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CONTENTS

EDITORIAL

It gives me immense pleasure to bring before you Synergy-I.T.S Journal of IT and Management, Vol 18. No.2.

This issue of the Journal furthers our tradition & commitment to bring together a variety of papers from diverse disciplines, from Predicting Green Purchase Intention through Personal Norm and Perceived Behavioural Control to the 'GI' tag Imperative, Studying Performance Analysis of Selective Stocks in Cement Industry to studying the Social Security Schemes by Government of India, Sectoral analysis of PCR and Gross NPA ratio on SBI to a Study on Evaluation of Consumer Attitude towards Electric Vehicles.

Study conducted by Pranshuman Parashar, Dr. Garima Mathur and Prof Yogesh Upadhyay focused upon evaluating the impact of perceived behavioural control (PBC) and personal norms (PN) on green purchase intention (GPI) with respect to eco-friendly products. Dr. Sujata Khandai and Dr Nandita Mishra investigated the awareness level and adoption rate of the GI tag among the weavers and how the adoption of the GI tag can help mitigate some of the challenges that the weavers face with specific reference to the weavers of Varanasi who weave the Banarasi fabric. Kajal Samania, CA Neeta Sahu and Pankaj Chauhan analyzed the financial Performance of the selective stocks in Cement Industry- UltraTech Cement Ltd, Ambuja Cement Ltd, or ACC Cement Ltd. to support investor decision for generating a significant dividend . Dr (Mrs.) Naina Hasija conducted a research to encompass all social security schemes announced by government of India since 2015 and evaluate their importance for the underserved segment of the society. Dr. Neeta Majumder and Dr. Soumendu Bhattacharya evaluated the growth of NPAs and the growth of provisions under housing, education and agriculture category so that volatility under credit risk can be identified and efficient credit risk management tools and stringent policies can be implemented. Consumers awareness , attitude, preference and consumption patterns towards electric vehicles had been explored by Karmendra Singh and Pankaj Chauhan in their research study.

As it is evident, the contributed papers delve into multiple aspects of management in different spheres of business and intellectual pursuits offering new perspectives and strategies to engage the reader and spur innovative thinking.

At Synergy, it has always been our endeavor to provide a framework for the furtherance of research into different aspects of Management and Information Technology. It is hoped that the present issue shall continue the tradition of aggregating path breaking research ideas from such diligent minds.

Editor-Synergy.

Predicting Green Purchase Intention through Personal Norms and Perceived Behavioural Control

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Abstract

The environmental protection has become a global concern due to which eco-friendly products are favoured widely. The personal norms (PN) of an individual are based on moral aspects which are useful in predicting the green purchase intention (GPI). Further, the perceived behavioural control (PBC) is dependent upon control beliefs which indicate about the control of an individual over his or her behaviour. The research was conducted to evaluate the impact of PBC and PN on GPI with respect to eco-friendly products. The total numbers of responses obtained were 136. The received data was analyzed through multiple regression analysis. Through regression analysis, it was found that the impact of PBC and PN on GPI was found significant and positive. The research findings contribute towards understanding the green products purchase intention which could play a vital role towards environmental protection.

Keywords: Green Purchase Intention, Personal Norms, Perceived Behavioural Control.

Introduction

"Environment protection", "Eco-friendly products", "Green Purchase" are buzz words for this era. Everyone consciously or unconsciously concerned with maintenance of eco system and that is why they are following the ways, they can. For example, they need to restrict their behaviour to follow the ways, required for maintaining green behaviour. In this context the study considered perceived behavioural control as one of the determinant of green purchase intention. Perceived behavioural control (PBC) refers to "people's perception of the ease or difficulty of performing the behaviour of interest" (Ajzen, 1991, p. 184).

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The concept of PBC is compatible with Bandura's (1977, 1982) concept which "is concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). PBC refers to "people's own perception about their ability to perform a given behaviour" (Aertsens et al., 2009, p. 1149). PBC is based upon control beliefs and perceived power. The perceived opportunities and resources that support or hinder the particular behavioral performance are the control beliefs and each control factor's perceived power is about the assessment of an individual regarding the importance of the opportunities and resources in attaining behavioural outcomes (Ajzen and Madden, 1986; Chang, 1998).

These behavioural aspects are generally associated with following rules, stated explicitly or implicitly. The feelings related with moral obligations to execute a particular behaviour are known as Personal Norms (Schwartz, 1973, 1977). The norms are related with our own beliefs on how to behave on the basis of our internal values (Schwartz, 1968). Personal norms are also referred as "moral obligation to perform or refrain from specific actions" (Schwartz & Howard, 1981, p. 191). Kallgren et al. (2000) considered Personal norms as the internal benchmarks regarding a particular behaviour.

'Intentions' drive the factors which influence a person's behaviour (Ajzen, 1991). Chan (1999) defined GPI as the readiness of the consumer to act for the environmental benefit. GPI refers to "the probability and willingness of a person to give preference to products having eco-friendly features over other traditional products in their purchase considerations" (Rashid, 2009, p. 134).

Perceived Behavioural Control and Green Purchase Intention

Chen and Deng (2016) found that PBC had significant positive effect on GPI. Diyah and Wijaya (2017) conducted the study in Indonesia and housewives were the sample of the study. The researchers found that the contribution of PBC towards GPI was positive. Wang et al. (2019) performed the study considering the green hotel industry in China. It was concluded that PBC effect on GPI was positive. Maichum et al. (2016) conducted the study in Thailand and the respondents were above 18 years old to find out the purchase intention for green product. They concluded that PBC had positive effect on GPI for eco-friendly products. Nam et al. (2017) conducted the study considering non-green and green sportswear buyers.

The respondents were taken from USA aged between 18 and 74. PBC did not influence the buying intention for green sportswear. Significant difference was found between eco-friendly and non-eco-friendly product buyers in terms of effect of PBC on respondents' purchase intention for green sportswear. Liu et al. (2017) conducted the study to find out the car use reduction intention and found that perceived behavioral control significantly affected the car usage intention.

