth. The mission highlights how Intel continues to trust and use Moore's Law today; this law sets the number of transistors in a processor that will double every 18 months. On the other hand, the ambition of the company is further highlighted by the inclusion of "connected to every person on earth", where it makes clear that its strategy continues to point to a global market in the segment of semiconductors, microprocessors and technologies related to computing.

Vision: Yes, it's smart and it's connected better with Intel. In the vision you can see how Intel defines the types of products it intends to offer to its target market, followed by a self-recognition as the best company. In other words, Intel is seen as the best qualified company capable of providing intelligent products and connected According to Intel (2019), the Moore law says that the number of transistors per inch in integrated circuits would double every 18 months and that this trend would continue for at least two decades. Although many think that Moore's law is no longer valid, the mission of Intel makes it clear that the company is still searching for the miniaturization of its processors.

Intel was the creator of the first model 4004 microprocessor in the world in 1969, calling it the computer on a chip. For the year 1980, the 8080 architecture was created, which was chosen as the central processing unit of IBM's first personal computer (Encyclopedia Britannica 2019).

In the mid-1990s, Intel expanded beyond the chip business. Large manufacturers of personal computers (PCs) such as IBM and Hewlett-Packard, were able to design and manufacture Intel-based computers for their markets. However, Intel in its desire to increase its market looked for ways to provide its technology to smaller companies, which will help expand its market with greater speed; to achieve this created a system that contained all the necessary parts of a computer called a motherboard. By 1995, Intel was selling more than 10 million motherboards to PC makers (Encyclopedia Britanica 2019).

By the end of the century, Intel and compatible chips from companies like AMD were on all PCs except Macintosh Apple Inc., which had used Motorola CPUs since 1984. In 2005 Craig Barret, CEO of Intel in that year, managed to close a contract with Apple Inc, being the same Steve Jobs, executive director of Apple who gave the announcement that Apple's future computers would use Intel's CPUs, thus covering practically the entire segment of PCs worldwide. (Encyclopedia Britanica 2019).

Intel dominates the market of processors and microprocessors, but when talking about this company it can be thought of the large number of competitors that the company can have. However, this company due to the different segments it focuses on an immense variety of competitors with respect to each turn, and in this research work will be focused mainly on the segment of personal computers (laptops), of this segment Intel only has a single competitor: Advanced Micro Devices.

Advanced Micro Devices or AMD is a semiconductor company based in Sunnyvale, California, dedicated to the development of processors, is the second manufacturer of x86 processors worldwide and the second manufacturer of graphic cards for the professional and domestic sectors (AMD 2019). It was founded on May 1, 1969 by a group of executives of Fairchild Semiconductor, among them Jerry Sanders III, Edwin Turney, John Carey, Steven Simonsen, Jack Gifford, Frank Botte, Jim Giles and Larry Sterfer (AMD 2019). AMD and Intel are currently the only two companies that sell x86 processors.

Concepts

A. Strategy
According to Vargas, Guerra, Bojórquez and Bojórquez (2017) the strategy can be defined as a plan, as an action or as an integration or theory. This is that the strategy is defined as the alignment or direction that is given to the internal resources of an organization to modify, lead, adapt and in the worst case survive the conditions of the environment. With this definition, it allows companies to plan better and giving rise to the case that there were changes to be able to adapt or adjust to changes.

B. Industry
According to Peng (2012). An industry is a group of firms or companies that produce goods and / or services similar to each other. Although it could also be defined as a set of companies that offer nearby substitute products (Hill & Jones, 2004).

C. Market
The market definition by Smith (2011), who was the so-called father of modern economics; In his book, The Wealth of Nations, he believed that selfishness is the characteristic of rational economic agents that motivates them to make deals, barter and purchases to obtain what they need from others, to that physical place he called the market. However, with the effect of globalization and innovation, the way in which transactions can be made has changed and not only transactions are made in a physical place but also through digital platforms making connection from all over the world, this it can only be given if buyers and sellers establish prices (Banco de México, nd).

According to Parkin (2010) the market is any agreement that allows buyers and sellers to obtain information about a good or service and do business with each other. Although it can also be defined by Vargas, et al (2017) since he considers that the market is the best mechanism for matching supply and demand, setting prices and extracting maximum utility from finite resources.

D. Oligopoly
According to Varían (2010) an oligopoly is a market in which there are some companies that realize their strategic interdependence. It can behave in several ways depending on the exact type of interrelation.

3. Theoretical revision

According to the vision based on the industry Peng (2012) mentions that this approach studies how companies use opportunities and confront industry threats. In other words, the way in which they compete or compete with this activity the basis of his differentiation (Vargas et al., 2017).

The competition to obtain benefits goes beyond the rivals that in this case may have Intel reach or that their competitors can reach it, said expansion of the rivalry originates from the combination of five forces that defines the structure of an industry and shapes the nature of the competitive interaction within it Porter (2017). Michel Porter who spread the model called the five forces and that forms the main part of the strategic vision based on the industry Vargas, et al (2017).

The five Porter forces are (Vargas et al., 2017):

1) Rivalry among competitors: Related to the number of competitors, the competitors that are similar in size, the products they offer, the capacity of each industry, the slow growth of the industry and the high costs of exit.
2) Threat of a potential entry: Barriers to entry which increase costs (economies of scale, know how) and customer loyalty.

3) The power of negotiation of suppliers: Ability to raise prices or quality of goods and services, providing unique products, few suppliers.

4) The bargaining power of the buyers. Few buyers have strength in negotiation; buy products without specific brands, products that do not produce savings.

5) Threat of substitute products: they are threatening as long as they are superior in their quality.

According to Porter (1981) which provides a framework to analyze the level of competition within an industry so that it can develop in their environment. The framework stated that an efficient strategy had to fulfill key elements that Porter (1981) mentions that are Strengths and weaknesses of the company, Economic and technical opportunities and threats of the industry, Personal values of key implementers and broader social expectations.

4. Research method

Analytical method is used to contemplate critical thinking and evaluation of facts

5. Analysis of results

A. Rivalry among competitors

According to Semmler (2010) regarding the microprocessor industry, it is well known that Intel and AMD are the two world leaders in the production of microprocessors. Intel has a market share of 81.7%, while AMD has a market share of 16.9%. Intel is historically the larger and the older of the two companies.

These two companies compete in the capabilities with respect to processors, both in the area of security and processing speed. This competition is based on the size of the processor, where it is talked about the current measure in a processor is 14 nanometers, so today the two companies jumped to a new technology that is to manufacture a smaller processor for reach 10 and 7 nanometers to offer better competitive advantage in the market. Currently the two are in a competition to make the processor smaller and offer it faster in the market (Extreme Tech 2019).

Despite the rivalries between these two companies, Intel still holds the lead with respect to AMD according to Digital Trends (2019) makes mention that although both companies are producing processors that are at a surprising distance on almost all fronts: price, power and performance, Intel chips tend to offer better performance per core. According to (Semmler 2010) in his article, he mentions that Intel can be defined as an Oligopoly with a leading company and AMD as a follower or master with respect to the type of competition it has with Advanced Micro Devices AMD and its market structure, since there are no other large producers of microprocessors and about 98.6% of the total market share is held by the 2 companies.

According to (Semmler 2010) the typical characteristics of this Oligopolic market are:

1) Companies sell standardized products.

2) Companies are price setters, which means that they can influence the market share of the product by establishing the prices of their products (Bertrand Oligopoly) or by establishing the quantities and allowing the prices to react (the Cournot oligopoly).

3) There are great barriers to entry. Entry barriers are factors that make it costly or expensive for other companies, newcomers, to enter an industry or market. Such barriers can be legal, bureaucratic, financial or economic.

4)There are few companies and there are strategic interactions between these companies.

5) Heavy advertising and brand name, as well as the use of technology are produced in the market in order to differentiate the products.

There are only two companies and the entry barriers are large enough to prevent new companies from entering the market, these barriers are the patents that each has over the years in addition to contracts with PC and laptop manufacturers (Semmler 2010).

Having said this, it can be mentioned that Intel worldwide can be located in an oligopolistic market structure, especially as a duopoly because, as mentioned above, AMD is the only company in its field that can compete with the processors currently in the market. Market is to say that there are only two companies, and according to the assumptions presented by an Oligopolic structure is precisely that there are few companies in the same market. However, in this case the Oligopoly also has a fourth assumption where it can be said that the Companies have strategic interaction between them. However, this is not the case, all the tools that both Intel and AMD have are strictly confidential.

Sharing information about their processes and interacting in a strategic way between them could become a monopolistic practice called collusion and that Intel (2019) for ethical reasons does not perform this type of strategy as mentioned (Semmler 2010). In 1976 AMD and Intel signed a cross-licensing agreement that eventually leads to the elimination of other competitors due to a growing technological gap, it is not until 1987 that the cross-licensing agreement between AMD and Intel is terminated. This marks the beginning of strong competition between the two companies (Semmler 2010).

B. Financial results

In the economic aspect, it can be analyzed the profits that both companies had in 2018, according to the financial reports of Intel in 2018 the company obtained 70.8 billion dollars being this an increase of 13% with respect to the reported in 2017 (Intel 2019). On the other hand, AMD (2019) reported an annual income in 2018 of 6.48 billion dollars (23% more than in 2017).

1) Threat of a potential entry

Economies arise when companies produce volume and enjoy low prices per unit, in addition to having more technology and efficiency to be competitive, ensuring that no competitor can enter the market (Porter 2017).

According to studies carried out by the Massachusetts Institute of Technology (2010), the cost for the construction of a microprocessor manufacturing plant is around 3 and 5 billion dollars, which is a high cost that forces companies to maintain 100% of said factories in operation in order to recover the investment. According to the Massachusetts Institute of Technology (2010), in the microprocessor industry, only Samsung and Intel have a high production volume that allows them to pay for these state-of-the-art production plants, making other companies in this sector such as AMD, it is looked in the need to contract external factories for the production of their processors, companies such as Global Foundries and Taiwan Semiconductor Manufacturing Company provide this service.

The need to have to invest large amounts of money in order to compete with the applicants, that is, if any company that wants to compete with the Intel company should invest in facilities and in some cases assume the initial losses of a company when it starts (Porter 2017). Institute Panmore (2017) states that one of the constraints that the industry has is precisely the access to these factories, the high cost of construction and maintenance prevents smaller companies such as ARM from aspiring to have a plant to manufacture their own devices. This is one of the main barriers that other companies have to face in order to enter the wide world of personal computers and servers.

One of the strategies based on Moore's law is to decrease the size of the processor. This change entails a large investment since it has to build a new factory that has the capabilities and tools necessary to achieve this new size, this being an advantage Intel's competitive position with respect to its competition since the manufacturing time and cost of its competitors is even higher (Berkeley Economic Review, 2019).

2) Bargaining power of suppliers

The fact that large companies Intel is difficult to change supplier as they spend large sums of money for specialized equipment for the manufacture of the

product, (Porter 2017).
There is no substitute for the product that is offered because its high innovation is difficult for a buyer to reject the product and therefore suppliers will have more influence in the negotiation since no other industry could have it (Porter 2017).

3) Buying power of the buyers
Buyers can become powerful if they have negotiating influence over the industry, a group of clients can be an influential negotiator if there are few buyers, and if they buy in large volume, another influence is that buyers face few variations in costs when they change vendors in addition to threatening to withdraw and produce that same product if other sellers can be profitable (Porter 2017).

However, in the case of Intel there are factors that alter the five forces of Porter in the aspect of negotiation with customers. These factors benefit the Intel brand since the low availability of substitutes, in the case of personal computers only AMD is competition. Buyers are in need of continuing to consume Intel products coupled with the high switching costs that exist between current alternative products. Intel (2019) says that for many years the alliance of Intel with Microsoft has helped Intel to have dominance in the computer market and especially in the new segments that are already starting to grow exponentially, such as the cloud, 5G and artificial intelligence. Wired (2017) mentions that this alliance dating from the beginning of the 80s influences the negotiation of customers with Intel since if Microsoft wanted to replace the current processors they would have many problems of compatibility with previous products.

Companies such as Microsoft and Apple lack microprocessor manufacturing facilities, as well as companies that can provide such substitutes lack the same factories that limit their production capacity in high volumes, which is why customers exert a weak force in the Intel industry environment allowing you to have a high power in negotiations.

Intel has factories for the production of microprocessors worldwide, if we refer to the United States, it has 4 factories located (Intel 2019) in:
a) Chandler, Arizona
b) Hudson
c) Rio Rancho
d) Hillsboro, Oregon.

Outside the United States:
e) Leixlip, Ireland
f) Jerusalem, Israel
g) Kiryal, Spain
h) Dalian, China.

Production sites outside the United States are located in locations that allow production and distribution close to the different research and development centers, as well as their customers around the world. Research and development centers can be found both inside and outside the United States (Intel 2019).

Intel offices within the United States:
a) Oregon
b) Santa Clara
c) Austin
d) Chandler
e) Folsom

Intel offices outside the United States:
Argentina Denmark Italy Romania
Australia Egypt Japan Russian Federation
Austria Finland Latvia Singapore
Belgium France Malaysia South Korea
Canada Germany Mexico Sweden
Chile India Netherlands Switzerland
China Indonesia Peru Taiwan
Costa Rica Ireland Poland United Kingdom
Israel Portugal Vietnam

4) Threat of substitute products
With the appearance of new technologies and constant innovation, these can act as substitute products to microprocessors. Consequently, to these constant changes Intel, unlike AMD, has tried to implement a strategy that allows it to guarantee a competitive advantage and reinvent itself around the innovation and trend that is currently advancing by leaps and bounds into the world of 5G technology, intelligence artificial, quantum computing and developments with more technology such as an autonomous car. However, currently the development of processors is still one of the

largest businesses with which Intel has, with this Intel is positioned as a leader in the market in unique competition with AMD as it continues to focus on the development of microprocessors (The world 2018).

Intel before the technological changes so accelerated that you have today, the threat of substitutes is high, if you do not innovate or think about implementing a new strategy Intel would be resentful by the arrival of such products. This makes the performance of an industry to be limited in its potential (Porter 2017).

6. Conclusions and recommendations

Intel is a company that since its inception in 1968 was a company which, for its innovation, has been positioning itself in the microprocessor market, relying on the Moore Law. This has allowed Intel to continue to attack the global market. Intel Corporation solely based on its semiconductor segment has a global competitor which is Advanced Micro Devices (AMD) a company that was founded a few years after Intel in 1969 and represents Intel as the only rival in the market of microprocessors since it is considered as the second manufacturer worldwide, these companies compete in the capacities of their processors both in the area of security and the speed of processing.

This research focuses primarily on an industry-based vision, but makes it very clear that we cannot think about it without thinking of the five forces of Michael Porter or also Porter's diamonds which indicates a company can have competitive advantages, these are mentioned below:

Rivalry among competitors: in the industry according to what Semmler, Intel and AMD even though they are the two leaders of this industry, makes it very clear that Intel is the most outstanding of the two as it covers a market of 81.7% and AMD 16.9% that makes Intel to be placed as number one. In the same way in the financial part, it can have realized that Intel is still leading as its reports for 2018 are practically 10 times higher than those of AMD.

Threat of a potential entry: Intel has invested in manufacturing plants in various parts of the world which makes their production costs decrease. That is why companies that can pretend to enter the competition in the same market are removed because the cost is too high and required to sustain if in any case had lost, that is why Intel is covered with a large investment.

The power of negotiation of the suppliers: when the supplier has the control of said negotiation it can be either by having the best quality, security, speed and all the ideal characteristics that the client looks for so that he cannot have more options and consume directly to the company.

The bargaining power of consumers: consumers can have a lot of influence in this aspect, since if the supplier company has some competence that can offer a substitute product or a product with the same characteristics and with lower prices, the consumer may threaten to withdraw and look for someone else, so Intel should always be one step ahead in innovation and a sense of customer service in order to keep consumers satisfied.

Threat of substitute products: innovation is a fundamental tool for the company as this can be its main threat, that is why Intel taking a step towards innovation and difference with the competition decided to also link to the world of 5g technology, artificial intelligence and quantum computing, which will allow it in the future to be one of the companies with the most technology and above all to be more profitable for the entire technology industry.

With the previous analysis made to Intel Corporation, it can be concluded that Intel is the leading company in the semiconductor segment given its reported financial profits, as well as the market that it currently covers. Advanced Micro Devices is the only company to make an effort to reach a larger market in the personal computers segment; likewise companies like ARM have tried to enter without success. Carrying out an analysis with the 5 forces of Porter, more specific in the factor of substitute products or a threat of potential entry, it has been found that there are different barriers for a company to compete in this large segment, the most important barriers are:

1) Partnerships with PC manufacturers
2) High cost of creation and maintenance of the production factories
3) Incompatibility with previous systems
4) High cost of switching by PC manufacturers to a new processor.

A small company that does not have the financial capital to invest in factories producing processors has diminished its chances of success since it will not be able to solve the current demand from buyers such as Apple Inc., Microsoft, Dell, etc. This also complicates that buyers can make strategic alliances with smaller companies.

Intel has offices and factories throughout the world that give buyers greater security in terms of production capacity and support. Intel has more than 50 locations worldwide which allows it to provide support.

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A Factor Analysis on Factors Influencing Female Buying Behavior for Cosmetic Products in Selected Cities of South Gujarat

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Abstract: *The present study investigates and evaluates factors influencing female buying behaviour for cosmetic products in the cities of Surat, Navsari, Valsad and Vapi. A structured questionnaire was developed and distributed among selected cities' respondents aged from 18 years and above by using quota sampling technique. The total sample which was eligible for study was 963 respondents. Data was analyzed using factor analysis and frequency analysis in SPSS version 16.0. The study provides evidence and insight on various variables used for analysis and reveals total number of 17 factors from brand and price consciousness to the belief of classic buying which were given more significance by female buyers from the cities of Surat, Navsari, Valsad and Vapi for purchasing cosmetic products.*

Keywords – *Key Words: Female buying behaviour, Quota sampling, Factor analysis, Factors influencing purchase of cosmetic products*

Introduction

Consumers are in-charge of the market. Every organization wants their customer to get satisfied with their products and services. And for that the study of consumer buying behaviour is very essential. Consumer buying behavior is the marketers' deeper knowledge with respect to how consumer think, from where the consumer bring the information, how the consumer will evaluate those information, how the consumers will be taking the purchase decision and what the post-purchase behavior of the customer.

According to Kotler et. al (2013) a consumer's behavior is affected by four different factors: cultural, social,personal factors and psychological factors. These factors help consumers to prefer certain products and brands. Though many of these factors are not under the control of marketers, but a successful consumer oriented market service provider should work as psychologist to procure consumers (Rani P, 2014).

Indian cosmetic industry

India had proved itself as a land of opportunities. When it comes to cosmetics, it proves the same. Cosmetics is one of the fastest growing retail segments in India. The cosmetics industry is dynamic, lucrative, innovative and fast paced. With shorter life cycles of the products, varying climatic conditions, and rapidly changing attributes of fashion, changing market demand; the manufacturers need not to be only innovative in manufacturing the products but also in presentation and marketing of the products ("Indian Cosmeceutical, Cosmetics & Personal Care Market 2022", n.d.).

The increase in the middle class population with disposable incomes and increasing health and fashion consciousness can be considered to be the major factors behind the increasing demand of cosmetic products that are mostly herbal and came with an assurance of high quality (Singh V., 2017). Supporting to this Anand S. (2017) had very nicely summarized all the factors considered as growth drivers for cosmetics industry in India like rising disposable income, globalization impacting lifestyles, changing retail landscape, cosmetic trials increases consumption, increasing penetration of channels and adoption of

natural products.
The Indian cosmetics industry is majorly categorized into skin care, hair care, oral care, fragrances, and colour cosmetics segments. It currently has an overall market standing of USD 6.5 billion and is expected to grow to USD 20 billion by 2025 with a CAGR of 25 per cent.In 2016, gender-wise market share of cosmetics industry in India was divided as 60 per cent female and 40 per cent male (Anand S, 2017).

1. Review of literature.

The word Cosmetics" is known to human race since ages. At the same time, desire to look good and attractive for every individual also can be identified as the psychological need having been given the upper place in hierarchy for ages (Shimpi S, Sinha D., 2012).

As per Section 3 (aaa) of the Drugs and Cosmetics Act 1940 and Rules 1945, Cosmetic means “any article intended to be rubbed, poured, sprinkled or sprayed on, or introduced into, or otherwise applied to, the human body or any part there of for cleansing, beautifying, promoting attractiveness, or altering the appearance, and includes any article intended for use as a component of cosmetic” (“Frequently Asked Questions (FAQ's)- Cosmetics Import Registration”, n.d.).

According to Kotler et. al (2013) a consumer's behaviour is affected by four different factors: cultural, social,personal factors and psychological factors.

1.1 Cultural factors

The study of culture is a challenging activity. In marketing and consumer behaviour, culture is frequently reflected in products' features and designs, as well as the layout, visuals and contents of promotional messages. To understand the influence of culture on consumer behaviour, (Schiffman, Kanuk, Kumar, 2010, 342) define culture as “the sum total of learned beliefs, values, and customs that serve to direct the consumer behaviour of members of a particular society. ”Consumers are also getting influenced from cross-culture of different countries (Patil and B. Bakkappa, 2012). To make products more tangible marketers use product features, its appearance and whole lot of other things to match the cultural demand of the consumers. Physical appearance is the most important component for selecting and purchasing cosmetics (Junaid Abdullah B, Nasreen R, Ahmed F, Hamdard J., 2013).One of the research shows that while selecting cosmetics, culture influences their selection. Cosmetics are selected in the framework of personal culture and rituals performed. Along with that the language and symbol on the package influences their selection. Consumers are of the opinion that their subculture influences the cosmetics selection and they have derived subculture from the culture of the state and religion to which they belong (Patil H, BBakkappa, 2012).

1.2 Social Factors

Family, social roles and statuses as well as different reference groups are some of the social factors that, in addition to culture, affect consumer behaviour (Kokoi I, 2011).According to one of the study conducted in Kolhapur by Desai K. (2014), consumers while purchasing cosmetics in spite of the impact of friends, family members, beauticians and others, the actual decision to buy was taken by the respondents on their own. In contrast, one of the studies also suggested that family members consent is the major factor in the purchase of soaps (Reddy P, Rao N. Appa, Reddy I. Lokananda, 2014). Not only in cosmetics but for FMCG products also the social factors influence the buying behaviour of consumers. One of the study shows that nearly 50 per cent of women purchases are getting influenced by word of mouth (Sonkusare G., 2013). Supporting to this study, one more study concluded that women shoppers are high involvement shoppers who sought their opinion of female friends and co-workers, used most of the non-personal idea sources for shopping (Tammy R. Kinley, Bharath M. Josiam and Fallon L., 2010).

1.3 Personal factors

A buyer's decisions are also influenced by personal characteristics. The characteristics like; the buyer's age and stage in the life cycle, occupation and economic circumstances, personality and self-concept, and lifestyle and values (Kotler et. al., 2013, 150).As this study is related to cosmetics products, age will be playing the most important role. Different age group people prefer different brand of skin care cosmetic product and there is a significant relationship between occupation and brand loyalty, brand preference (Junaid Abdullah B, Nasreen R, 2012; Wijesundera G, Abeysekera R, 2010). Supporting to this, Junaid Abdullah B, Nasreen R, Ahmed F, Hamdard J. (2013) also concluded that there is a significant relationship between age and type of cosmetics products used and age and time period of using cosmetics.As this study is related to cosmetics products and today is the era of working women. So, occupation is going to play the most important role while purchasing cosmetics, supporting to this one of the study concluded that, the working respondents were more conscious of their appearance and ready to buy high priced products as compare to housewives & students (Desai K, 2014).Self-image does have an impact on purchase intention and purchase behaviour in buying skincare products (Sukato N., Elsey B., 2009).One of the studies conducted by Srinivasan R., Srivastava R., Bhanot S. (2014) depicted the relationship between age, value and purchase behaviour towards luxury brands.And there is a significant difference in perception of usability value among people of different age groups.

1.4 Key psychological processes

As Kotler et. al. suggested (2013, 153);four key psychological processes-motivation, perception, learning, and memory-fundamentally influence consumer responses.A motivated person is ready to act. Satisfying all the needs and wants, overcoming to all the tensions and drive, they will show certain behaviour that will help them into purchase decision and goal or need fulfillment.In terms of studying consumer behaviour, people's perceptions are more important than reality because perceptions are what actually affect a consumer's behaviour.Perceptions are formed through a three stage process that consists of selective attention, selective distortion and selective retention (Kotler et. al., 2013, 156).Marketers want their communications to be noted, believed, remembered, and recalled. For these reasons, they are interested in every aspect of the learning process (Schiffman, Kanuk, Kumar, 2010, 196-198).It is very important to study memory as a part of factors influencing consumer buying behaviour, because which products or services or brands consumer will be choosing is the result of the associations they have made with information stored in the memory.As Kotler et. al., (2013) wrote, cognitive psychologists distinguish between short-term memory (STM)- a temporary and limited repository of information- and long-term memory (LTM)- a more permanent, essentially unlimited repository.

2. Research Methodology.

For this study of cosmetics and female buying behavior, quantitative research strategy was used. The principal orientation to the role of theory in relation to research was deductive. The epistemological orientation was natural science model, in particular positivism. The objectives of this research were as follows:

- To study and analyze factors influencing female buying behaviour of cosmetic products for the selected cities of the study.
- To understand and select key variables of female buying behaviour of cosmetic products for the selected cities of the study.
- To analyze the demographic variables of cosmetic products for the selected cities of the study.

The targeted population for this study was female consumers who live in the cities of Surat, Navsari, Valsad and Vapi. Respondents were 18 years of age or older, with a mix of occupations, level of education and income.The sample respondents were derived using quota sampling method of non-probability sampling.For this study, in the first stage of quota sampling; age and cities like Surat, Navsari, Valsad and Vapi from South Gujarat region of Gujarat district has been identified as a quota on the basis of judgment. The various age groups used for the study was derived taking the reference from demographic segmentation variables for consumer markets given by Kotler, Keller, Koshy, Jha. (2013, 191). The relevant control characteristics or quotas, which may include sex, age, and race, are identified on the basis of judgment (Malhotra N, Dash S., 2010, 337). For the second stage of the study, from each age group minimum 10 per cent of population had been required for sample from the selected cities for the study.1000 respondents were selected for survey in this study to ensure sufficient response to provide reliability of data as the nature of the research has an impact on the sample size, such as for descriptive surveys larger samples are required (Malhotra N, Dash S., 2010, 332).The sample size distribution; using quota sampling technique, sample size of 1000 and for the selected cities of Surat, Navsari, Valsad and Vapi; for the selected study can be seen in table 1.

The primary data was collected using survey method and all the data obtained using structured questionnaires. A pilot study was conducted in two stages, first state involved experts who had analyzed the questionnaire as per objectives and second, 50 females were contacted conveniently to fill up the questionnaire and were asked to write down the comments at the end of the questionnaire. So, a refined questionnaire was taken forward for the actual survey. For actual survey, researchers had contacted females residing in the cities of Surat, Navsari, Valsad and Vapi and visited few colleges, salons, shops that sell cosmetics, tuition classes and conveniently contacted the people who are already known in the selected cities. For secondary data the researchers had thoroughly studied journals, periodicals, books, articles, reports, theses, etc.

In this study, all the data was collected using survey method were checked and then transformed into intelligence and coding had done using SPSS 16.0.A five-point likert-type scale (Strongly agree to strongly disagree) was employed to measure variables. The data set was screened and examined for incorrect data entry, missing values, normality and outliers. The value of Cronbach's Alpha was 0.885 for 55 items and 963 respondents of this study, indicates that the instrument is reliable and can be used with other statistical procedures for further investigation. In this study, descriptive statistics were employed first and then factor analysis was carried out to satisfy the objectives.

Selected citites for the study/Age -wise sample size of females	Sample size of 18 - 34 years of age	Sample size of 35-49 years of age	Sample size of 50 - 60 years of age	Sample size of 60+ years of age	Total Sample size
Surat city	397	189	61	54	701
Navsari city	46	28	13	13	100
Valsad city	44	29	12	14	99
Vapi city	59	27	8	7	101
Total	547	273	93	88	1001

Table: 1 Age-group wise sample size

3. Data analysis and interpretation

The number of respondents participated in this study was 963, as seen in table 2. The collected data was significant for analysis because it's quite a big size and a minimum sample size suggested was five for one variable in addition, a one hundred sample size is acceptable, and however a sample size more than two hundred is much more acceptable to fulfill the factor analysis (Hassan S, Ismail N, Jaafar W, Ghazali K, Budin K, Gabda D, Samad S, 2012; Malhotra N, Dash S., 2010, 590). The reliability analysis result showed that Cronbach's Alpha was 0.885 for 55 items on scale. So, it suggests that there were internal consistency of the scale and the instrument used in this study had high reliability value.

As seen in table 2, total 963 responses were collected during the entire tenure of data collection. The varied demographic profile of the respondents includes, age, education qualification, occupation, marital status and economic status of the respondents. Out of 963 respondents; 62 per cent of the respondents belonged to 18-34 years of age category, 52 per cent of the respondents were graduate, 54 per cent of the respondents were married and 38 per cent of the respondents belonged to middle class family earning the income of 80,001-1,20,000 Rs.). From this analysis, it was also found that 31 per cent of the respondents were housewife, 29 per cent were studying and 26 per cent of the respondents were doing private job.

Based on above mentioned figures, as 62 per cent of the females were under the age of 18-34 years, from which one can assumed that they must be having a very good knowledge of cosmetics and must be using cosmetics on regular basis. So, from the above findings, one could interpret that the age, occupation, education qualification, family income, and marital status, all differ from person to person and their purchase behaviour would be entirely based upon what demographic profile they fall upon.

Demographic Profile		Frequency	Percentage
Total no. of respondents		**963**	**100%**
Age of the respondents	18-34 years	592	61.5%
	35-49 years	237	24.6%
	50-60 years	92	9.6%
	60+ years	42	4.4%
Education qualification of the respondents	Undergraduate	212	22%
	Graduate	496	51.5%
	Post graduate	232	24.1%
	M.Phil/Ph.D	15	1.6%
	Missing Value	8	8%
Occupation of the respondents	Student	282	29.3%
	Government job	59	6.1%
	Private job	251	26.1%
	Own business	57	5.9%
	Housewife	294	30.5%
	Others	20	2.1%
Marital status of the respondents	Unmarried	407	42.3%
	Married	524	54.4%
	Divorced/Separated	14	1.5%
	Widowed	13	1.3%
	Missing Value	5	0.5%
Economic status of the respondents	Low class (Below 40,000 Rs.)	104	10.8%
	Lower middle class (40,001- 80,000 Rs.)	125	13%
	Middle class (80,001-1,20,000 Rs.)	369	38.3%
	Upper Middle class (1,20,001-1,60,000 Rs.)	209	21.7%
	High class (1,60,001 and above)	151	15.7%
	Missing Value	5	0.5%

Table 2: Demographic profile of the respondents

In marketing research, there are large numbers of factors, most of which are correlated and which must be reduced to a manageable level. Thus, factor analysis could help the researcher to reduce the factors to that it become manageable and the objectives of this research could be satisfied. The factor analysis is a class of procedures primarily used for data reduction and summarization (Malhotra N, Dash S., 2010, 587).

The total number of 55 variables included in the study after comprehensive review of literatures and thoroughly studying the theories. These variables were measured on ratio scale of 1 to 5; from strongly agree to strongly disagree. And the sample size used was 963.

The following was the result of factor analysis performed by the researcher:

KMO and Bartlett's Test	
Measure of Sampling Adequacy.	.863
Approx. Chi-Square	1.204E4
Df	1485
Sig.	.000

Table 3: Factor analysis- KMO test

According to Malhotra N, Dash S. (2010, 592), to measure the sampling adequacy, Kaiser-Meyer-Olkin (KMO) is a very useful statistical method. The desirable value of KMO given by them is greater than 0.5.As seen in table 3, the value of KMO statistic for this study is 0.863, which is considered large (> 0.5). Even the Bartlett's test of sphericity is significant ($p<0.005$, $p=0.000$). Thus, factor analysis considered as an appropriate technique for analyzing the components.

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.187	14.886	14.886	2.708	4.923	4.923
2	3.556	6.466	21.351	2.639	4.799	9.722
3	1.981	3.601	24.953	2.583	4.697	14.418
4	1.924	3.498	28.450	2.403	4.369	18.787
5	1.577	2.866	31.317	2.096	3.811	22.598
6	1.445	2.627	33.944	2.014	3.661	26.259
7	1.351	2.457	36.401	1.857	3.376	29.635
8	1.301	2.365	38.767	1.805	3.282	32.917
9	1.259	2.289	41.056	1.674	3.043	35.961
10	1.227	2.230	43.286	1.637	2.977	38.938
11	1.221	2.220	45.506	1.582	2.877	41.815
12	1.182	2.149	47.655	1.566	2.847	44.661
13	1.136	2.065	49.720	1.518	2.759	47.421
14	1.124	2.044	51.764	1.459	2.653	50.073
15	1.059	1.925	53.688	1.352	2.459	52.532
16	1.031	1.875	55.564	1.350	2.455	54.987
17	1.016	1.847	57.411	1.333	2.424	57.411
18	.959	1.744	59.155			
19	.928	1.688	60.843			
20	.910	1.655	62.498			
21	.889	1.617	64.115			
22	.858	1.560	65.675			
23	.838	1.524	67.199			
24	.808	1.468	68.667			
25	.800	1.454	70.121			
26	.761	1.383	71.504			
27	.746	1.356	72.861			
28	.730	1.328	74.189			
29	.727	1.322	75.510			
30	.718	1.306	76.816			
31	.681	1.239	78.055			
32	.665	1.210	79.265			
33	.660	1.200	80.465			
34	.651	1.183	81.648			
35	.630	1.146	82.793			
36	.624	1.134	83.927			
37	.598	1.087	85.014			
38	.570	1.037	86.051			
39	.566	1.029	87.080			
40	.561	1.021	88.100			
41	.550	.999	89.100			
42	.526	.957	90.056			
43	.511	.930	90.986			
44	.481	.874	91.860			
45	.467	.849	92.709			
46	.464	.843	93.552			
47	.445	.809	94.361			
48	.429	.780	95.141			
49	.422	.768	95.909			
50	.412	.748	96.658			
51	.403	.732	97.390			
52	.388	.706	98.096			
53	.363	.661	98.757			
54	.352	.641	99.398			
55	.331	.602	100.000			

Extraction Method: Principal Component Analysis.