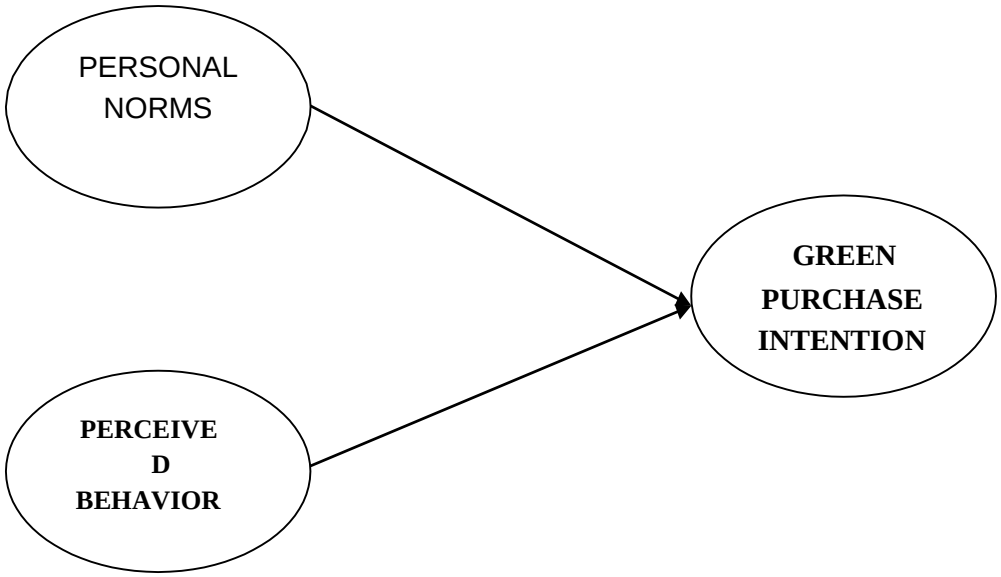
H1: Perceived Behavioral Control predicts GPI positively.

Personal Norms and Green Purchase Intention

The panel study conducted by Thogersen and Olander (2006) in which about 1500 Danish citizens were interviewed 3 times between 1998 and 2000 found that stronger personal norms significantly affect the buying behaviour with respect to organic food products. In another study conducted by Thogersen and Olander (2003), it was found that eco-friendly behaviour of Danish consumers was influenced by personal values. Prakash and Pathak (2017) evaluated the consumers' intention to buy products with eco-friendly packaging and found that personal norms significantly affect the buying intention towards eco-friendly packaging. Park and Ha (2014) found that PN, attitude and PBC influence the recycling intention. Zhang et al. (2017) examined the environmental complaint intentions in China. It was argued that it is useful for regulators for controlling various emissions. It was found that personal norm strongly influenced intention.

H2:Perceived norms predict GPI positively.

Proposed Research Model



Method

The Study and Procedure

The study was empirical in nature, where people who intend to buy eco-friendly products comprise the population. Total 150 people were contacted with the help of non-probability purposive sampling technique. The completely filled 136 responses were analyzed with the help of statistical package PASW 18.

Measures

The measurements of constructs were adopted from prior research. The items of PBC were adopted from the research of Wu and Chen (2005) and Maichum et al. (2016). The PN items were adopted from the studies of Sopha and Klockner (2011), Bamberg et al. (2007) & Barbarossa and De Pelsmacker (2016). The items of GPI were adopted from the studies of Chu (2018) and Maichum et al. (2016). The alpha values were .774 for PBC, .717 for PN and .769 for GPI.

Demographic Profile

Particulars	Description	Frequency	Percentage
Gender	Male	75	55%
	Female	61	45%
Age	Below 30 years	63	46%
	Above 30 years	73	54%

Above table shows the summary of demographic profile. Out of the total respondents, the male respondents were 75 (55%) and female respondents were 61 (45%). The age groups were divided into 2 different groups viz. Below 30 years and above 30 years and number of respondents were 63 (46%) and 73 (54%) respectively.

Analysis

The data was analyzed by utilizing the statistical package PASW 18. The assessment of the constructs was performed through multiple regression analysis.

Hypothesis Testing

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.656[a]	.430	.422	2.960

a. Predictors: (Constant), PBC Total, PN Total

The model summary table indicated the values of R, R^2 and adjusted R^2. The R value, known as the multiple correlation coefficient is one of the measure which indicates the prediction quality. The R value is 0.656 which shows good prediction. The R^2 value explains the variance proportion in the dependent variable. The table shows R^2value as 0.430 which specifies that PBC and PN explain 43% variance of GPI. However, for multiple regression, the value of Adjusted R^2 need to be interpreted to report data accurately. The Adjusted R^2 value is 0.422 which specifies that PBC and PN explain 42.2% variance of the GPI.

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	880.649	2	440.325	50.254	.000[a]
	Residual	1165.343	133	8.762		
	Total	2045.993	135			

a. Predictors: (Constant), PBC Total, PN Total

b. Dependent Variable: GPI Total

The F-ratio in the ANOVA table, $F(2, 133) = 50.254$, $p < .005$ indicates that regression model was showing good fit.

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	5.303	1.497		3.543	.001
PN Total	.341	.085	.276	4.020	.000
PBC Total	.491	.065	.518	7.543	.000

a. Dependent Variable: GPI Total

The unstandardized coefficients value in the coefficients table indicates the dependent variable's variability with an independent variable. The unstandardized coefficient, B, for PN was 0.341 and for PBC was 0.491. It showed that with each one unit increase in PN and PBC, there would be an increase of 0.341 unit and 0.491 unit in GPI respectively.

Further, the coefficients table also showed that the t-value for PN Total and PBC Total were 4.020 and 7.543 respectively which were statistically significant at $p < .005$. It indicates that both the hypotheses were supported and there was significant effect of PN on GPI as well as PBC on GPI.

Discussion & Conclusions

The researchers concluded that purchase intention to buy eco-friendly products were predicted by PN and PBC. The PBC is formed through the control beliefs related with the factors and with the intensity of the factors which support or hinder the behaviour. The PBC acts like actual control for the behavioural performance. Another construct, PN are moral obligation to perform specific behaviours. People now-a-days are becoming concerned about the well being of the environment and for this purpose, their purchase intention to buy environment friendly products is becoming strong due to the stronger personal norms. Of the two constructs, the effect of PBC on GPI was higher than PN which indicates that PBC strongly predicted purchase intention for green products. It is of great utility for green marketing as PBC has been regarded as good indicator of GPI (Paul et al., 2016).

The findings underline implications for the companies engaged in green products marketing. As both PN and PBC predict GPI, hence, the companies should spotlight the importance of using eco- friendly products for the environmental protection through their advertisements. This will strengthen the consumer's personal norm. Also, their would be higher control on his/her behaviour as the belief would become stronger.

Limitations and Future Directions

Firstly, the data was collected from a small region in Madhya Pradesh, India, and further the sample size was small which could be extended in the future research for the generalized results. Secondly, the study did not consider specific green products and the green products, in general, were considered. The results may vary for different green products. Thirdly, the demographic analysis could also be performed. The PBC was taken from the planned behaviour theory whereas PN was taken from the norm activation model. Future research could be carried out considering other constructs from the above theories to get more comprehensive results.

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The 'GI' tag Imperative: Towards Sustainability & Raising Income level of Weavers

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Abstract

This study is an attempt to understand the challenges faced by the weavers in India, with specific reference to the weavers of Varanasi who weave the Banarasi fabric. The study further investigates the awareness level and adoption rate of the GI tag among the weavers and how the adoption of the GI tag can help mitigate some of the challenges that the weavers face. In addition, the study highlights the current best practices and innovations adopted by the weavers and to assess the gaps in efforts made so far for unlocking the commercial potential of selected GI products. There is little research on the adoption of GI Tag by handloom weavers, their awareness level and tangible benefits to them. We used grounded theory approach (Charmaz, 2006; Glaser & Strauss, 1967) for this study. Our data sources include interviews with weavers and cluster heads, press articles, participant observations and existing literature. We developed semi- structured questionnaires that covered general questions about the demographic details of weavers, their family's detail, their experience in handloom industry and specific questions like cost of their input or yarn, role of intermediaries in procurement and sales, their awareness about GI and other financial assistance provided by government As the research progressed, we revised the questionnaire and adapted new ones. All interviews were conducted face-to-face and in the local language, which was further transcribed verbatim into English. We coded the transcription according to recommendations for qualitative research (Gioia, Corley & Hamilton, 2013). We used Nvivo software for coding and analysis.

Granting GI tag to the Banarasi Brocade and Sarees was an imperative step towards the protection of this ancient handloom art, but many weavers are still not benefitted by this.

The weavers mostly remain unaware of the GI registration process and the advantages of registering. Falling income of weavers, availability of cheap imitations, rising cost of raw-material and shrunken margins has forced weavers to migrate to other professions.

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The paper also investigates and suggests various measures to promote this dying art of India which ultimately will lead to sustainable and inclusive growth.

Keywords - Geographical Indication (GI), Banaras Brocade and saree, Cluster, Grounded Theory, Inclusive growth

Introduction

Banaras, Varanasi or Kashi has an ancient history of textile designing. The most exquisite brocades in silk and gold are woven by weavers in silk pit looms. He weavers of Varanasi are best known for their skill in brocade weaving. There are many exquisite designs in this variety and it is more or less impossible to copy or imitate the designs as the loom itself as a very intricate design.

The origins of the weaving industry in Varanasi can be traced to the Vedic period. Historical evidence further indicates that the weaving industry of Varanasi reached its peak during the Mughal period especially under the patronage of the benevolent Mughal emperor, Akbar. Thereafter, it was during the British rule in India when it was rightly observed that the prosperity of the people of Banaras mainly existed in the brocades and zari manufacture and trade as these textiles were popular items of export to Europe.

The brocade weaving of Banaras is cluster based and scattered all over the Varanasi district and some adjacent districts too. The city of Varanasi is the main entre of weaving. With such an impressive history associated with the city and its weaving skills, it is not surprising that the skills and talent have been inherited by the future generations.

The ground reality in Varanasi today is quite harsh and sad for the weaving industry. Today, the weavers churning out Banarasi sarees, with the trademark patterns of paisley, geometrical motifs and hunting scenes are caught up in a diabolical war of handloom vs. power loom, dyeing technique, migrating workers, fake Banarasi with plastic “zari” made on Chinese silk and futile attempts at revival. A sad fact of today is that no connoisseur actually goes to Banras to buy a genuine Banarasi brocade over the counter from a retail shop. The last two decades have been particularly tough for the weavers as thousands of looms in Banaras have become silent. Cheap, bad quality imitation have flooded the market, and this has left weavers and traders in despair. Eighty five percent of the weavers have migrated to other cities in search of jobs or have moved away in search of other livelihood options. India’ largest hand weaving guild is seriously threatened.

The weaving industry is buffeted by headwinds. Small weavers claim their margins have come down drastically, especially since demonetization. If weavers can't deliver, then the entire trade, which follows an age-old traditional structure, suffers.

Literature Review

According to Bowen (2010), GI status is very unique in the sense that it provides 'a means of ensuring that control over production and sales of a product stays within a local area, but at the same time [it] makes use of extra local [foreign] markets'.

Developed countries have already been exploring the uniqueness of their products and ensuring their product differentiation through GI Tags. It is with developing countries which are in dire need of realizing the potential of such protections and exploit their resources in global market in an optimum manner. India has also been ensuring product identification and product differentiation strategies by adopting different policies viz. GI Tag, Handloom Marks, Quality standards etc. Due to its uniqueness and worldwide nature GI tags have been gaining popularity in India during past decades. Many studies have been conducted to analyse the status of GI tagged products at international, national and state level.

Geographical Indication (GI) is covered under Article 1 (2) and 10 of Paris Convention for the Protection of Industrial Property and under Article 22 to 24 of the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement (Verma & Mishra, 2018). In 2017, the then Union Textile Minister, Ms. Smriti Irani emphasized on the importance and relevance of the GI tag and that the tag would immensely benefit both the maker of the fabric, i.e. the weaver and the consumer. The GI Tag is an assurance of getting the right product at the right price, directly from the weaver.