Table 4: Total variance Explained

The table 4 shows the actual factors extracted from all the 55 variables selected for the study. In the table 4, if one could look to the “rotation sum of squared loadings”, it shows only those variables which met the cut-off criterion (extraction method). In this case, there were 17 factors with eigen values greater than 1. When 17 factors were extracted, then 57.411 per cent of the variance would be explained. The “% of variance” column, it shows how much variability could be accounted for by each of these factors. Factor 1 account for 4.923 per cent of the variability in all variables, and so on.

The rotated component matrix shows the factor loadings for each variable. Though it is not included in this article, the researcher went across each row, and took only those factors that loaded most strongly on. Hassan Set. al, (2012) stated variable with factor loadings more than 0.45 were chosen in this study because loadings equals to 0.45 is considered average, whereas loadings 0.32 is considered less good. Thus, according to the rotated component matrix, following components are distracted:

After performing Varimax Rotation Method

No. of component	Name of the component	Factor loading
1	I believe that for cosmetic products high price products have more staying power than low -price products	0.471
	The more expensive cosmetics brands are usually my choice	0.652
	I usually buy international brands of cosmetic products	0.578
	The brand of cosmetics must help me attain the type of life I strive	0.470
	I am interested in shopping at exclusive stores rather than at department stores or other discount stores for purchasing cosmetic products	0.519
2	I evaluate different brands of cosmetics by reading labels, considering ingredients, trying out the sample available	0.515
	I usually trust in a brand of cosmetic products because of the famous and well-known celebrity endorses it.	0.404
	The road side billboards or hoardings attracts me the most for purchasing cosmetic products	0.631
	For cosmetic products, interior of the store must be attractive and pleasant	0.499
	For the store which is selling cosmetic products, must have good wall color and must play good music	0.688
3	I love the cosmetic products made of the natural ingredients	0.627
	I will repeat my purchase of the same cosmetics which have given promised effects previously	0.611
	I will always consider my previous product usage experience for purchasing cosmetic	0.590
	I always look for clear instructions regarding contents, ingredients, manufacturing date, expiry date etc on the cosmetics product packaging	0.488
	For me, quality is an important factor in buying cosmetics products	0.630
4.	The advertisements always give me better information of the cosmetic products	0.658
	The video blogs of cosmetic products always attracts me to purchase cosmetics	0.664
	The advertisements on social media attracts me to purchase cosmetics	0.755
5.	I am likely to buy cosmetics if I recognize its brand name	0.406
	In my opinion, a good brand always have a good store location	0.465
	In my opinion good brand must have sufficient outlets	0.641
	For me to purchase cosmetic products, the store must be easily accessible	0.570
6.	For cosmetic products, I shop quickly, buying the first product or brand that's good enough	0.692
	Buying the most expensive brand of the cosmetic products makes me feel distinguished	0.528
	Price is not an important factor while purchasing cosmetics	0.401
7.	For purchasing cosmetic products, I really don’t give much thought or care	0.488
	The lower price cosmetic products are usually my choice	0.658
	If my preferred brand of cosmetics in the product I want is not available at the store, it makes little difference to me and I choose another brand.	0.480
8.	I always keep my standards and expectations very high when it comes to purchasing cosmetic products	0.440
	I look carefully to find the best value for the money	0.463
	Increase in price does not hinder my purchases when it come to cosmetics	0.495
	I buy as much as cosmetics products possible at sales prices	0.616
9.	A good cosmetic store must have the wide range of products	0.582
	A good cosmetic store must have effective and attractive product display	0.563
10.	Price is an important factor for me while purchasing cosmetics products	0.741
	I always purchase cosmetic products if special discounts are available	0.513
11.	For me, a good brand of cosmetics must have an online presence	0.684
	I usually purchase cosmetics online	0.590
12.	I look for ingredients of the cosmetic products before purchasing it	0.424
	I always purchase the cosmetic products which is made in India	0.654
13.	I always look for attractive packaging for cosmetic products	0.410
	For me, packaging of the cosmetic products should be convenient to use, store and dispose	0.70
	I usually get into the cosmetic store if its window displays are attractive	0.455
14.	I purchase cosmetic product after looking to the recommendations and testimonials of the people who have already used it	0.713
	I always purchase cosmetics from the company kiosks available at malls	0.467
15.	I usually purchase the same brand of cosmetics for different product type	0.534
	I usually got attracted by free-trials of cosmetic products for purchasing it	0.614
16.	I did not search attribute information of the cosmetics brands I am not aware of	0.492
	The salesperson’s recommendations always affect my purchase decision	0.646
17.	I believe more in cosmetic products outlets than a website selling the cosmetic products	0.692

Table 5: Factor analysis-Factor distraction with factor loadings

with Kaiser Normalization, Factor 1 comprised of five items with factor loadings ranging from 0.470 to 0.652. The items in factor 1 were shown in Table 5. Factor 2 comprised of five items with factor loadings ranging from 0.404 to o.688 and the items in factor 2 were shown in table 5. Factor 3 comprises of five items with factor loadings ranging from 0.488 to 0.630 and the items in factor 3 were shown in table 5. Factor 4 comprises of three items with factor loadings ranging from 0.658 to 0.755 and the items in factor 4 were shown in table 5. Factor 5 comprises of four items with factor loadings ranging from 0.406 to 0.641 and the items in factor 5 were shown in table 5. Factor 6 comprises of three items with factor loadings ranging from 0.401 to 0.652 and the items in factor 6 were shown in table 5. Factor 7 comprises of three items with factor loadings ranging from 0.480 to 0.658 and the items in factor 7 were shown in table 5. Factor 8 comprises of four items with factor loadings ranging from 0.440 to 0.616 and the items in factor 8 were shown in table 5. Factor 9 comprises of two items with factor loadings of 0.563 and 0.582 and the items in factor 9 were shown in table 5. Factor 10 comprises of two items with factor loadings of 0.513 and 0.741 and the items in factor 10 were shown in table 5. Factor 11 comprises of two items with factor loadings of 0.590 and 0.684 and the items in factor 11 were shown in table 5. Factor 12 comprises of two items with factor loadings of 0.424 and 0.654 and the items in factor 12 were shown in table 5. Factor 13 comprises of three items with factor loadings ranging from 0.410 to 0.70 and the items in factor 13 were shown in table 5. Factor 14 comprises of two items with factor loadings of 0.467 and 0.713 and the items in factor 14 were shown in table 5. Factor 15 comprises of two items with factor loadings of 0.534 and 0.614 and the items in factor 15 were shown in table 5. Factor 16 comprises of two items with factor loadings of 0.492 and 0.646 and the items in factor 16 were shown in table 5. Factor 17 comprises of one item with factor loading of 0.692 and the item in factor 17 was shown in table 5.

17 new factors were successfully extracted using factor analysis and assigned as the factors affecting female buying behaviour for cosmetic products. Table 6 shows the name of new factors and the percentage of variance explained for each factor. The first factor shows the highest percentage of variance explained when it was extracted. Thus, when the first factor brand consciousness was extracted, brand consciousness, then 4.923 per cent of variance would be explained.

Factor	Name of the factor	Percentage of Variance
1	Brand consciousness	4.923
2	The total customer benefit	4.799
3	Quality consciousness	4.697
4	Promotion- Social media	4.369
5	Accessibility	3.811
6	The impulsiveness	3.661
7	Low price buying	3.376
8	Customer satisfaction	3.282
9	Product varieties	3.043
10	Price consciousness	2.977
11	Online shopping	2.877
12	Made in India products	2.847
13	Product packaging	2.759
14	Customers' recommendations	2.653
15	Sales promotion	2.459
16	Salespersons' recommendations	2.455
17	The belief of classic buying	2.424

Table 6: Factor analysis-Name of new factors with the percentage of variance

4. Findings and Conclusion

Acceptance for frequent use of cosmetics has been on rise among Indian female consumers. According to this study, 62 per cent of the female respondents were of 18-34 years of age, 52 per cent were graduate respondents, 54 per cent were married females, 38 per cent belonged to middle class family earning the income of 80,001-1,20,000 Rs.), 31 per cent were housewives, 29 per cent were studying and 26 per cent of the respondents were doing private job. So, as per the analysis conducted, majority respondents were young and rising respondents. And it was also found that females considers total number of 17 factors while purchasing cosmetics likewise; brand consciousness, the total customer benefit, quality consciousness, promotion on social media, accessibility, the impulsiveness, low price buying, customer satisfaction, product varieties, price consciousness, online shopping, made in India products, product packaging, customers' recommendations, sales promotion, salespersons' recommendations, and the belief of classic buying. Thus, to study the process of evaluating and selecting the most appropriate brands of cosmetics for females is not simple as today's female are getting more aware and due thanks to all social media which is making females more attentive while choosing cosmetics. And the product like cosmetics is bought with lots of expectations, so the risk of dissatisfaction and dissonance are always there, which makes the study of female buying behaviour for cosmetics more important and complex.

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Role of Urban Cooperative Banks in Financial Inclusion

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Abstract: *Role of financial system makes a country strong and capable to stand out in this competitiveworld financial inclusion become key development parameter to reduce poverty and achieve financial milestones. It catalyzes development activates specially in developing country. This paper studies the role of urban cooperative banks to fill up the gap to access for finance, financial literacy to afford cheap finance for weaker sections of society. Government leaders of developing country making vast effort to expand financial inclusion network by implementing regulatory framework in countries. Financial inclusion should be implemented in grassroots bases so that rural development can be happening in India. Being local in the nature and minimal operating cost and labor cost give an advantageous our economy to spread development on the grassroots level through cooperative banks. Cooperative banking sector capture Attention of economic policy maker when there is burning issue of inclusive growth after the World Bank Report. No doubt in India currently there is large gap in demand and supply side of finance at affordable cost. Urban cooperative banks achieved significantly growth in terms of size, deposits, lending in Urban areas which makes urban cooperative banks as strong Pillar of financial inclusion apart from commercial banks.*

Keywords – *Financial Inclusion, Urban Cooperative Banks (UCB), Commercial Banks.*

Introduction

Financial inclusion is the way to achieve economic growth by overcoming income inequality in economy. Financial inclusion enables poor people to save and to borrow - allowing them to build their assets, to invest in education and livelihoods opportunities, and thus to improve their quality of life. Inclusive finance especially benefits disadvantaged groups such as women, youth, and rural communities. For all these reasons financial inclusion has gained prominence in recent years, across the world, in many countries as a policy objective to improve the lives of the poor. Recognizing that 2.5 billion adults worldwide are 'unbanked' the World Bank has put forward a vision for achieving universal financial access by 2020. More than 50 countries, including India, have made ambitious commitments to financial inclusion targets. Financial inclusion focus not only to provide banking services in weaker and non-banking area but also focus to speed up financial literacy, financial products at less cost and at less time.There should be 5p's concept which is suggested by RBI that is Product, Place, Price, Protection and Profit in financial inclusion area. CRISIL defines financial inclusion as the extent of face by all sections of society to formal financial services such as credit, deposit, insurance and pension services. Financial inclusion may be defined as the process of ensuring access to financial services and timely adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost (The Committee on Financial Inclusion, Chairman: Dr. C. Rangarajan). Lots of efforts has been done by various countries in world and agreement is taking place like MAYA declaration is great effort by developing countries in the creating the right environment, implementing the correct framework, ensuring consumer protection measures are taken towards financial Inclusion. To give the importance of poverty reduction and financial empowerment government has launched various schemes like Pradhan Mantri Jan Dhan Yojna which aims there should be at least one account in one households in India so that financial services can be provided in affordable manner. In Budget 2016-17 MNAREGA and Jan Dhan Yojna has been given focus to uplift economy. Aynsley (2010) identifies three key aspects of definitions of financial inclusion: (i) access to financial services and products; (ii) financial capability (managing money effectively, etc.); and (iii) financial literacy.

There are various financial institution and banks which are doing work in this direction but in this paper we are analyzing role of urban cooperative banks in financial inclusion. A co-operative bank is a financial entity which belongs to its members, who are at the same time the owners and the customers of their bank. Co-operative banks are often created by persons belonging to the same local or professional community or sharing a common interest. The co-operative credit structure is three-tier and federal. At the apex is the State Co-operative Bank (SCB) in each state (co-operation being a state subject in India); at the intermediate (district) level there are Central Co-operative Bank (CCBs); and at the village level there are primary agricultural credit societies (PACS). Cooperative banks structure in India-Cooperative banks has two categories which includes Urban cooperative banks and rural cooperative banks.

Urban cooperative banks were established under the cooperative societies act 1904 to lend small borrowers and small business purpose but now a day the scope of the operation of UCB has changed significantly. Currently in India UCB 1606 across India where there are 51 Scheduled Bank and 1555 Non Scheduled urban cooperative bank. Urban cooperative bank is primary cooperative banks which is situated in urban (1 lakh and above and less than 10 lakh Population) and semi urban area (10,000 and above and less than 1 lakh Population) .Rural cooperative banks main objective to lend farmers for agriculture purpose for short and as well as long term. India having 93550 Rural Cooperatives, it is small share of total credit system among commercial banks in formal banking system still they have lots of importance because they have wide distributed in various geographic location and has the ability to reach poor people at affordable cost.

1. Review of literature-

Y.V. Reddy (2005) Financial inclusion term was firstly used in India RBI annual policy 2005-2006. Under financial inclusion policy framed in this committee report it is noticed that vast section is excluded in formal finance system so banks given advice to practice to attract more and more people towards financial inclusion.

Khan (2005) committee report suggest that to achieve greater financial inclusion. Based on the report credit facility through business correspondents and business facilitator, Self Help Group, Micro finance institution by using technology at affordable cost is provided in the economy. According to committee report bank accounts can deploy suspicious transactions and can help in antimony laundering. No frill account introduced after this committee recommendation which mean there is no minimum cash requirement for opening the account.

K C Chakrborty committee this committee focus on urban poor people like Household workers, Construction workers, Weavers, Hawkers, Rickshaw pullers, Auto Drivers who are excluded from formal banking system. There lots of solutions provided like training and capacity building can be provided through Jawaharlal Nehru National Urban Renewal Mission (JNNURM). Joint liability group and Self Help Group play very important role in it. KYC norms should be relaxed and Aadhar card will be good option for as identity proof. Rangrajan committee-This committee focused on the new role of regional rural banks as this banks have higher presence in financial exclusion areas. This committee has suggested that micro credit should be linked with micro insurance.

2. Objectives of the study-

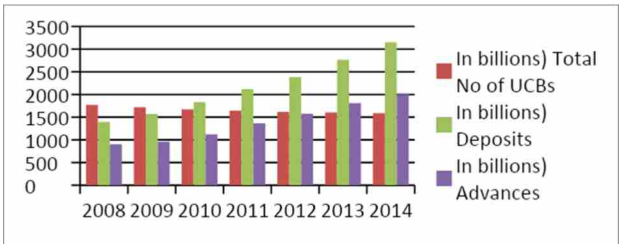
1. To study the growth and expansion of UCB in India.

2. To study Branch penetration in all over India.

3. To understand the Loans and advanced to priority sector and contribution in access to finance.

3. Research Methodology-
To analyze study secondary data is used including report of RBI, NABARD and other research agency and financial institution reports like CRISIL and KPMG report. Graphical and tabular representation used for better analysis and understanding. In this paper under introduction part we have discussed about financial inclusion concept and cooperative banks in India. In next part, we have analyzed urban cooperative banks in terms of branch expansion, ATM, loans & advances to priority sector. We have taken certain parameters to identify the role of urban cooperative banks towards financial inclusion.