A working paper published by Export Import Bank of India in 2018 elaborates that the handloom industry is the oldest and the largest cottage industry in India, representing and preserving the vibrant Indian culture. The strength of the handloom industry lies in the fact that it involves hardly any usage of capital and power, is eco-friendly and suitable for innovation and transformation with respect to market requirements. According to the working paper, the handloom industry is presently regarded as the largest economic activity in India after agriculture, generating direct as well as indirect employment for more than 3 million weaver households.

However, it is also observed that economic liberalisation, rapidly increasing industrialisation, globalization and advent of modern technology has brought with it various challenges for the handloom industry and weavers.

India is a major contributor of the rapidly growing upcoming intellectual property that is Geographical Indication (GI) and there has been a gradual increase in the total number of GI status awarded to products in India. GI supports manufacturers, farmers, craftsmen by increasing profits and helping to identify specific goods or services (Sharma, 2019). Goig forward, 28 states registered their products with a GI Tag and 14.47% of the total products were from Karnataka state (Manjunatha, 2016). A total of 289 GI tags were issued in India, out of which only 24 products were from the state of Uttar Pradesh (Yadav, Chaudhary and Sahani, 2018).

The impact of GI tag has been witnessed throughout the globe and with a wide range of products. Although more studies have been conducted in developed countries, the benefits have started accruing in developing countries for a wide variety of products. The GI tag has proven to be beneficial for products like Darjeeling Tea, Silver Filigree etc. in securing their identity worldwide and making the business better, but lack of awareness amongst practitioners of these products has not probably yielded the benefits as predicted and desired (Choudhari 2016). In addition, there exists the intention of the government to increase the farmer's income by developing contemporary geographical indications of agriculture food in China to protect the interests of the farmer. But on the flip side, the quality of GI products is not necessarily being enhanced by the geographical indication schemes (Zhao, Finlay and Kneafsey,2014). Bagade and Mehta (2014) also pointed similar concerns in the Indian context. The study revealed the absence of any mandatory requirement for geographical registration in India and recommended regulations of such a mandate so that Indian products are in a position to seek protection in other member countries of World Trade Organization (WTO).

Venkatesh and Kumarasamy (2015) analysed the problems that arise in handloom industry and recommended GI tag as a probable solution to protect handloom industry in today's competitive market. The research takes a study of Colombian coffee as a success story of geographical indication in Colombia. The study concludes by highlighting competitive advantage of geographical indication for the handloom sector in future.

Research Methodology

The main objective of the study was to identify the current status of awareness of GI tag in Varanasi. The product which was analysed under this study is “Banarasi Silk and Brocade” which is associated with the geographical area “Banaras”, also known as Varanasi. To address this objective, a field survey was conducted.

Data Collection

Data is the base of any research and defines the quality of research. Data collection is getting all possible required raw data to derive at some information and to extract knowledge for development of the strategy. In this project both primary and secondary data were collected to derive best possible strategies. Data can be divided into two types – Primary and Secondary

Primary data Sources - The following methods are used for data collection – Questionnaire, Detailed Interview and discussion

Secondary Data Sources - The following was referred for collection of secondary data – books, journals, magazine, publications, newsletter, advertisement/brochure and social networking sites.

Sample Design

A sample design is a framework or a road map that serves as the basis of selection of the survey sample. It is a very important element for a successful survey. A sampling frame must be defined in the research so that the population is well represented. The sampling frame must be identical or similar to the population so that population is well represented. In our project advice and information from various state government and central government handloom officers were taken into consideration before defining the sampling design.

Following is the sample design of the data collection –

a. Population Universe – A total 10 clusters were included in the study to ensure maximum coverage and a high level of comprehensiveness (Banarasi brocade and silk industry works under cluster system and there are total 10 clusters which are active in the area).

The details of the cluster are given in the table 1 below:

Table 1: Details of Cluster

S. No	Name of Cluster	Address/ Area of Cluster	Name of Cluster Head
1	Magalpur kashividya peeth	Lohta Varanasi	Shri Bholanath Maurya
2	Sarangpur Daipur, Varanasi	Daipur	Shri Manhur Khan
3	Kotwa Dihwa Kashi	Dihwa	Moh. Luckman
4	Benipur Aaraji Line	Harsosh	Shri Hafiz
5	Ajgara Kamna Cholapur	Ajgara Kamna	Shri Sunil Kumar
6	Saraymohana	Chiraigaun	Shri Lalan
7	Jhanjhor Pidhara Varanasi	Jhanjhor	Shri Chandra Bhushan
8	Kundi Badagaun Varanasi	Badagaun	Shri Riyazudin
9	Ram nagar Varanasi	Ram nagar	Shri Amresh Prasad
10	Bazardiya Varanasi	Hathwa, Aazad Nagar	Shri Ansari

Source – Author's Compilation

b. Sample Size – 6 Clusters – Because of the wide diversification and stretch of the cluster over the area and large number of weavers registered in each cluster, it was not possible to cover all the clusters and therefore, six clusters were considered as sample size for the project. The selection of clusters was done on the basis of number of weavers registered and the geographical spread of the cluster. The cluster with large number of weavers and having different and wide geographical spread was selected for the study. The sample was selected with this criterion in mind and therefore purposive sampling technique was used for selecting clusters. The list of selected clusters is as detailed in table 2:

Table 2: Details of selected Clusters

S.No	Name of Cluster	Address/Area of Cluster	Name of Cluster Head
1	Magalpur Kashividya Peeth	Lohta Varanasi	Shri Bholanath Maurya
2	Sarangpur Daipur, Varanasi	Daipur	Shri Manhur Khan
3	Kotwa Dihwa Kashi	Dihwa	Moh. Luckman
4	Ajgara Kamna Cholapur	Ajgara Kamna	Shri Sunil Kumar
5	Jhanjhor Pidhara Varanasi	Jhanjhor	Shri Chandra Bhushan
6	Ramnagar Varanasi	Ramnagar	Shri Amresh Prasad

Source – Author's Compilation

After selecting the cluster, random sampling was done in each cluster to select the respondents for the questionnaire.