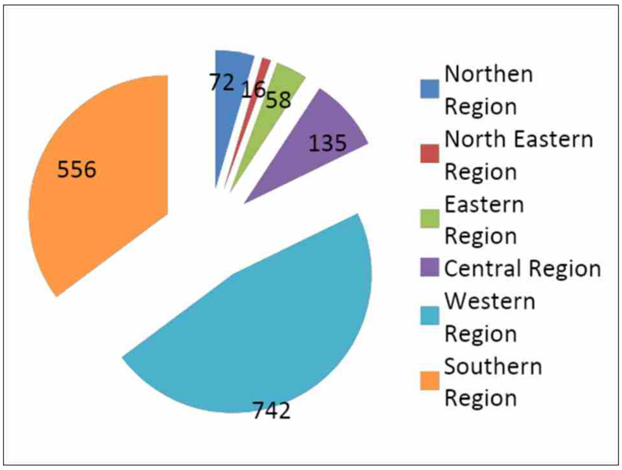
1.EXPANSION OF URBAN COOPERATIVE BANKS-Urban cooperative banks play an important role providing all banking services to common and unprivileged society. From 2008 to 2014 Urban cooperative banks numbers declined from 1770 to 1589 .UCB divided into four categories grad 1,grade 2,grade 3,grade 4 based on financial performance. In declining of UCB grade iii and IV decline but grade 1 and ii increase time to time. In total 1589 UCB there is more grade 1 that is 1132 makes 71.69 percentage of total UCB and 447 which makes 28.31 %.UCB deposits.



RBI: High powered committee report on UCB

A deposit of UCB increases from 2008 to 2014 1398.71 billion to 3155.03 billion and it is 125 percentage growth in deposits terms. It is good Sign in terms of financial inclusion. Urban cooperative banks advance increases from 904.44 Billion to 1996.51 Billion almost 120 percentage increase significantly.

2. BRANCH PENETRATION IN INDIA
Urban Cooperative banks distributed in all over State, Territory and Region wise-UCB has it presence in Northern, Northeastern, Eastern, Central, Western, Southern Region.UCB has highest number in western region which include Goa, Gujarat, Maharashtra, Dadar and daman in which highest presence of UCB is in Maharashtra (510), Gujarat (226) with 5442 and 1028 Branches respectively. After western region Urban Cooperative Bank has 2nd highest presence in southern region in which Karnataka has highest no that is 265.

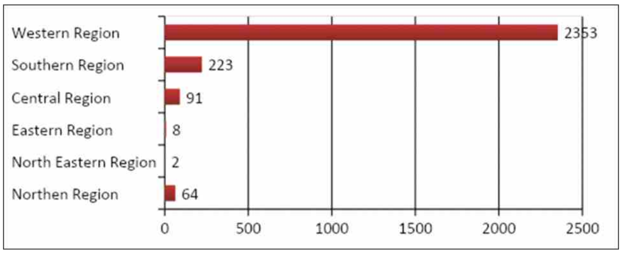


Source: RBI Database on 31st March 2015

Urban cooperative branches with 1012 branches of Urban cooperative banks. Central region has total 135 presence of Urban cooperative bank but there is the less presence of urban cooperative bank in northern region (72), north eastern region (16) and eastern region (58). Branch penetration is being good some region and less in other but urban cooperative bank can provide much more to Unbanked area as they are more interwoven with local community and can do lot of to break physiological barrier to get finance at affordable cost. Commercial banks have more penetration than cooperative banks but they opt technology based solution reach customer but there are local community which are not prone to technology so at that time urban cooperative bank can do lot for weaker sections.

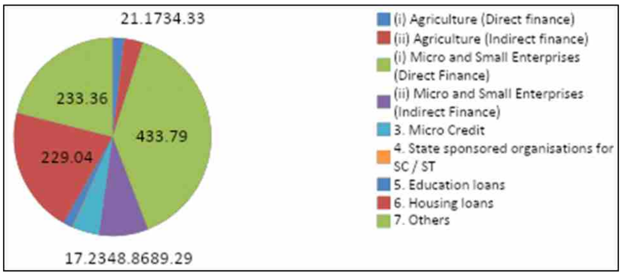
3. ATM FACILITY- ATM Facility by urban cooperative banks-To open up ATM of

urban cooperative banks 50 Crore net worth and it should be financial sound and well managed (FSWM).



UCB –ATM has highest presence in western region (2353),Southern Region (223), Central Region (91), Northern Region(64), Eastern Region(8), North Eastern Region(2) date 31st march 2015.

4.LOANS & ADVANCES TO PRORITY SECTOR- In 1968 banks have given direction to give loans to priority sector. Urban cooperative banks give various types of loans but main emphasis on priority sector. Following are the priority sector in India-



Source: RBI Report (31st March 2015), Amount is in Rupee Billions.

(I) Agriculture
(ii) Micro and Small Enterprises
(iii) Education Loans
(IV) Housing Loans
(v) others

Total Priority Sector	40 percent of Adjusted Net Bank Credit or credit equivalent amount of Off-Balance Sheet Exposure, whichever is higher.
Total agriculture	No target.
Micro &Small Enterprises (MSE)	(I) Advances to micro and small enterprises sector will be reckoned in computing achievement under the overall priority sector target of 40 percent of ANBC or credit equivalent amount of Off -Balance Sheet Exposure, whichever is higher. (ii) 40 percent of total advances to micro and small enterprises sector should go to Micro (manufacturing) enterprises having investment in plant and machinery up to ` 10 lakh and micro (service) enterprises having investment in equipment up to ` 4 lakh; (iii) 20 percent of total advances to micro and small enterprises sector should go to Micro (manufacturing) enterprises with investment in plant and machinery above ` 10 lakh and up to ` 25 lakh, and micro (service) enterprises with investment in equipment above ` 4 lakh and up to ` 10 lakh. The targets for Micro Enterprises within the Micro and Small Enterprises segment (MSE) will be computed with reference to the outstanding credit to MSE as on preceding March 31st.
Advances to Weaker Sections	10 percent of ANBC or credit equivalent amount of Off -Balance Sheet Exposure, whichever is higher.

CRITERIA FOR URBAN COOPERATIVE BANKS FOR LOANS AND ADVANCES-

According to report of RBI total loans provided by UCB highest loans given to micro small enterprises in direct finance amount 433.79 Billion which include manufacturing enterprises, Loans for food & agro processing, service enterprises, khadi and village industries sector but loans granted for indirect finance under micro n small industries is which include loans for decentralized sector that is 89.29Billion.Urban cooperative banks have gain their strategic position in housing finance under priority sector lending. UCB is offering various schemes to provide finance for house especially for weaker sections yet UCB has limit for loans under house finance. To provide loans to housing societies UCB has to take permission from registrar.

MOBILE BANKING- It is a part of the financial inclusion initiative where customer can use financial services in easy way. Mobile banking is the service which is given by banks and other financial institution to avail financial services or do financial transaction in prescribed amount by using mobile or tablet. According to KPMG report adoption rate of mobile banking are highest in developing countries: reaching to about a 60-70 per cent in India and China, rather than developed nations such as the USA, Canada and the UK. It also suggests that mobile banking and payment systems are increasingly being integrated with other technologies, driving an era of 'Open Banking'. NABARD has taken initiative to come all cooperative banks under CBS platform. To provide mobile banking it is necessary to link it with CBS. Total 201 central and state cooperative banks with 6,953 branches from 16 states & 03 UTs of the country, has come under CBS Major commercial banks and urban cooperative banks are providing mobile banking services to customer which is based on technology which is adopted by them. Various urban cooperative banks are providing mobile banking services via completed RBI norms related to authentication, security, grievance handling, security etc.

4. NECESSARY ACTIONS TO URBAN COOPERATIVE BANKS-

Urban cooperative banks should provide more education loans as it is the less one. It provides more security in mobile transactions so that it is benefited to customer in longer way. UCB has dual control of RBI and state governments are remove for better functioning and better governance.

5. CONCLUSION-

Urban cooperative bank is important role in India financial system as it's have certain advantage over commercial banks like to provide financial services on ground level which help in poverty reduction. UCB can create income generation; can give more opportunity for employment and most important can create women entrepreneurs. UCB can solve ground level problems by emphasizing on more branch penetration, qualitative services to customers. Cooperatives bank can contribute in income inequality problems and by implementing appropriate strategy it can lead inclusive growth.

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Green Banking Practices of HDFC bank : A Case Study

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Abstract: *Banking sector is one of the chief economic factors that effects industrial and economic growth of any country. As in the industrial sector, banking is one of the main stakeholders that can face credit risk and liability risk and its quality of assets and rate of return can be influenced by the environmental effects in the long run. In view of this, banks have to play a positive role to go green and inculcate the environmental and ecological factors in their policies. Green banking strategies mean promoting environment-friendly practices and reducing carbon footprint in the day to day banking activities. Some banks in India including the private bank HDFC have developed several green banking initiatives. By adopting these practices, the customers as well as the banks employees can contribute a lot towards the environment. This paper aims to highlight the green banking initiatives introduced by HDFC in Delhi which may help identify the possible gaps in the green initiatives in the banking sector in India. The collection of data was done through a structured questionnaire using SPSS technique. The study found that Green banking initiatives have direct and positive impact on the environment because doing these practices; customers can save energy, fuel, paper, water, time as well as money. The common people are yet to come forward to follow these practices due to lack of the awareness.*

Keywords – *Financial Inclusion, Urban Cooperative Banks (UCB), Commercial Banks.*

Introduction

A concept of Green banking means promoting environmental-friendly practices and reducing carbon footprint in the banking activities. Green Banking is a departure from the traditional banking since it envisages a socially and environmentally responsible role for the banks. After globalization, environmental issues are gaining importance and there is pressure on banks to go green and finance industries which work towards reducing carbon footprints.

Across the globe, green banking initiatives are being taken by way of resource saving, remodeling choices offering green accounts for customers and rewarding them for reducing the printed material significantly. Although green marketing has developed significantly in recent years and big retailers, from Wal-Mart to Apple, are following green methods, green packaging, etc. but green banking is still in its early stage. Recently, Demonetization announced on 8th November, 2016 gave a tremendous boost to the Green Banking initiatives. For example, banks have started mobile ATMs for hospitals and there is rise of the cashless economy. Now there is a spread of digital payment culture which will reduce the use of physical cash and will encourage increased cashless payments and integrate latest technology in economic transactions. In the long run, it is expected to have a 'habit-changing' effect on the Indian citizens. People would now prefer keeping cash in banks rather than keeping it at homes/lockers. This would boost bank's Current and Saving Account (CASA) ratio, reduce the cost of funds and help bank's Net Income (NI) margin. India is moving ahead towards being digital very fast.

1. GREEN BANKING

The idea of banks to encourage environment friendly investments, financing those enterprises that are already green or planning to go green and reducing carbon footprints from banking activities to save natural environment is called Green Banking. The benefit of such an initiative will be jointly shared by banks, industries and the economy. Green banking helps in cost optimization, enhancing the assets quality of banks, lowering the risk, improving the reputation and helps in achieving the environment sustainability objective. All these objectives can be achieved through online banking. It is also called ethical banking or sustainable banking. They are controlled by the same authorities but with an additional agenda towards taking care of the Earth's environment / habitats / resources. It has been perceived that banks can play a more active role towards good environmental and social business practices by checking all the factors before lending a loan, i.e. whether the project is environmentally friendly and all the environmental safety standards will be followed. At present the banking operations have drastically increased the carbon footprint of banks due to substantial use of energy e.g., (lighting, air conditioning, electronic equipments, IT etc.), paper wastage, lack of green buildings, etc. In view of this, it is imperative that banks adopt technology, process and products that result in substantial reduction in their carbon footprint and encourage sustainable business.

2. Need and Importance of the Study

Today environmental sustainability is an important issue and green banking is a step in this regard. Hence, there is need to study the green banking strategies initiated by the Indian Banks.

Review of Literature

Author(s)	Title	Technique (s) Used	Variables	Main Findings
Jain, H (2018)	Green Banking: A Study on Customer's Awareness in Public and Private Sector Banks	Source- Primary and Secondary Data Qualitative and Quantitative Analysis (T-test, Chi Square test, Regression using SPSS)	In- House and External Green banking activities	It is analyzed that customer's usage of Green Banking is independent of their demographic characteristics i.e. Age, Gender, Education and occupation.
Janakiraman, R. (2016)	A Study on Green Banking in India- An Overview	Source-Secondary Data (Theoretical Analysis)	In-house operational activities	Green banking, if implemented sincerely opens up new markets and avenues for product differentiation.
Barhate, G.H., & Tambol M. A. (2016)	Green Banking: An Overview	Source- Secondary Data (Theoretical Analysis)	Green Banking practices	Green banking is beneficial for banks, industries and the economy. Green Banking will ensure the greening of the industries and improving the asset quality of the banks. Government should play major role and formulate green policy guidelines and financial incentive for going green.
Singh, Y. (2015)	Environmental Management Through Green Banking: A study of Commercial Banks in India	Source- Secondary data Method - Theoretical analysis	Green Finance, Ethical Strategies	Green banks are at start-up mode in India. Even though they have started adopting green practices, but still a lot of channels are unutilized by Indian banks.
Gupta, J. (2015)	Role of Green Banking in Environment Sustainability- A study of Selected Commercial Banks in Himachal Pradesh	Source- Secondary data Method- SWOC Analysis	Paper less banking	Banks are taking new initiatives and promote different green banking products. Banks should also adopt environment friendly practices which ensure the efficient use of resources.

Narang, D. (2015)	Green Banking- A Study of Select Banks in India	Source-Secondary data used Sample size- Public Banks- State Bank of India & Punjab National Bank Private Banks- HDFC Bank & ICICI Bank	Environment management and reducing the damage to the natural resources and global warming	Banks have taken on the green initiatives in a big way. Banks have gone beyond just paperless banking to solar energy sources for ATM's and many more.
Deka, G. (2015)	Green banking practices: a study on Environmental Strategies of banks with Special reference to State Bank of India	Study based on Primary and Secondary sources. Sample Size- 486 customers of SBI (Assam) Method- Survey (Structured questionnaire)	Reduction of carbon footprints	Green banking clearly has direct and positive impact on sustainability. Because doing these practices customers can save energy, fuel, paper, water, time as well as money.
Ramila, M. (2015)	Impact of Green Banking Initiatives on The Level of Carbon Foot Print - An Empirical Study	Source-Secondary source Methodology- Descriptive Analysis Multiple Regression, ANOVA	Reduction of Carbon footprints	The study concludes that green banking initiatives adopted by the banks by the way of retail electronic payment systems are effectively working in reduction of carbon footprint.
Campiglio, E. (2015)	Beyond carbon pricing: The role of banking and monetary policy in financing the transition to a low-carbon economy	Secondary sources	The paper discusses the potential role of monetary policies and macroprudential financial regulation.	The climate change challenge will require a transition to a low- carbon economic system, characterized by the production of energy from renewable resources, high efficiency and a smart use of ecological resources
Ramnarain,T.D., & Pillay,M.T. (2015)	Designing Sustainable Banking Services: The Case of Mauritian Banks	Based on Secondary data which was taken from audited provisional financial reports of the concerned bank for the year 2010-2013 Mauritian Banking Sector Sample size- 2 Mauritian Banks namely Mauritius Commercial Bank Ltd and State Bank Ltd.	Client, Culture, Cost	This study concludes that sustainability can affect the decision -making on investment policies and/or launching of new banking products and services can be achieved by following green banking strategies.
Bimha, A. (2014)	The Internal Carbon Emissions Reduction Efficiency of The South African Banking Sector: A Data Envelopment Analysis	Based on Primary and Secondary data. Sample size- 04 major banks in South Africa (ABSA, Standard Bank, First National Bank, and Nedbank) Method- DEA Analysis	Reduction of carbon emission	Through various ethical banking strategies banking sector can be improved and hence carbon emission will be reduced.
Nath, V., Nayak, N., & Goel, A. (2014)	Green Banking Practices – A Review	Based on Secondary source (Theoretical Analysis) Sample Size- Public and Private Banks in India	Green Finance	Indian banks want to penetrate western markets or global economy, it is important for them to recognize their responsibilities as a global corporate citizen.
Scholten's, B., & Dam, L. (2013)	Banking on the Equator. Are Banks that Adopted the Equator Principles different from Non- Adopters	Secondary Data	Equator Principles Climate change	CSR is an important element for banks performance in International scenario.

Newel, R. G., William A, & Raimi, D. (2013)	Carbon Markets 15 Years after Kyoto: Lessons Learned, New Challenges	Secondary source Theoretical Analysis	Climate change	This study aims that carbon allowance trading can support emission reduction and send market signals for future investments.
Bahl, S. (2012)	The Role of Green Banking in Sustainable Growth	Source- Primary and Secondary data. For collecting Primary data structured questionnaire has been used. "Sample size- 100 Managers of Public banks Method of Analysis- Garrett's Ranking Technique"	Green Finance	India's growth account and obligation to cut its carbon intensity by 20-25 percent from 2005 levels by 2020 provides tremendous opportunities for Indian banks from funding **sustainable projects** to offering innovative products and services in the area of green banking.
Juwaheer, T.D., Pudaruth, S., & Ramdin, P. (2012)	Factors influencing the adoption of internet banking: a case study of commercial banks in Mauritius	Source- Primary and Secondary source "Sample size- 384 Respondents in various banking institutions Method- Descriptive and Inferential Analysis using SPSS"	Ease of use, Education level and Income level.	Level of education and income level of respondents may be a major determinant in influencing the adoption of internet banking
Prita D., & Mallya. (2012)	Sustainable Banking in India: The Road Less Travelled	Based on Secondary source (Theoretical Analysis)	Green Financial Products	This study states that banks not only need to make direct investments in sustainable development and also need to leverage their indirect control over investment and management decisions to influence business into fulfilling broader social and environmental goals.
Saxena, M., & Kohli, A.S. (2012)	Impact of Corporate Social Responsibility on Corporate Sustainability: A study of the Indian Banking Industry	Source- Primary and Secondary data Sample Size- 38 Indian banks Data Source- Karmayog Methodology- Descriptive Analysis Regression Analysis, Correlation Coefficient	CSR Ratings, EPS	This study indicates the insignificant impact of CSR on Financial performance
Verma, M.K. (2012)	Green banking: a unique corporate social responsibility of Indian banks	The study is based on primary sources. The study was conducted with sample of 275 different customers of 11 large banks operating at Jaipur. The 25 customers were selected on random basis from each bank. The names of banks are SBI, PNB, SBBJ, BOB, ICICI Bank, HDFC Bank, Axis Bank, Bank of Rajasthan, CitiBank, HSBC and Standard Chartered. This group includes 4 PSU, 4 Private and 3 Foreign banks.	Demographic profile of Jaipurites and green banking strategies followed by banks in Jaipur	The study concluded that only few of Indian banks have adopted green banking and financed some of green banking-based projects. There is negligible awareness of green banking among bank staff and banks have adopted green banking and financed some of green banking-based projects. There is negligible awareness of green banking among bank staff and customers.

Bihari, S.C. (2011)	Green Banking towards socially responsible banking in India	Source- Secondary data Theoretical Analysis	Green loans	This study concludes that Sustainable and responsible investment (SRI) is an investment strategy that identifies investment targets that not only provide financial growth but also takes explicit account of environmental, social and governance issues in the investment process.
Rudawska, E., & Versita, S.R. (2011)	Sustainability as the Direction for the Long-term Success in Banking-Poland Vs. Croatia	Source- Primary and Secondary Sample Size- 33 Bank Managers of Banks in Poland and Croatia Methodology- Survey Technique Software used- SPSS	Sustainability	The findings of this paper suggest that banks in Poland express stronger need to take into account the environmental, social and economic concerns comparing to banks in Croatia.
Scholtens, B. (2009)	Corporate Social Responsibility in the International Banking Industry	Based on both Primary and Secondary data Sample Size- 32 International Banks (North America, the Pacific and Europe from 2000-2005 Methodology: Analysis through comparison of Regional Performance, Individual bank analysis and Country Analysis	Corporate Social Responsibility	This study shows that CSR is an important element for banks performance in International scenario.
Sahoo, P., & Nayak, B.P. (2008)	Green Banking in India	Based on Secondary data (Theoretical analysis)	Paper less banking strategies	Study concluded that environmental impact might affect the quality of assets and also rate of return of banks in the long run. Thus, banks should go green and play a pro-active role.
Brown, I., et al (2004)	The Impact of National Environment on the Adoption of Internet Banking: Comparing Singapore and South Africa	Based on Primary and Secondary data Methodology- Survey Technique Method - Descriptive Analysis	Ethical Bank Practices	This study shows the adoption of internet banking in Singapore identified attitudinal, social and perceived behavioral control factors as possible influences on adoption. But in in a replicated study in South Africa only attitudinal and perceived behavioral control factors, but no social factors actually influenced adoption.
Pikkarainen, T., et al (2004)	Consumer Acceptance of Online Banking: An Extension of the Technology Acceptance Model	Based on Primary and Secondary data Sample Size- 268 Respondents in Finland Method- Survey	Attitude, Culture	The findings of the study indicate that perceived usefulness and information on online banking on the web site were the main factors influencing online banking acceptance.

3. Objectives of the Study

- To identify the best practices for Green banking introduced by HDFC Bank in India.
- To investigate the impact of green banking practices on sustainability.

4. Data and Methodology

The present study is predicted on Primary and Secondary information. Secondary data has been collected from the journals and websites for the latest happenings and green initiatives taken by the banking sector in India. For collecting primary data, structured questionnaire has been used to analyze various benefits and Green initiatives taken by the HDFC bank.

4.1 Sample Size

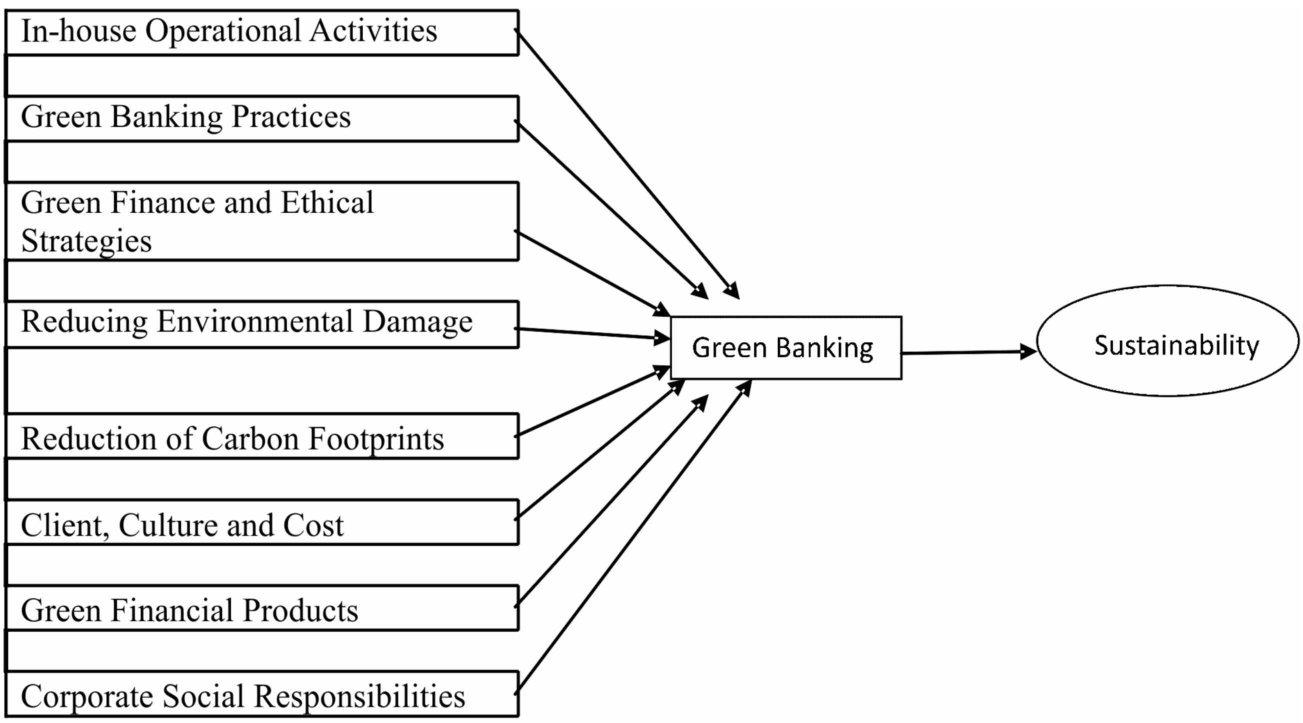
For conducting survey, a sample size of 150 customers of the HDFC Bank in Delhi was taken out of which 110 respondents' responses were received.

4.2 Technique of the analysis of the data

The collected data has been processed and analyzed by applying the SPSS (Statistical Package for Social Sciences) Version-16. Descriptive analysis techniques like average, percentage, frequencies, etc. were performed on the data for getting an overall structure of the sample. Tabulation and creation of pictorial presentation has been done wherever found appropriate.

4.3 Conceptual Framework of the Study

Green banking promotes environmentally friendly practices and reduces carbon footprints from banking activities. This comes in many forms. For conducting research, it is very important to show the relationship between variables. This section shows the theoretical framework between variables.



Green Banking Products

Green Credit Cards

Many banks are now launching a green credit card which permits cardholders to earn points or rewards on purchase of expensive items which can later be redeemed and contributed to eco-friendly charitable organizations.

4.4 Green Mortgage and Loans

Green mortgage and loans are officially called Energy Efficient Mortgages (EEMS) or Energy Improvement Mortgages (EIMs). It provides bigger loan than the normally permitted one for the housing projects which meets the energy efficiency standards. It is based on the principle that energy efficient house results in lowering utility bills which ultimately leads to higher income authorizing a perspective buyer to buy a more luxurious house.

4.5 Green Reward Checking Accounts
Reward checking accounts offer a reward interest rate only when a client fulfils a set of requirements every month. The customers need to get a debit card from the bank and need to make minimum number of debit card purchases per month, direct deposit or electronic banking. Interest would not be paid if customer does not meet bank's requirements (interest rate may fluctuate as these are liquid accounts). Generally, no monthly fee is charged for such accounts, the benefit of such accounts being that these accounts are insured and have higher yield.

4.6 Carbon Credit Business
Indian banks are encouraged to implement carbon credit business like London where this business is of around 30 billion euro.

4.7 Green Financial Products
Financing the eco-friendly housing projects, providing green loans at lower rates of interest, providing concession to eco-friendly vehicles, etc. are some of the green financial products.

4.8 Paperless Banking
It is online banking transactions through banks official website i.e. paying bills, checking accounts, money transfer, e-statement, ATMs, E-wallets, etc. Almost all private and foreign banks are changing to paperless transactions, but public banks are still lagging behind in this respect.

4.9 Energy Consciousness
Banks have now become very energy conscious as they have installed energy efficient technologies like CFLs, energy efficient air conditioners and are avoiding misuse of such technologies. They are also donating energy efficient electronics to the schools and hospitals.

4.10 Mass Transportation
Nowadays, banks are providing transportation to its staff which ultimately helps in environment protection through less emission of pollution and staff members are also going for car pools.

4.11 Green Building
A building which makes use of less water, energy, generates less waste and conserves natural resources as compared to other buildings is called a green building. Nowadays, banks are following green building guidelines recommended by the INDIAN GREEN BUILDING COUNCIL (IGBC) for their offices and ATMs.

Social Responsibility Services: Indian banks also participate in various social responsibility services like maintenance of parks, tree plantation camps and pollution check-up camps, etc.

Green Banking Initiatives of the HDFC Bank

4.12 Environment Sustainability
HDFC banks believe in environment sustainability as a core part of its business activities. It regards environmental conservation and climate change mitigation as an important component of a sustainable business.

4.13 PaperlessBanking
The ATMs at the HDFC Bank have gone paperless, enabling reduction of its carbon footprint. Furthermore, the bank has given fillip to these efforts by ensuring multichannel delivery through Net Banking, and Mobile Banking. This reduces carbon emission from operations as well as by reducing customer travel requirements.
Solar ATMs

To control its environmental footprint the bank has introduced solar ATMs. These use rechargeable Lithium Ion batteries which use solar energy for their functioning thereby reducing consumption of the conventional energy.

4.14 Energy Management

• Bank has initiated "Energy Management Module" in 100 select branches across 4 metro cities to collect data through sensors to monitor real time usage and based on these data, electricity wastage can be controlled. This system also monitors diesel consumption of DG sets.

v The bank is also promoting energy conservation by replacing conventional lighting with CFL, switching off all the lights after 11 pm at all the branches and establishing green data centres.

4.15 Sustainability Reporting

HDFC Bank has been reporting since 2011 as it is a signatory to the Carbon Disclosure Project (CDP). The bank has also completed on the Carbon Disclosure Project Leadership (CDLI) India in FY 2014-15.

sustainable plus gold 2015

HDFC Bank was rated with "Sustainable Plus Gold Label" (SPGL) for the financial year (FY) 2015, based on the ESG analysis conducted on public information, scans and information request. Sustainable Plus (SP) is the world's first and only corporate sustainable label. It is based on the comprehensive Environmental, Social and Governance (ESG) analysis of companies which helps them to measure performance as well as identify risks that challenge sustainability of their business. Each year, Commissioner of The Environment and Sustainable Development (CESD) undertakes ESG analysis of the top 100 companies across 20 sectors and provides Sustainable Plus label.

4.16 Parivartan (GIVING BACK IN MEANINGFUL WAYS)

HDFC Bank's new initiative, 'Parivartan', which means change, motivates small industries and businesses to include social and environmental norms in their operations.

HDFC Bank as Leader in the Field of Green Banking Practices in India:

No of Branches	4715
ATMs (Across 2,657 cities and towns)	12260
Installation of POS terminals	4.30 Lacs
Issuance of Debit Cards	235.7 Lacs
Issuance of Credit Cards	85.4 Lacs
Permanent Employees (As on 31st March 2018)	88253
Bank of the year & best digital banking initiative award 2016	Klynveld Peat Marwick Goerdeler(KPMG)study of India's Best Banks

Source: www.wikipedia.com

Table 1: Bank's Statistical Data 2018

5. Results and Discussion

The data is analyzed using descriptive analysis technique through Statistical Package for Social Science Research (SPSS), taking the HDFC bank customers as respondents.The result obtained from the survey is shown in the Table 2.

Table 2: Respondents heard about Green Banking Practices

Options **(Paperless Banking, Green products, Green Finance, Internet Banking, Mobile Banking, Power saving equipments etc.)**	**Heardabout**	**Percentage**
Yes	43	39 %
No	67	61 %
Total	**110**	**100**

Source: Primary Data (Survey)

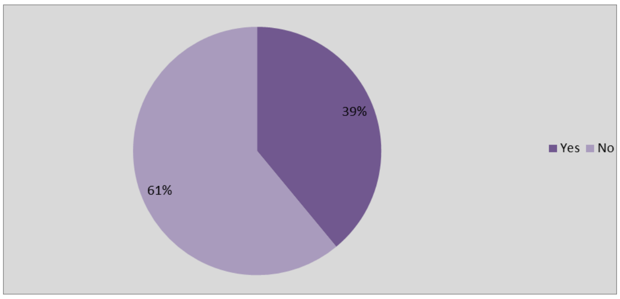


Figure 1: Respondents heard about Green Banking Practices

Green Banking Practices :
Paperless Banking, Green products, Green Finance, Internet Banking, Mobile Banking , Power saving **equipments etc.**

Source: Primary Data (Survey)

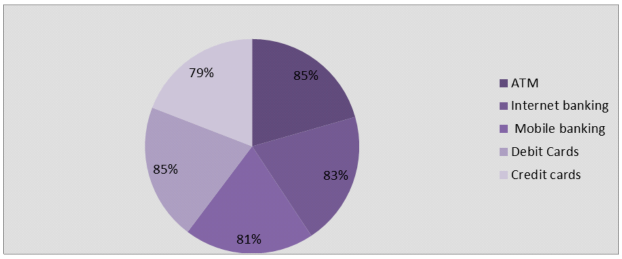
It was found from the response of the survey that 61 per cent of the respondents have not heard about the green banking practices of the bank. Therefore, this study shows that people are not fully aware of green banking strategies.

Table 3 Level of adoption various E-Banking

Services	Respondents	Percentage
ATM	94	85%
Internet banking	91	83%
Mobile banking	89	81%
Debit Cards	94	85%
Credit cards	87	79%
Total		100

services from their bank
Source: Primary Data (Survey)

Figure 2: Level of adoption of various E-



Banking services from their bank
Source: Primary Data (Survey)

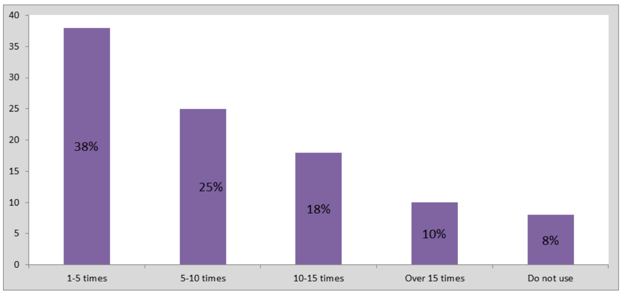
The study also significantly found from the survey of HDFC bank customers that 85 per cent respondents are using ATM services while 83 per cent respondents choose Internet banking, 81 per cent respondent's use Mobile Banking services, 85 per cent respondents opt for Debit Cards and 79 per cent opt for Credit Cards. Therefore, this study depicts that respondents are using basic core virtual facilities.