Questionnaire Structure

The questionnaire was designed keeping in view the objective of the study and recommendations of officials, NGOs and cluster-heads. The questionnaire was structured to contain both open- ended and close ended questions. The questions were clear, simple and double meaning words were avoided. The nature of the study led us to frame the questionnaire in both open ended and close ended questions. Closed ended questions were used to gather basic information about the weavers as close ended questions are easier to answer and data gathered are easier for the researcher to analyse. But the survey was based on finding the reasons behind lack of awareness of GI tag and problems faced by the weavers. Because answers to these question can be different for different respondents therefore open ended questions were designed.

Two separate sample surveys were designed; one was conducted with the help of questionnaire, whereas the other was conducted with the help of in-depth interview conducted by the field investigators. Since a majority of the respondents were uneducated, therefore the questionnaire was generally filled up by the field investigators after asking the questions. This also gave us better results as far as missing figures or wrong entries are concerned. The in-depth interviews were conducted in Hindi by the field investigators and then the interview was transcribed in English. The two surveys were developed and designed in order to get maximum information about the weavers' problems.

Also before conducting the interviews, a briefing session was always conducted by the field investigators to tell the respondents about the purpose of survey. This briefing session helped a lot in getting better and appropriate answers.

Pre-Testing

Pretesting or pilot study is a very important step in this kind of study. It is an absolutely necessary step to ensure that all kinds of errors, associated with the survey research are reduced. This helps to improve the quality of the data and survey as a whole. Any question which is difficult to understand or was sensitive in nature was deleted. The pre-testing was done within a small group of people before administrating it on the study population. A small sample group of respondents were asked to complete the questionnaire. Answers from this sample group of respondents were examined and observed to see if they understood the questions and whether they were also reluctant to answer some of the questions (De Vaus, 56 2002 cited in Ham 2007). Proper revisions of the questions were made and a final questionnaire was administered for the study. Those involved in the pre-test were no longer eligible for inclusion in the final survey sample (Ruane, 2005).

Data Collection

The goal of data collection in our study was to capture quality and accurate data on which analysis could be done. Accuracy of data is very important in any type of study and therefore it is one of the most important stages in conducting a research.

To fulfill our research questions both qualitative as well as quantitative data was required. But to understand the problem faced by the weaver the main focus was on qualitative data. Researchers were clear that problems and the challenges of weavers could be different for each respondent and therefore the questionnaire had open ended questions too. Data collection becomes even more important when we are dealing with open ended questions. One more challenge which we faced during data collection was that most of our respondents were illiterate.

Qualitative data are mostly descriptive, nominal in nature and often the data are feelings, emotions and subjective perception of the respondent and it is because of this reason that we focused on methods like interviews, focus groups and group discussions.

The process used for data collection in this project was combination of in depth interviews and administration of the questionnaire. The respondents were majorly illiterate. To solve this problem, the researchers selected two local field investigators who were fluent in local language (Bhojpuri) and also were able to write their answers verbatim. Generally, they questioned the respondents in local language and wrote their answers in the questionnaire.

Second problem in data collection was that the sample area was spread over 6 districts with 10 clusters. The sample area had a wide spread which was a hindrance in data collection. This problem was solved at two levels. Firstly, we selected six clusters out of ten, which were bigger and of more importance. Secondly we had our local partner Dr. Shambhu Nath Singh Research Foundation- SRF, an NGO who took daily reports from the field investigators and helped us in gathering the data.

Data collection was done by two field investigators who were local resident of Varanasi.

Findings & Discussion

The Cluster and its Genesis and Function in Traditional Handloom Industry

The handloom industry in India demonstrates the richness and diversity of Indian culture and is the second-largest employment provider for the rural population in India after agriculture. It has more than 4.5 crore people directly involved in the production of handloom products. Handloom in India has originally thrived from clusters in parts of rural area, and has traditionally been a low caste occupation. Traditionally, weavers and artisans were part of the local economy and their produce was sold locally. Their designs were and are still inspired from the local flora and fauna and constituted the main traditional design inspired from local sources. With industrialization and opening up of the Indian economy, the progression of local market and artisans disappeared. They lost track of the market trends and also lost due to competition and new players in the market.

Because a large number of livelihoods are attached to this sector and there is high contribution of textiles to the economy, an independent ministry was set up in 1989. Also 37 offices of Development Commissioners for handloom and handicraft were established. Cluster development was one of the agendas of the Ministry of Textile. It also focused on the sectoral development policies and promotion of export.

But it was very clear to the ministry also that the handloom sector can be developed in India only when a cluster based strategy is adopted. Government initiatives accelerated since 2004, as it started many new benefits and schemes, including IHCDP (The Integrated Handloom Cluster Development Programme) and other financial schemes.

The Varanasi Cluster

This study is essentially focused on the Varanasi Cluster who are engaged in the production of the GI tagged product " Banarasi Brocade and Silk". Varanasi is one of the oldest and highest weavers' concentrated city of our country. Weaving has been one of the traditions here since 1500 BC. Yet the city is also one of the poorest and populated cities of Uttar Pradesh, with a population of around 170 million.

The Varanasi cluster comprises of around 100,000 weavers, according to the latest handloom census. Weaving is a male centred occupation and many of them are illiterate. According to the government data, only 57% of the weavers are literate. There are 500 traders and master weavers who are locally known as "Sattiwalas", "Grihastas" & "Gaddedars". The weaving sector is governed and ruled by them. They can be divided into two parts - weavers and traders. Gaddegars are large traders who buy the handloom products from Grihastas and also employ weavers directly on wage or piece-rate basis. Grishastas buy handloom products from small weavers and sell it to Gaddedars.

The main centres for brocade weavings are Varanasi, Mirzapur, Bhadohi (SantRavidas Nagar), Chandoli, Chunar and Chakia. But among all, Varanasi city is the most important centre of brocade weaving and more than 85 percent weavers belong to the Varanasi city and its neighboring area only. Out of the different areas of the Varanasi, Madanpura and Ahaipur are two most significant areas of the brocade weaving. It is believed that the brocade weaving in the city initially started in these two areas and subsequently embraced by the other families.As per the handloom census of 2017, Varanasi had close to one lakh weavers.

Table – 3 – Details of Weavers
Handloom Census-2009-10 (Fact Sheet 2017)

Parameters	All India	UP	Varanasi
Number of handlooms	2377331	80,295	31,378
Number of handloom weavers	4331876	2,57,783	95,439

Source – Author's Compilation

As per the data provided by the state handloom office in Varanasi there are 10 clusters currently working in the area.

Demographic profile of the weaver Profile of the Weaver

In Varanasi and its neighboring regions, the number of weavers involved in weaving of the Banarasi Silk and Brocade include more than 200,000. All the weavers are grouped in a particular cluster and each cluster is headed by a Cluster Head.

The weavers belong to the lower middle-income strata, with a median income of Rs 7000. The educational qualification of the weavers range from having a senior secondary school certificate to holding a postgraduate degree. The family size of a weaver ranges from 4 members to 8 members and it is observed that all the family members, excluding the children, are involved in weaving. In the case of a few families, the children are inducted into weaving once they attain the age of 14 years. It is generally presumed that the children would also follow in the footsteps of the father and carry on the tradition of weaving. Sadly, though, and not surprisingly, the children are loath to pursue weaving as a career for the following three reasons:

1. Weaving does not seem like a promising career to them as the potential to earn a decent salary and live a "good life" does not exist in this profession.
2. The children, largely belonging to the millennial generation and Gen Y are lured by the opportunities that the new India is offering to them and they wish to take advantage of these opportunities and put their education to good use.
3. Most of the children of the weavers do not want to stay in Varanasi and instead would like to go to a bigger city like Lucknow or Delhi to try their luck there as they feel they would have access to a wider vista of opportunities in larger cities.

The Business of Weaving

The weaver has, on an average, 4-7 looms, which is used by all adult members of the family to weave. A loom may cost anywhere between Rs.15,000- Rs. 20,000. Weaving in each family is done for almost 8-10 hours every day. Traditionally, weaving the Banarasi brocade is always done using silk yarn. The weavers procure the yarn from NHDC, a government body. The weavers buy anywhere between 8-10 kilograms of loom every month at a cost of Rs. 4500. With this quantity of yarn, they are able to weave – to – brocade sarees every month. Increasingly, on account of the following reasons, weavers are turning to nylon and lesser priced Chinese silk yarn (which is of an inferior quality) to weave the brocade:

1. High cost of silk yarn per kilogram and a supply problem.
2. Easy availability of nylon and at much cheaper rates.
3. Low cost of Chinese silk yarn and available in large quantities

Raw Materials used in Weaving of Banarasi Brocade and Silk

The raw material used in Banarasi brocade and silk can be broadly divided into 3 categories and the price of the saree or dress material depends on the raw material used. The three main types of raw materials used are:

1. Silk,
2. Cotton
3. Zari.
4. Kalabuttun

Silk is mainly procured from Banglaore, Karnataka, Malda, West Bengal and China. The average price of Banglore silk is 1800/- to 2000/- per kg whereas the cost of China silk is around 1400/- to 1600/- per Kg. The low cost of China silk is the primary reason why the weavers are increasingly using silk from China instead of Bangalore silk. This results in an inferior quality of woven silk fabric as the final product. The use of China silk in weaving comprises of around 70%, reducing the demand of Bangalore silk.

Cotton is procured from Salem, Tamil Nadu which costs around 350/- to 450/- per kg. But because Banarasi silk has always been associated with silk which is considered purer form of fabric and similarly depicted in the Hindu tradition, use of silk is more as compared to cotton.

Next on the list is Zari which is used as raw-material in all type of sarees and dress material. Zari is of four types- pure zari, tested zari, powder zari and plastic zari. Cost of pure zari is highest and it ranges from Rs. 12000/- to Rs. 18000/- per kg. Powder zari is cheaper at Rs. 2000 – Rs. 2200/- per kg and tested zari is valued at Rs. 600/- to Rs. 800/- per kg. The cheapest form of zari is plastic zari which costs around Rs. 350/- to Rs. 500/- per kg. Kalabattun: The next essential material is the kalabattun, the gold or silver thread. The kalabattun is still manufactured in Varanasi.

Use of Raw material in different type of Banarasi Sarees

The use of raw material depends on the type of saree. Banarasi saree are of many type, more common once are Brocade, Chiffon Jamdani, Jungla, Reshambuti, Satin border, Satin embossed, Tanchoi , Tissue saree and Kora cutwork. Brocade, Chiffon, Jamdani, Jungla, Reshambuti, Satin border, Satin embossed, Tanchoi and Tissue saree are mainly woven with silk and zari, whereas Kora cutwork have cotton designs on silk ground. Each sari has different composition of raw material and therefore the price also changes according to it.

Preparing Process of Raw Material

After procuring silk the raw material twisting of yarn is done. This is again of two types single twisting and thrown single twisting. In Banaras, special artisans called “Bataia” undertake the work.

Before the silk hanks are subjected to the following preliminary processes:

- Warp preparation
- Degumming
- Dyeing
- Weft preparation

Weaving Process

This is the most vital and complicated part of the whole process. The design is plotted on graph paper by plotters according to the dimensions desired. The plotted “nakshas” are taken to a technician who punches them on cardboards in the required sequence. These cards, are then used by the jacquard machine to provide the exact sequence of the different colours of the threads that are required for the design. The jacquard machine (which runs by a weaver moving a pedal) has a rectangular block on which the chain of punch cards run.

In Banaras the weavers of expensive silk fabrics and brocades are called “karigar” (artist). A Banaras weaving-shed which contains a loom for weaving an expensive kimkhab is known as a karkhana.