Table 4: Frequency to use the ATM per month by the respondents

No.oftimesuseATMpermonth	Respondents	Percentage (round off)	CumulativePercentage
1-5 times	42	38%	38%
5-10 times	28	25%	63%
10-15 times	20	18%	81%
Over 15 times	11	10%	92%
Do not use	9	8%	100%
Total	**110**	**100**	

Source: Primary Data (Survey)

Figure 3: Frequency to use the ATM per month by the respondents



Source: Primary Data (Survey)

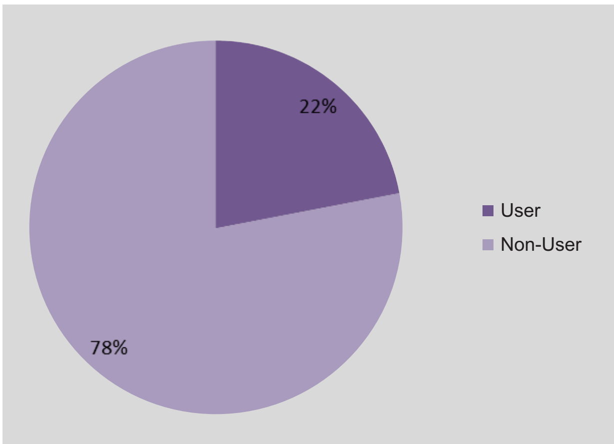
With reference to table No 4, 92 per cent respondents use ATM. Out of them 38 per cent respondents visit ATM maximum five times permonth.63 percent respondents use ATM more than 5 times in a month while 8 per cent respondents do not use ATM.

Table5:User of Internet Banking

UserofInternetBanking	Respondents	Percentage
User	24	22%
Non-User	86	78%
Total	**110**	

Source: Primary Data (Survey)

Figure 4: User of Internet Banking



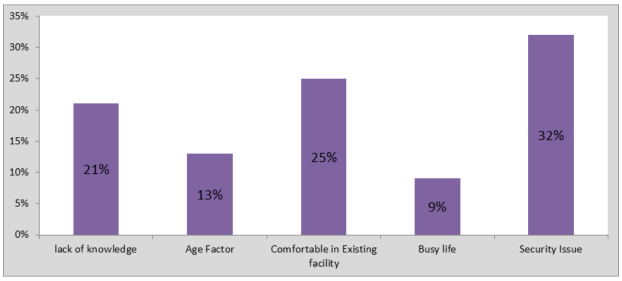
Out of the total 110 respondents, 78 per cent respodents do not use internet banking whereas 22 per cent respondents use it.

Table 6: Causes for not using Internet Banking

Causes	No.ofRespondents	Percentage	CumulativePercentage
lack of knowledge	23	21%	21%
Age Factor (Senior and Super Senior citizens)	14	13%	34%
Comfortable in Existing facility	28	25%	59%
Busy life	10	9%	68%
Security Issue	35	32%	100%
Total	**110**		

Source: Primary Data (Survey)

Figure 5: Causes for not using Internet Banking



Source: Primary Data (Survey)

The research clearly shows that only 22 per cent of the total respondents are using internet banking. Out of the remaining 78 per cent respondents who are not user of online banking, while analyzing causes of not using internet banking, maximum of 32 per cent of them have security issues on the online banking. Notable thing is that 25 per cent respondents are satisfied with the existing traditional banking and ATM because they are very much comfortable with what they are doing for so many years. On the other side, 21per cent respondents are suffering due to lack of knowledge and 9 per cent respondents do not have time to use internet banking facility.

Table7:User of Mobile Banking

User of Mobile Banking	Respondents	Percentage
User	22	20%
Non-user	88	80%
Total	**110**	**100%**

Source: Primary Data (Survey)

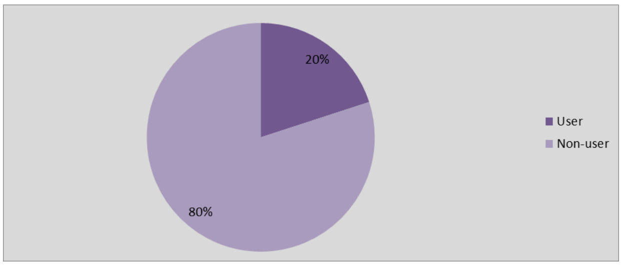


Figure 6: User of Mobile Banking
Source: Primary Data (Survey)

Only 20% of the total respondents use mobile banking while 80% of the total respondents are non-user of mobile banking. The people don't use mobile banking because of many reasons like lack of education, awareness, unavailability of smart phones, security threats, transaction cost etc.

	Green Banking Practices are environment friendly	
LevelofAcceptance	**Respondents**	**Percentage**
Strongly agree	54	49%
Agree	31	28%
No idea	15	14%
Disagree	4	4%
Strongly disagree	6	5%
Total	**110**	**100**

Table 8: Level of acceptance of the respondents regarding the effect of green banking practices on environment
Source: Primary Data (Survey)

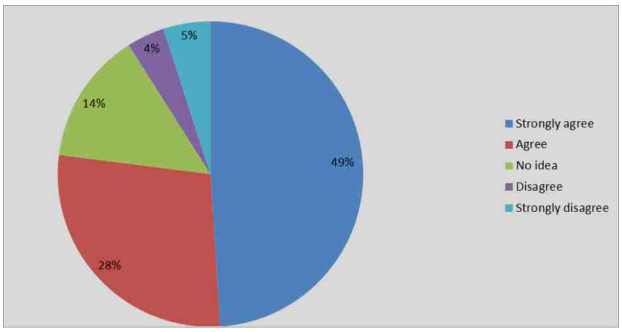


Figure 7: Level of acceptance of the respondents regarding the effect of green banking practices on Environment
Source: Primary Data (Survey)

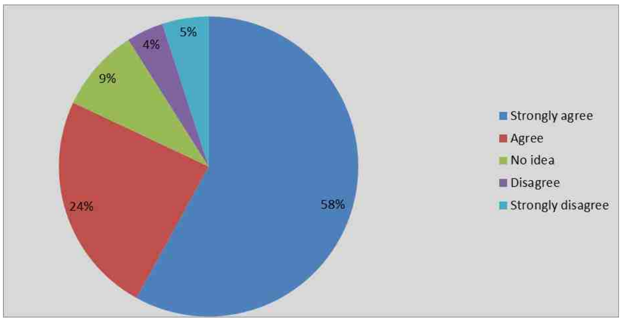
The respondents were asked about their opinion regarding the impacts of various green banking strategies on the environment. The study shows that 49% of the respondents feel that by adopting various green banking practices, they can contribute some sort of help towards the environment by saving paper as well as energy. Obviously, they are agreeing that green banking practices are environment friendly. However, 14 percent of the respondents have no idea about this and only 4 percent respondents disagreed with this statement.

Table 9: Green Banking practices save time and cost

	Green Banking Practices Save time and cost	
Opinion	**Respondents**	**Percentage**
Strongly agree	64	58%
Agree	26	24%
No idea	10	9%
Disagree	4	4%
Strongly disagree	6	5%
Total	**110**	**100**

Source: Primary Data (Survey)

Figure 8: Green banking practices save time and cost



Source: Primary Data (Survey)

The respondents were also asked, whether the adoption of various green strategies can save and cost for the customers point of view. In this regard, 58 percent respondents agree that adopting various green banking practices instead of going to the bank physically can save time and cost, and hence, they are beneficial to the customers as well for the banks also. However, 0.9 percent respondents do not have any idea about these practices and only 0.4 percent respondents disagreed in this regard.

6. Conclusion and Recommendations

This paper concludes that green banking clearly has direct and positive impact on the environment, because doing these practices customers can save energy, fuel, paper, water, time as well as money. This finding was similar to the findings of previous researchers like Malliga and Revathy (2016), Jatana and Jain (2018).The common people are yet to come forward to follow these practices due to lack of awareness. Therefore, banks must literate their customers about the usage of green banking practices and their benefits. We should go green in all aspects of life which will bring a significant difference in growth with sustainable features which is the need of today. This study concludes with the statement that "green banking practices are not only feasible; they are now becoming essential".An attempt has been made to contribute to existing theory of green banking and lay down the foundation for future researches.

7. Recommendations

- Mass education programs on Green Banking must be organized by the banks as awareness cum promotional program. The green banking has to be included as in the curriculum or an activity from the school and college level studies.
- In the banks, a separate cell must be formed to guide the customers to carry out the transactions in an eco-friendly manner.
- Frequent meetings with customers must be planned in order to know their suggestions and satisfaction level. A practice of rewarding the customer must be initiated; this would encourage the customer to participate in the program.
- There is lack of awareness about Green Banking among most of the people and hence the bank should create awareness to know the benefits of green banking and to use internet banking and mobile banking as majority of the customers do not know to use it.
- Indian banks are far behind their counterparts from developed countries

which is a clear indication that Indian bankers and consumers are less aware of the sustainable green banking initiatives and the corresponding benefits which can be derived from this.

- Indian banks should adopt green banking as a business model embedding climate change and green initiatives in main streaming of banking without much further delay.
- The adoption of reporting CSR practices though quite slow in India; it would definitely get a great pace in the near future.
- Role of the regulatory authorities should be made more stringent especially RBI, pollution control board, etc. so that they can give their best role in achieving the sustainable development.
- The banks should play a pro-active role to take environmental and ecological aspects as a part of their lending principle which would force industries for mandated investment for environmental management, use of appropriate technologies and management systems else there funding will be denied.

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Bhushan Steel Limited : Leverage a Double Edge Sword

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Abstract: *The Non Performing Assets (NPAs) of Banks is a matter of great concern. The gross bad debt of the Indian banking system was Rs. 7.11 trillion as on March 2016. The Bhushan Steel Ltd was in the first list of 12 Loan defaulters as on 31st March 2016 and had an outstanding loan of Rs. 44478 crore. SBI filed a claim against Bhushan Steel Limited under Insolvency and bankruptcy Code, 2016 to recover Rs. 4295 crore and $490 million foreign currency loan. So to know how the Bhushan Steel Ltd gone into bankruptcy proceedings the objective of the study is to analyzing the capital Structure, debt Structure and the financial position of the Bhushan Steel Ltd. Data for the study is taken from capital line data base from period 1992 to 2017 and from the article/research published in the websites. The objectives of the study have been achieved with the ratio analysis. The study finds that the three fourths of the Odisha plant of Rs. 19400 crore was funded through debt to increased steel production. The problem began to start during 2010-11 as its debt repayment outstanding become Rs. 1118 crore. The cash from operating activities was only Rs. 994 crore and the company could not be able to pay its debt obligations. This position become worst during 2013-14 as it repaid debt obligation of Rs. 3384 crores. Beside debt repayment the interest burden on the company reached up to Rs. 1663 crore with earning of Rs. 59 crore. The company could not come out from the debt trap. The profit and cash flow from operations was not enough to repay the loan with interest back to the loan providers. During this course of action the offering of bribe to the CMD of syndicate bank put the company in the back foot. In the case of Bhushan Steel Ltd there was absence of good governance that caused the company in to the insolvency process.*

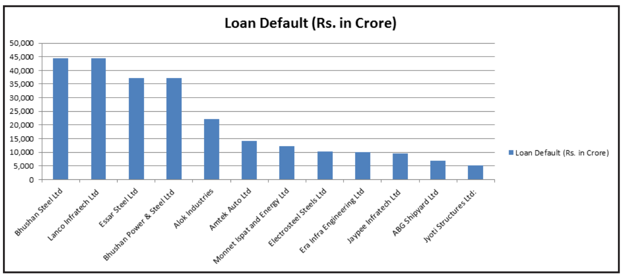
Introduction

The Non Performing Assets (NPAs) of Banks is a matter of great concern. The gross bad debt of the Indian banking system was Rs. 7.11 trillion as on March 2016. It has great impact in the Indian banking system. It is term as NPA crisis. On 13th June 2016 RBI shortlisted those firms that has at least 25% NPAs of the banking system about Rs. 2.5 trillion claims filed by the banks. The first list of 12 Loan defaulters is given in Table 1

S.No.	Company	Loan Default (Rs. in Crore)
1	Bhushan Steel Ltd	44,478
2	Lanco Infratech Ltd	44,364
3	Essar Steel Ltd	37,284
4	Bhushan Power & Steel Ltd	37,248
5	Alok Industries	22,075
6	Amtek Auto Ltd	14,074
7	Monnet Ispat and Energy Ltd	12,115
8	Electrosteel Steels Ltd	10,273
9	Era Infra Engineering Ltd	10,065
10	Jaypee Infratech Ltd	9,635
11	ABG Shipyard Ltd	6,953
12	Jyoti Structures Ltd	5,165

Table1: Loan Defaulters

Figure 1: Loan Defaulters



The Bhushan Steel Ltd as on 31st March 2016 had an outstanding loan of Rs. 44478 crore. During 2017 it had a net loss of Rs. 3501. The company's Vice chairman/ president Neeraj Singal Chairman and managing director was arrested by CBI for a bribe case of Rs. 50 lakhs. This bribe was offered to the Chairman and Managing director of Syndicate Bank to increase the loan credit limit. State Bank of India and Punjab national bank also had given loan to the company. These banks declared the loan amount as NPA. SBI filed a claim against Bhushan Steel Limited under Insolvency and bankruptcy Code, 2016 to recover Rs. 4295 crore and $490 million foreign currency loan. The interim resolution professional verified Rs. 44498 crore of committee of creditors of 49 lenders. Tata steel Ltd made a highest bid of Rs. 35200 to pay to the lenders beside 12.27% stake in the company. They also agreed to pay the outstanding salary of 353 employees. To know how the Bhushan Steel Ltd gone into bankruptcy proceedings the objective of this study are as follows:-

1. To analyze the Capital Structure of the Bhushan Steel Ltd.
2. To analyze the Debt Structure of the Bhushan Steel Ltd.
3. To analyze the financial position of the Bhushan Steel Ltd.

This study is divided into five sections including the present one. Second sections deals with the Bhushan Steel Ltd. The third section discusses the data and research methodology. The fourth section contains the analysis and interpretation of the results. The last fifth section deals with the summary and conclusions of the study.

1. Bhushan Steel Limited

Bhushan Steel is the part of United Bhushan Group of Brij Bhushan Singal. He had set up a rolling mill at Chandigarh under the Bhushan Power and Steel in 1980. The first year turnover was about Rs. one crore. Sanjay Bhushan and Neeraj Bhushan is the two son of Brij Bhushan Singal. They had taken the management of Jawahar metal Industries in 1987 and set up a new plant to manufacture wide width cold rolled steel strips with integrated facilities. This company was renamed Bhushan Steel & Strips later named Bhushan Steel. It got listed in 1993. They had installed Hitachi steel mills at Sahibabad factory. This factory output was of very good quality. At that time the company was the first to cater to the high grade automobile sector. Now they decided to set up a new galvanizing line adjacent to the existing facility by set up an integrated steel plant at Odisha. From 2002 to 2011 disputes between BrijBhushan along with Neeraj with Sanjay aroused. Sanjay Bhushan removed Brij Bhushan from the board of Bhushan Power & Steel in 2005. In 2011, Sanjay Bhushan got ownership of Bhushan Power and Steel and Brij Bhushan along with Neeraj Bhushan got the charge of Bhushan Steel. Bhushan Steel has a capacity of 2.5 million tones and can commission another 5 million tonne. In 2017 one of its plants in Odisha blast furnaces and the plant blew up and about 19 persons injured with the death of one person.

1.1 Golden Period

The company was doing well in spite of rising loan. It increased its steel production capacity. The three fourths of the Odisha plant of Rs. 19400 crore was funded through debt. It is getting enough cash from operations to pay its interest liability along with the repayment of the loan amount. From 2006 to 2010 its cash from operation was around Rs. 400 crore each year while the interest and loan repayment were between Rs. 55 crore to Rs. 316 crore a year. During these golden periods the company's net profit growth was around 53%.

1.2 Struggling Period

The problem began to start during 2010-11 as its debt repayment outstanding become Rs. 1118 crore. It may be due to the repayment due of Odisha phase I and Odisha phase II loan taken. The cash from operating activities was only Rs. 994 crore and the company could not be able to pay its debt obligations. This position become worst during 2013-14 as it repaid debt obligation of Rs. 3384 crores. Beside debt repayment the interest burden on the company reached up to Rs. 1663 crore and the company could earn a profit of Rs. 59 crore. The company could not come out from the debt trap. The profit and cash flow from operations was not enough to repay the loan with interest back to the loan providers. During this course of action the offering of bribe to the CMD of syndicate bank put the company in the back foot.

1.3 Absence of Corporate Governance

The falling the market price of the share of Bhushan Steel Ltd by more than the 55%. This fall is due to the absence of corporate governance in the Bhushan Steel Ltd. The company was in debt trap but never defaulted on payments. Corporate governance practice is important than the numbers in the financial statements of a company. It is not necessary that a company is in good position as predicted by the financial statements such as balance sheet, profit and loss account and cash flow statement of that company it may have lack of corporate governance that may take the company into a distress position. It is the responsibility of the board of directors to protect the interest of the shareholders including those who have a little stake in the company. Good corporate governance in the company may infused faith and trusts in the soundness of the company. In the case of Bhushan Steel Ltd there was absence of good governance that caused the company in to the insolvency process.

2. Data and Research Methodology

Data for the study is taken from capital line data base from period 1992 to 2017 and from the article/research published in the websites. The objectives of the study have been achieved with the ratio analysis of the collected data.