The process of weaving simple silk fabrics and the tools employed therein are not generally very different from the process and tools employed in weaving other fabrics but the Banaras kimkhab and other gold-and-silver-thread fabrics, with a heavy body of silk, are woven with an indigenous device, quite special to Banaras.

The completion of the fabric is called rejapujna. The woven fabric (than or reja), when taken off the loom is called a kora than, the pure fabric. After completion, the fabric is carefully pressed and folded for delivery. Special workers called kundigar do the pressing and finishing. They washed the fabric in a specially prepared bath, then dried it, pressed, glazed and folded for delivery. Pressing is done by the machine-rollers. The fabric, before undergoing this process, is treated with the sizing material. After mounting the fabric on the rollers of the machinery, the sizing solution is gently sprayed over it and the manipulation started. This finishing process is called polishing.

Usually, the local shopkeepers do not store polished fabrics. It is done free of charge only after the fabric being finally approved or booked by the customer. The price includes the finishing charge also, and the delivery could be made within a couple of days. But there being no such facility with the outstation dealers they have to keep the fabrics ready polished and finished

The whole journey of the silk saree can therefore be divided into four main processes, starting from buying raw- material, pre-weaving preparation, weaving and finishing. The cost of the sari also flows in the same sequence. Pricing of few famous Banarasi sarees has been illustrated below to understand the pricing process.

Procurement Process and the Pricing Structure

Table 4: Pricing of Banarasi Saree

Particulars	**Brocade Saree**	**Chiffon Jamdani Saree**	**Jamdani Saree**	**Jangla**	**Tissue Saree**	**Tancho i Sari**	**Resham Buti Saree**
Raw-Material-							
Silk	1200	1000	1700	1300	990	1700	1000
Zari	600	120	0	400	400	0	1000
Cotton	NA	NA	NA	NA	NA	NA	NA
Pre-weaving Cost	195	209	230	200	190	230	180
Weaving Charges	1000	725	825	1200	700	700	600
Overhead Cost	345	253	330	400	300	180	280
Margin(10%)	334	230.7	308.5	350	258	281	306
Sales price of weaver	**3674**	**2537.7**	**3393.5**	**3850**	**2838**	**3091**	**3366**

Source – Author's Compilation

The above chart shows the pricing of the famous Banarasi sarees. The weaver sells the sarees in such low prices. Each sari depending on the work done on it, is prepared in 10-30 days' time and the weaving charges which the weaver get ranges from 700/- to 1200/- per sari. But when it is sold to Gadidar or the middle man and then to the retail shop, the prices go as high as 20000/- to 25000/- per sari.

The Distribution Channel

The weaver does not have the where withal to sell directly to the end consumer. He neither has the financial capability not the business or marketing acumen to reach out to the end consumer. The weaver sells to a middleman/an intermediary who then sells to the final retailer. In some few cases, the weaver is able to sell directly only when the order size is very small.

Because the sale of the brocade saree or material is always effected through intermediaries who are loath to pay a good price or the market price to the weavers, the latter is always at a disadvantage. As a result, the weavers are paid a pittance for the sarees and material which are sold by the intermediaries to the final retailer at a price with a rather high margin and the final customer literally pays a fortune to buy Banarasi brocade.

Government Support for the Weavers

On the basis of interviews conducted with the weavers, where a lot of open-ended questions were fielded to them, there emerged a consensus among all weavers that they do not receive much support from the state or central government. The feedback from the weavers with respect to the various form of form are as enumerated below:

Infrastructural support: The weavers use available space in their homes for weaving purposes. They have a family size ranging from 4 members to as many as 8 or more members in a family. And since they belong to the lower socio-economic strata of society, they live in relatively smaller houses, which in 73% of the cases is owned by them. Taking into consideration the mall size of the house the weaver and his family reside in, this makes it quite difficult for them to focus on their weaving activity.

In addition, the weavers have to buy their own looms and each loom costs a minimum of Rs. 70,000 approximately. During our survey of weavers and clusters, we did not find any evidence of option of renting of loom in case the weaver receives a large order and he has to complete the order in s short span of time. The weavers own – to – looms each. According to the weavers, many a times these looms are not sufficient to cater to the orders they receive. Hence, they are forced to forego larger orders as they do not possess or have access to additional looms as and when the demand arise.

Financial support: By and large, weavers do not receive any kind of financial support from any government or quasi government body. In the case of a few weavers though they have indicated having received some form of financial assistance.

Technical support: Majority of the weavers mentioned that they have some received some kind of technical assistance form the government in the form of training sessions. The government has organized a few training sessions for them to help them in the weaving process.

Information support: To enhance their awareness levels and bring about an improvement in their skill levels, the following kind of information is disseminated to the weavers, but on a rather limited basis:

1. The weaving techniques
2. Availability of finance
3. GI Tag benefits and process of registration.

It is evident from the findings above, about the support offered to the weavers, that the depth and breadth of support offered to them is limited. There is scope to extend the amount of information disseminated to them so that they are able to upgrade their skills, use better techniques to product better quality silk, have the knowledge to access government funds at lower rate of interest and also enhance their knowledge of GI to be able to use it to the best and most optimal use.

Challenges Faced by Weavers

- Weavers do not have access to the buyers. Their end product is sold to middlemen who have little concern for their plight.
- Most of the times they feel cheated being unaware of the fashion industry and the demand of the saree they weave in the international market.
- Most transactions happen through middlemen who exploit them, paying only a minimum amount of Rs. 250 a day on which they survive. As the cost of production is very high, with an earning so low it is difficult to maintain a huge business. In a cyclic process, they fall prey to the brokers.
- Being in an unorganised sector where accounts aren't efficiently maintained, most work is undertaken on the basis of trust. In case they feel cheated, they have nowhere to go.
- When once it was a handloom craft, it took a month to weave a saree, now it's mostly done on power loom, the latter producing more of its quantity in a single day. Although the production has gone up, the earnings haven't.
- Fake Benarasi sarees have flooded the market from Surat and China, threatening the dying handloom.