3. Analysis and Interpretation

This sections deals with analysis of the data and the interpretation on the basis of the results. Table 2 shows Capital Structure of Bhushan Steel Ltd and figure 2 is its graphical view.

Table 2: Capital Structure of Bhushan Steel Ltd

	Equity	Debt	Total	Equity (%)	Debt(%)
1992	20.27	34.12	54.39	0.37	0.63
1993	28.26	54.05	82.31	0.34	0.66
1994	54.39	66.71	121.10	0.45	0.55
1995	85.15	148.72	233.87	0.36	0.64
1996	251.68	153.69	405.37	0.62	0.38
1997	338.89	263.29	602.18	0.56	0.44
1998	369.26	435.40	804.66	0.46	0.54
1999	406.12	531.61	937.73	0.43	0.57
2000	447.05	561.22	1008.27	0.44	0.56
2001	488.92	613.76	1102.68	0.44	0.56
2000	447.05	561.22	1008.27	0.44	0.56
2001	488.92	613.76	1102.68	0.44	0.56
2002	457.12	594.53	1051.65	0.43	0.57
2003	502.95	777.82	1280.77	0.39	0.61
2004	588.68	930.61	1519.29	0.39	0.61
2005	730.59	1317.47	2048.06	0.36	0.64
2006	889.67	2036.18	2925.85	0.30	0.70
2007	1214.50	3241.98	4456.48	0.27	0.73
2008	1625.32	5718.14	7343.46	0.22	0.78
2009	2034.20	8066.25	10100.45	0.20	0.80
2010	3991.67	11404.11	15395.78	0.26	0.74
2011	5896.41	16561.07	22457.48	0.26	0.74
2012	7779.37	21500.97	29280.34	0.27	0.73
2013	9048.10	28523.39	37571.49	0.24	0.76
2014	9153.12	35224.14	44377.26	0.21	0.79
2015	7880.56	39078.66	46959.22	0.17	0.83
2016	4724.82	44477.93	49202.75	0.10	0.90
2017	-1482.90	48152.00	46669.1	-0.0317748	1.031775

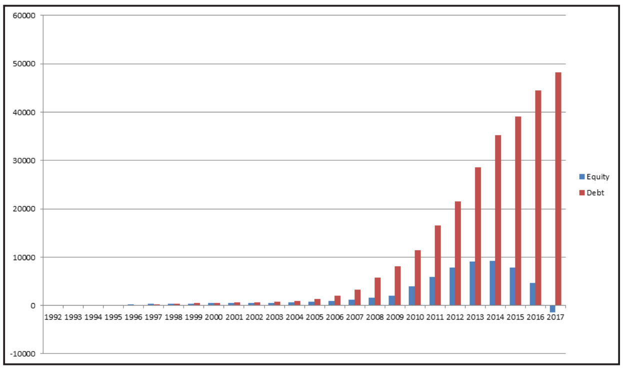


Figure 2: Capital Structure of Bhushan Steel Ltd

Table 2 shows the capital structure analysis of the Bhushan Steel analyze the capital structure analysis of Bhushan Steel Ltd (BSL) from 1992 to 2017. In 1992 share of equity was 37% and debt was 63% in the Capital Structure. In 1994 equity shares becomes 45% and debt decreased to 55%. In 1996 the equity becomes 62% and debt goes down to 38%. In 1997 equity becomes 56% and debt 44 % of the Capital Structure. Thereafter the share of equity decreased and the share of debt inclining with alarm rate. In 2016 equity share was 10% only and share of debt was 90%. In 2017 equity becomes negative and share of debt in the capital structure become 103%. Here the debt proved a double edged sword in the Bhushan Steel Ltd case.

Table 3 : Sources of Debt Funds

Year	STD	LTD	Debt
2008	7.13	5711.01	5718.00
2009	24.90	8041.35	8066.00
2010	16.15	11388.00	11404.00
2011	3992.80	12568.30	16561.00
2012	1456.00	20045.00	21501.00
2013	817.47	27705.90	28523.00
2014	3556.30	31667.90	35224.00
2015	651.08	38427.60	39079.00
2016	5683.60	42634.60	48318.00
2017	3086.20	45065.70	48152.00

Figure 3: Source of Debt

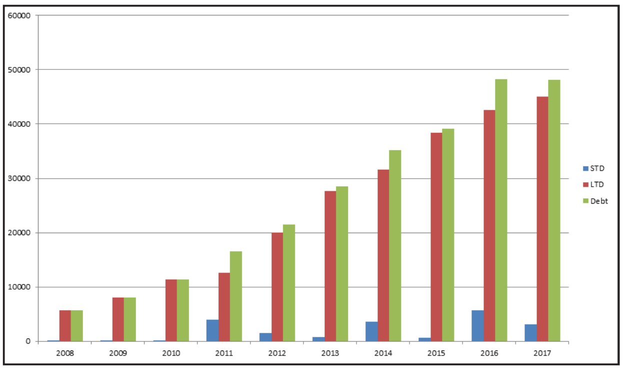


Table 3 shows the share of short term debt and long term debt in the total debt.

Table 4: Short Term Debt (STD)

Year	[Foreign Currency Loans (Including Secured Loans)	[Repayable / Redeemable-1 yr (Incl Secured Loans)	[Short Term Borrowings-Unsecured	[Current Maturities of long term Borrowings-Unsecured	Other STD Unsecured
2008	2211.63	95.43	0.00	0.00	2314.19
2009	2900.58	150.34	0.00	0.00	3075.82
2010	3095.41	315.73	0.00	0.00	3427.29
2011	5343.19	0.00	2861.47	1117.58	9336.01
2012	9052.68	0.00	1444.48	0.00	10508.68
2013	9381.35	0.00	808.99	0.00	8580.97
2014	9814.10	0.00	138.20	3384.97	13370.35
2015	8384.37	0.00	624.03	549.39	8486.06
2016	8908.15	0.00	0.00	1083.80	14591.71
2017	8521.25	0.00	0.00	1889.64	11607.41

Table 4 shows that Foreign Currency Loans, Redeemable Securities, Short Term Borrowings, Current maturity of Long Term Borrowings and other short term borrowings were the source of Short Term Debt for the Bhushan Steel Ltd from 2008 to 2017.

Table 5 shows that Non Convertible Debentures, Term Loans from Institutions, Term Loans from Banks, Deferred Credit, Bridge Loans, Cash Credit, other LTD

Table 5: Long Term Debt (LTD)

Year	[Non Convertible Debentures	[Term Loans Institutions	[Term Loans Banks	[Deferred Credit / Hire Purchase	[Bridge Loans	[Cash Credit /Packing Credit / Bills Discounted	Others LTD Secured	LTD Secured	[Unsecured Loans	[Loans from Banks	Others LTD-Unsecured
2008	260.00	41.91	2555.60	0.49	0.00	475.12	0.00	3333.12	2385.02	2277.89	100.00
2009	260.00	30.52	4375.91	0.40	0.00	469.49	0.00	5136.32	2929.93	2905.03	0.00
2010	260.00	169.14	7363.77	0.04	0.00	534.01	0.00	8326.96	3077.15	3061.00	0.00
2011	715.00	129.43	8788.82	0.47	0.00	0.00	1612.68	11246.40	5314.67	1321.85	0.00
2012	995.00	94.71	14556.50	0.27	0.00	0.00	2993.31	18639.77	2861.20	1405.20	0.00
2013	2005.00	60.00	18988.00	0.11	0.00	0.00	6050.18	27103.26	1420.13	602.66	0.00
2014	2030.00	55.43	26829.30	0.00	0.00	0.00	2749.90	31664.67	3559.47	3.22	0.00
2015	2030.00	0.00	29081.50	0.00	0.00	0.00	7313.47	38424.95	653.71	2.63	0.00
2016	0.00	606.74	32259.80	0.00	0.00	0.00	9768.10	42634.60	5683.56	0.00	0.00
2017	0.00	622.60	32397.10	0.00	0.00	0.00	12046.05	45065.71	3086.16	0.00	0.00

Secured, Unsecured Loans, Loans from banks & other LTD Unsecured, Term Loans from Banks and other LTD Secured Loans were the Long Term Source of finance of the Bhushan Steel Ltd.

Table 6: Ratio Analysis of Bhushan Steel Ltd

	Debt-Equity	Current Ratio	Inventory Turnover	Debtors Turnover	Interest Cover	Net Worth	Sales	PAT	M Cap	**Price**
2008	3.16	1.24	4.93	8.03	4.93	33.83	11.14	35.26	29.04	62.07
2009	3.77	1.14	4.57	8.72	3.22	25.16	16.16	-0.57	-39.91	286.42
2010	3.23	1.31	3.74	8.83	6.48	94.42	10.73	100.76	321.70	467.97
2011	2.83	0.79	2.95	12.45	4.08	47.35	26.82	18.83	30.34	306.20
2012	2.78	0.66	3.33	12.67	2.30	32.01	42.45	1.83	-5.08	473.48
2013	2.97	0.95	2.66	6.62	1.94	16.29	9.33	-11.20	17.55	480.55
2014	3.50	0.87	1.76	4.41	1.06	1.15	-10.17	-93.18	-1.02	88.40
2015	4.36	0.82	1.70	4.83	0.50	-14.36	10.70	-2123.61	-85.46	44.10
2016	8.62	0.48	2.79	7.33	0.09	-70.86	11.84	-165.58	-45.52	40.50
2017	9.51	0.21	5.73	11.10	0.24	-155.08	14.50	-5.14	60.58	70.00

Figure 6: Debt Equity Ratio

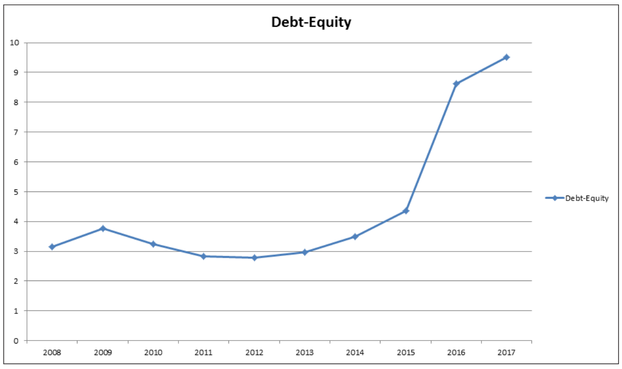


Figure 7: Current Ratio

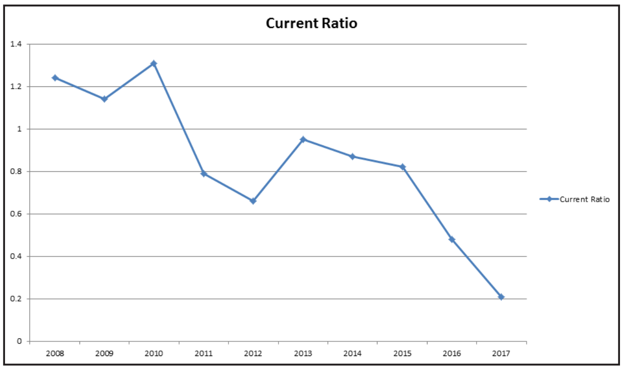


Figure 8: Inventory Turnover Ration

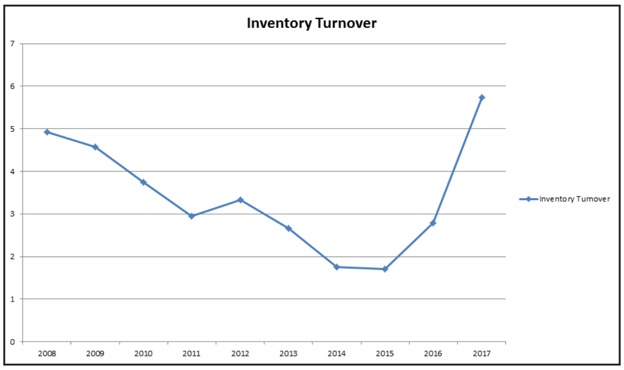


Figure 9: Debtor Turnover Ratio

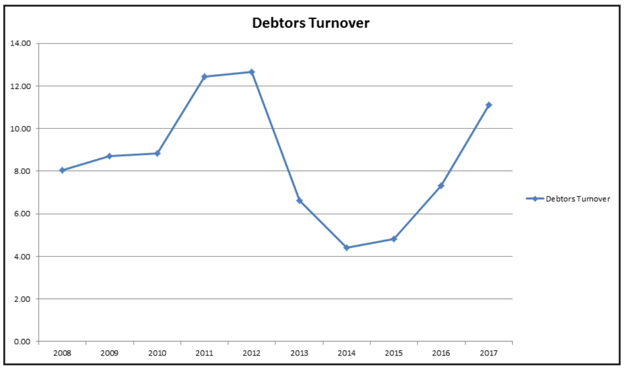


Figure 10: Interest Coverage Ratio

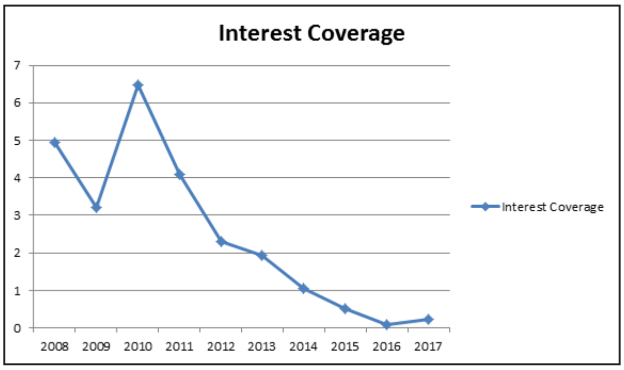


Figure 11: Net Worth

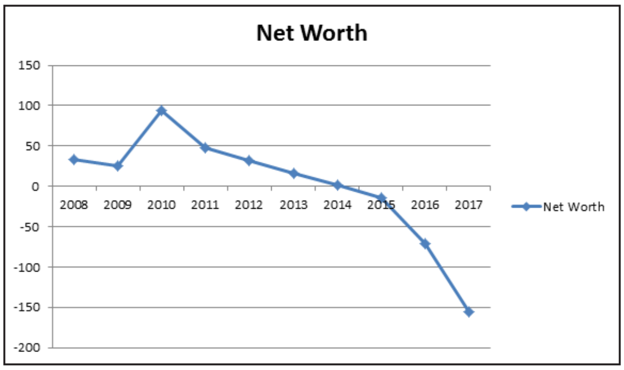


Figure 12: Sales

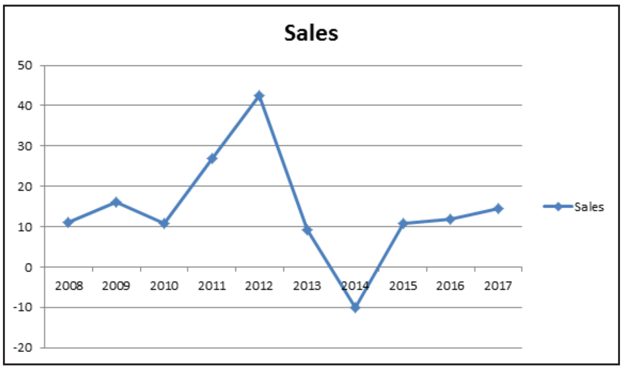


Figure 13: Profit after Tax (PAT)

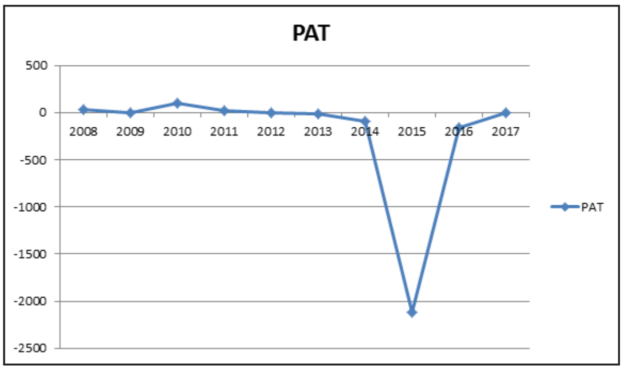


Figure 14: M Cap

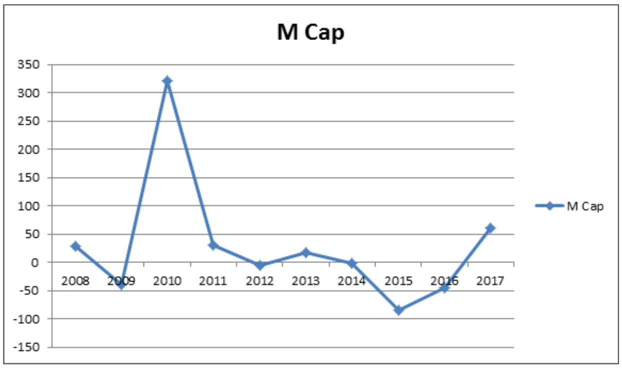


Figure 15: Price

Table 6 provides data about Debt-Equity Ratio (D/E Ratio), Current ratio, interest coverage ratio, Inventory Turnover Ratio, Debtor Turnover Ratio, Net Worth, Sales, Profit After tax (PAT), M Cap and Market Price of the Share of the Bhushan Steel Ltd from 2008 to 2017. In 2008 the Debt Equity Ratio was 3.16 and it decreased to 2.78 in 2012. Thereafter since 2013 it starts rising and reached at 9.51 in 2017. Current Ratio shows that the liquidity position was declining at an alarming rate. Inventory Turnover ratio shows a declining trend since 2008 and rise in 2017. Debtor Turnover Ratio was 8.03 in 2008 and it increased up to 12.67 in 2012. Thereafter it started declining and inclined in 2016. It was 11.10 in 2017. We observe that Interest Coverage Ratio shows a declining trend since 2008. In 2008 Net Worth shows 33.38 and then it decreased to 25.16 in 2009. Thereafter it starts rising up to 94.42 till 2012. Thereafter it shows a continuous decrease and in 2015 it becomes negative. The sales in 2012 show 42.45. Thereafter it goes down. In 2014 it becomes negative (-10.17) then slightly start increasing not sufficient to survive the company. It starts loss from 2013(11.20) maximum loss (-2123.61) shows in 2015. M Cap shows high value (321.20) in 2010 and it become negative in 2013. We see that Market Price of the share in 2008 was 62.07 then it becomes 286.42 in 2009. The maximum price was 480.15 in 2013 then the price starts declining till 2016 and 70 were in 2017.

In short, good corporate governance in the company may infused faith and trusts in the soundness of the company. In the case of Bhushan Steel Ltd there was absence of good governance that caused the company to go in to the insolvency process.

1. Summary & Conclusions

The Non Performing Assets (NPAs) of Banks is a matter of great concern. The gross bad debt of the Indian banking system was Rs. 7.11 trillion as on March 2016. The Bhushan Steel Ltd was in the first list of 12 Loan defaulters as on 31st March 2016 had an outstanding loan of Rs. 44478 crore. SBI filed a claim against Bhushan Steel Limited under Insolvency and bankruptcy Code, 2016 to recover Rs. 4295 crore and $490 million foreign currency loan. So to know how the Bhushan Steel Ltd gone into bankruptcy proceedings the objective of the study of analyzing the Capital Structure, Debt Structure and the financial position of the Bhushan Steel Ltd. Data for the study is taken from capital line data base from period 1992 to 2017 and from the article/research published in the websites. The objectives of the study have been achieved with the ratio analysis. The study finds that the three fourths of the Odisha plant of Rs. 19400 crore was funded through debt to increased steel production. It is getting enough cash from operations to pay its interest liability along with the repayment of the loan amount. From 2006 to 2010 its cash from operation was around Rs. 400 crore each year while the interest and loan repayment were between Rs. 55 crore to Rs. 316 crore a year. During these golden periods the company's net profit growth was around 53%. The problem began to start during 2010-11 as its debt repayment outstanding become Rs. 1118 crore. It may be due to the repayment due of Odisha phase I and Odisha phase II loan taken. The cash from operating activities was only Rs. 994 crore and the company could not be able to pay its debt obligations. This position become worst during 2013-14 as it repaid debt obligation of Rs. 3384 crores. Beside debt repayment the interest burden on the company reached up to Rs. 1663 crore and the company could earn a profit of Rs. 59 crore. The company could not come out from the debt trap. The profit and cash flow from operations was not enough to repay the loan with interest back to the loan providers. During this course of action the offering of bribe to the CMD of syndicate bank put the company in the back foot. The results show that in 1992 share of equity was 37% and debt was 63% in the Capital Structure. In 1994 equity shares becomes 45% and debt decreased to 55%. In 1996 the equity becomes 62% and debt goes down to 38%. In 1997 equity becomes 56% and debt 44 % of the Capital Structure. Thereafter equity share continuously declined and the share of debt inclining with alarm rate. In 2016 equity share was 10% only and share of debt was 90%. In 2017 equity becomes negative and share of debt in the capital structure become 103%. Here the debt proved a double edged sword in the Bhushan Steel Ltd case. In 2008 the Debt Equity Ratio was 3.16 and it decreased to 2.78 in 2012. Thereafter since 2013 it starts rising and reached at 9.51 in 2017. Current Ratio shows that the liquidity position was declining at an alarming rate. Inventory Turnover ratio shows a declining trend since 2008 and rise in 2017. Debtor Turnover Ratio was 8.03 in 2008 and it increased up to 12.67 in 2012. Thereafter it started declining and inclined in 2016. It was 11.10 in 2017. We observe that Interest Coverage Ratio shows a declining trend since 2008. In 2008 Net Worth shows 33.38 and then it decreased to 25.16 in 2009. Thereafter it starts rising up to 94.42 till 2012. Thereafter it shows a continue decrease and in 2015 it becomes negative. The sales in 2012 show 42.45. Thereafter it goes down. In 2014 it becomes negative (-10.17) then slightly start increasing not sufficient to survive the company. It starts loss from 2013(11.20) maximum loss (-2123.61) shows in 2015. M Cap shows high value (321.20) in 2010 and it become negative in 2013. We see that Market Price of the share in 2008 was 62.07 then it becomes 286.42 in 2009. The maximum price was 480.15 in 2013 then the price starts declining till 2016 and 70 were in 2017. Tata steel Ltd made a highest bid of Rs. 35200 to pay to the lenders beside 12.27% stake in the company. They also agreed to pay the outstanding salary of 353 employees. Good corporate governance in the company may infused faith and trusts in the soundness of the company. In the case of Bhushan Steel Ltd there was absence of good governance that caused the company in to the insolvency process.

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Role of Key Performance Indicators (KPI's) in Project Management

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Abstract: *A project has many moving parts and it is critical that you measure the timeliness, budget, Quality and effectiveness of the Project along the way. There is need to execute these projects effectively with a limited budget. There are Key Performance Indicators (KPIs) i.e Planned Value, Actual Cost, Earned Value, Cost variance, Scheduled variance, Scheduled Performance Index, Cost Performance Index, Return on Investment. Every Project Manager can't afford to miss.To frame actionable project Key Performance Indicators (KPIs) that help to improve your team's performance. The following list of frequently used project KPIs and think how you could apply these metrics to track your own team's performance.*

Key Words: *Key Performance Indicators: Budget: Planned Value: Cost variance*

1. PLANNED VALUE (PV) PROJECT KPI

This metric is also referred to as Budgeted Cost of Work Scheduled (BCWS).The planned value is the estimated cost for your project activities planned/scheduled as of reporting date. Compare the Planned Value with other project KPIs to see whether you're running ahead of schedule or have already spent a bigger slice of your budget than scheduled to date.

- PV can be calculated by these two formulas:
- Planned value = (the hours left scheduled on the project) X (project worker's hourly rate)
- Planned Value = (Planned % of tasks left to complete) X (project budget)

For example, if you have a one-year project with a total planned budget of 10 ,00,000, the Planned Value after 9 months (if you're on schedule, you've completed 75% of the project activities and you've got 25% to go) is 25% of 10,00,000 which makes 2,50,000. Meaning that the project planned value at this point of the project is 2, 50,000.

If you've actually spent more to date, it means that your Actual Cost has been higher than the Planned Value.

2. ACTUAL COST (AC) PROJECT KPI

The Actual Cost KPI is also referred to as Actual Cost of Work Performed (ACWP).It indicates how much money you have spent on a project as to date. There's no formula for calculating the project's actual cost, you just have to add up all the project-related expenses you've used to date.

A project budget is calculated considering all the hours planned for the project, so use the time spent on tasks to calculate the Actual Cost spent on salaries, resources etc.

3. EARNED VALUE (EV) PROJECT KPI

This KPI is also referred to as Budgeted Cost of Work Performed (BCWP).This project KPI shows the approved budget for all the performed project activities by a specified date. It shows how much-planned work you have actually accomplished and what the budget for these accomplishments is.When managing multiple projects, it's best to create multiple KPI dashboards. For example one for each extensive project, one that summarizes all projects' performance and a team dashboard to keep everyone updated.Now that we're done with the basics, let's move on to more complex project KPIs that give us a complete overview of the project and business performance and are a must-have on your project tracking dashboard.If you're still looking for a perfect tool for your project team, learn about the essential features of the best project management software.

4. RETURN ON INVESTMENT (ROI)

Project's ROI reflects on its profitability and shows whether the benefits of the project exceed its cost.Not all projects are destined to have a positive ROI in the first place. Sometimes, the ROI should be considered long-term as some projects take more time to grow profits.ROI metrics on the project KPI dashboard should be derived from measurable components like the project's Actual Cost and Earned Value.

5. COST VARIANCE (CV) (PLANNED BUDGET VS ACTUAL BUDGET)

Project's cost variance reflects the project expenses.It indicates whether the estimated cost of your project is below or above the planned baseline. To calculate the Cost Variance, compare the Planned Budget to Actual budget at a given time.When measuring the Cost Variance, you can easily notice whether you're beyond or above your approved budget.

6. COST PERFORMANCE INDEX (CPI)

This project KPI helps you approximate how much time you're behind or ahead of the approved project schedule. CPI is the ratio of the planned budget to what you've actually spent to accomplish these tasks.As The Cost Performance Index suggests the relative value of work done, it can be seen as the indicator of the project's cost efficiency.

7. COST OF MANAGING PROCESSES

Add this metric to your project dashboard to get an overview of time and resources spent on supervising and managing the project.If the cost of managing processes seems too high, it might indicate that your project manager's doing an inefficient job.On the other hand, if the management costs are too low, it means that your teamwork may be poorly organized. It's normal for the team to spend time on project meetings, making sure that everyone's on the same page.You can ease the project manager's workload by using automated invoicing and time billing software, saving hours every week.

8. PLANNED HOURS OF WORK VS ACTUAL SITUATION

Overseeing this project metric indicates how many working hours were planned for the project processes compared to the actual time spent. You can apply this metric to different time periods and compare multiple project phases. If the actual amount of hours spent highly exceeds the scheduled time, it's time to re-estimate the time scheduled for the project.To organize your projects and finish everything on time, consider using work scheduling and project planning software.

9. OVERDUE PROJECT TASKS / CROSSED DEADLINES

Add this metric to your project tracking dashboard to get an overview of how many project activities are overdue. This KPI is a calculated percentage of projects with crossed deadlines compared to all the completed project activities.If you have a high percentage of overdue tasks, it's time to think through the project schedule and bring in some new contributors.

10. SCHEDULE VARIANCE (SV)

Schedule Variance shows how much ahead or behind of planned budget (and scheduled work), your project is running.It can be calculated by subtracting the project's Planned Value of its Earned Value.In other words, you take the time and budget that you initially planned to spend up to date and subtract it from the actual budget spent to date. If the sum is negative, it means that you have managed to achieve more than planned and have a bigger budget left to spend on remaining tasks.

11. SCHEDULE PERFORMANCE INDEX (SPI)

This project management KPI will tell you whether you're ahead or behind the planned project schedule.It's similar to many previous KPIs, except that the value of this metric is always close to number one.To calculate Schedule Performance Index, divide the project's Earned Value (EV) with the Planned Value (PV). If this metric is less than one, it indicates that the project is potentially behind schedule. If the SPI is greater than one, it indicates that the project is running ahead of schedule.

• Schedule Performance Index = (Earned Value) / (Planned Value)

12. MISSED MILESTONES

Similar to the number of missed deadlines, this KPI is widely used in project dashboards. It indicates whether you've overestimated your capacities and are running behind schedule or you're doing just fine, never missing a milestone.It's okay to miss a couple of milestones during a long-term project process, but if it's becoming a rule instead of the exception, it may be a sign that you need to review the whole project process.

13. PERCENTAGE OF TASKS COMPLETED

To get a really quick overview of your project's performance, create a KPI indicating the percentage of completed tasks. Enter the planned time for each project activity so that the KPI won't reflect the number of various-size tasks but the time spent. You'll get more accurate reporting and understand what phase your project actually stands.

14. RESOURCE UTILIZATION

While the majority of previously listed project management KPIs indicates how your project currently performs, resource utilization enables a quick glance at your team's work.Resource utilization measures how the time of team members is used while working on the project.It implies how much time people are working on billable activities compared to the time spent on non-billable tasks.This metric is specifically important when working with multiple customers, for example, various agencies need to watch this KPI. You'll notice how many hours are spent on meetings and scheduling instead of actually working on the billable project activities.

15. PERCENTAGE OF PROJECTS COMPLETED ON TIME

If you're frequently handling multiple projects, this KPI is a must-have on your project management dashboard.This project KPI indicates the number of projects completed on time compared to crossed deadlines.If you're not able to keep this percentage over 80%, it might be time to hire some new team members or accept fewer projects from customers.

16. PERCENTAGE OF CANCELLED PROJECTS

Similarly to the previous project performance indicator, it's widely used by agencies that frequently take up new projects. But the number of cancelled projects also reflects on a company's capability to plan ahead. Foreseeing whether a project is going to be profitable and the team sufficiently qualified to achieve all the project goals.Perceive the percentage of cancelled projects as a reflection on the sustainability of your business decisions.Trying to take on fewer projects that are doomed to fail or simply cancelled because they're not imperative to your company's goals.

Management of Key Performance Indicators (KPIs)

To improve the performance of the project the management of KPIs is more important. The following lists show how to manage Key Performance Indicators (KPIs).

1. Cycle Time: The time needed to complete

Management of Key Performance Indicators (KPIs)

a certain task or activity. This is helpful for repeated tasks in a project.

2. On-Time Completion Percentage: Whether or not an assignment or task is completed by a given deadline.

3. Time Spent: The amount of time that is spent on the project by all team members—or, if you like, by each team member individually.

4. Number of Adjustments tothe Schedule: How many times your team has made adjustments to the completion date of the project as a whole.

5. FTE Days vs. Calendar Days: How much time your team is spending on a project by calendar days, hours, and/or full-time equivalent work days.

II. Budget KPIs

1. Budget Variance: How much the actual budget varies from the projected budget? To track this KPI, measure how close the baseline amount of expenses or revenue is to the expected value.

2. Budget Creation (Or Revision) Cycle Time: The time needed to formulate an organization's budget. This includes the total duration of research, planning, and coming to a final agreement.

3. Line Items in Budget: Line items helps owners and managers keep track of individual expenditures—and provide a more detailed way to see how the budget was spent.

4. Number of Budget Iterations: The number of budget versions produced before its final approval. A higher number of budget iterations means more time is being spent planning and finalizing a budget.

III. Quality KPIs

1. Customer Satisfaction/Loyalty: Whether or not someone is satisfied and would come back again. This can be measured effectively by a survey. This comes more into play when the project deals directly with a client or customer.

2. Number of Errors: How often things need to be done during the project. This is the number of times you have to do and rework something, which affects budget revisions and calendar revisions as well.

3. Customer Complaints: Keep in mind that the "customer" of a project could be someone internal—does someone from your organization complain because someone else isn't getting things done?

IV. Effectiveness KPIs

1. Number Of Project Milestones Completed On Time With Sign Off: There are different parts within a project—are they being completed in a timely manner? Additionally, were the milestones completed and approved by the owner or buyer?

2. Number of Returns: If you have a capital project that requires many parts, you may track the return rate of those parts; this helps you see if you did a good job planning or adjusting to the project during implementation.

3. Training/Research Needed For Project: You may track this in hours, number of courses, or something similar. If you need to do a lot of this, your project might get started later than you hope. Another way of looking at this is asking, "What percent of resources did you have at the beginning of the project that was qualified to immediately begin working on the project?"

17. CONCLUSION

There is Key Performance Indicators (KPIs) i.e. Planned Value, Actual Cost, Earned Value, Cost variance, Scheduled variance, Scheduled Performance Index, Cost Performance Index, Return on Investment. Every Project Manager can't afford to miss. Management of Key Performance Indicators is vital to any project.

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1.	Title of Publication	:	Anusandhan - NDIM's Journal of Business and Management Research
2.	Language of publication	:	English
3.	Periodicity of Publication	:	Bi-annual
4.	The issue of the Journal is for	:	Free distribution
5.	Publisher's Name	:	Mrs. Bindu Kumar (Chairperson) for and on behalf of New Delhi Institute of Management
6.	Nationality	:	Indian
7.	Printed at	:	Viba Press Pvt. Ltd., C-66/3, Okhla Industrial Area, Okhla Phase II, New Delhi-110020
8.	Owner's Name	:	New Delhi Institute of Management
9.	Particulars of the Society or Association which owns the Journal	:	A unit of Society for Employment & Career Counseling (Regd.)

Published and Printed by Mrs Bindu Kumar, for and on behalf of New Delhi Institute of Management, 61, Tughlakabad Institutional Area, New Delhi -110062 and Printed at Viba Press Pvt Ltd, C-66/3, Okhla Phase II, Okhla Industrial Area, New Delhi -110020.

Published by : Mrs. Bindu Kumar for and on behalf of New Delhi Institute of Management
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