Recommendations

This study goes forward by putting forth a series of recommendations by taking the following macroeconomic situation and the findings of the study into consideration:

1. Irregular earning capacity of weavers on account of proliferation of cheaper substitutes to the Banarasi Silk & Brocade.
2. Migration of weavers to the cities in search of employment or looking for alternative sources of employment as weaving as a profession does not offer them a livelihood whereby which they can support their family.
3. Lack of adequate financial support to the weavers forcing them to migrate from weaving to other employment avenues.
4. High level of dependence upon silk sourced from China as it is a cheaper yarn compared to the silk which can be sourced domestically.

5. The current pandemic, COVID 19, which has engulfed the world has put all economies, including the strongest ones, into a state of extreme turbulence. Recovery from this pandemic will be slow and gradual but the worst hit will be those like the weavers who may find it extremely difficult to get back to the art of weaving, unless offered substantial help offered by the government.

Conclusion

Being one of the most recognized product of Indian handloom sector, the Banarasi Silk Brocade saree was one of the lead products recognized for Geographical Indication. 'Banaras Brocades and Sarees', received GI tag in year 2009. It has been considered as a matter of pride for being recognized by the rich cultural heritage of Banaras. But, the condition of weavers manufacturing these globally recognized fabric, displays a totally different picture. The level of migration and the dismal poverty is forcing the weavers to look for an alternative. So, even after receiving the GI tag, why are the weavers not able to reap benefits out of it. This study attempts to identify the current status of awareness of GI tag in Varanasi. The present study identifies the cluster and its genesis and function in traditional handloom industry, by throwing light on the profile of the weavers, business of weaving, manufacturing process, pricing and distribution structure. Being awarded the GI tag, the role of government is also assessed in this study, in terms of infrastructure, financial assistance, technical support and information support. The study found that 45% of the weavers have registered for GI and the remainder of them have evinced interest in registering for GI. Though the weavers are aware of GI Tag and they want to register for it because the government has told them to, they did not appear to have an in-depth understanding of the benefits of GI Tag and how it could help them promote and sell their products more efficiently and effectively. The probable reason of why weavers don't take advantage of financial support given by government is lack of knowledge. Based on our study, it was concluded that GI tag's advantages, its marketing opportunities and lack of financial literacy are the major reasons for the current status of weavers.

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A Study of Performance Analysis of Selective Stocks in Cement Industry

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ABSTRACT

Indian Cement Industry is the second largest in the world after china. Cement industry in India was under full control and supervision of the government. The present study is an attempt to analyze the financial Performance of the selective stocks in Cement Industry. UltraTech Cement Ltd, Ambuja Cement Ltd, or ACC Cement Ltd. are selected for this study. The data for the study is taken for three years i.e. 2017-2018 to 2019-2020. The performance have been analyzed through the current ratio, quick ratio, net profit ratio, return on equity ratio and earnings per share ratio and sales trend.

Key Words – EPS, Liquidity ratio, Financial ratio, Profitability ratio, Financial Performance Introduction

Cement is requisite component of infrastructure development and essential input of construction industry. It is necessary for the country growth, social-economic development. Cement industry is the one of the leading section in construction and building material industry. Cement Industry play very significant role in Indian economy. It facilitates the basic infrastructure facility for the development of the country. Ultra Tech Cement Limited is a largest cement company in India. It is a subsidiary of the Indian multinational Conglomerate, Aditya Birla Group. Ultra Tech is the largest manufacturer of grey cement, ready mix concrete (RMC) and white cement in India, with an installed capacity of 116.75 million tons per year, and is the only company in the world to have a capacity of more than 100 million tons in one country, outside china. Ambuja Cement was founded in 1983 by Naraottam and Suresh Neotia , two traders with little knowledge of cement or manufacturing. Ambuja Cement is trade as BSE 500425 or NSE AMBUJACEM and is headquarters in Mumbai, Maharashtra India.

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Ambuja Cement aspires to be the most competitive and sustainable company in the cement manufacturing industry. Ambuja Cement Limited, formerly known as Gujarat Ambuja Cement limited, is an Indian major cement manufacturing company. The group's market is cement and clinker for both domestic and export markets. Ambuja Cement subsidiaries in Holcim (India) Private Limited, Dirk India Private Limited, Dang Cement Industries Private Limited, Count Micro fine Products Private Limited or Kakinada Cements Limited. ACC Cement limited (Formerly The Associated Cement Companies limited) is the largest producer of Cement in India. ACC Cement was founded 1 August 1936, by Sadly F E Dinshaw, the man recognized as the founder of ACC, died in January 1936: just months before his dream could be realized. It is located on Maharishi Karve Road, Mumbai. The subsidiaries include ACC Concrete Limited, Bulk Cement Corporation (India) Limited, ACC Mineral Resources Limited, Lucky Minmat Limited, National Limestone Co. Private Limited, and Encore Cement & Additives Private Limited. It is 3rd leading Cement Companies in India.

Literature Review

(Burange & Yamini, 2009) The technology that is used for evaluating competitiveness of firms in the Indian cement industry is construction of composite index. The variables that constitute the competitiveness index for the Indian cement industry have been identified based on factors related to competition at the firm level, considering industry issues. There are some sub- indicators that analyze firm competitive index.

(Chopra, 2011) The researcher consider different Indian companies for fundamental analysis. The company's financial was calculated on the basic of future cash flow of the firm. EBIT has also calculated on various growth rate. Fundamental analysis seeks to determine the intrinsic value of the company's stock.

(Tariq Zafar, 2011) This study is an attempt to analyze the various factors of the industry like cost structure & profitability, government policy, inflation and taxation whether it impact on the fundamental of the company or not.

(Jain, 2013) The research has been conducted to know the financial and liquidity position of Shree Cement Ltd. For this the ratio analysis tool was most suitable. This would reveal the solvency position of the unit. Various ratios have been selected for data analysis by Shree Cement Limited. Financial performance evaluation has great influences on the development and progress of the industry. It also analyzes the profitability of Shree Cement Ltd. The trend of sales and profitability for the past 5 years was calculated.

(Geetha & Ramasamy, 2014) The secondary data used in the study was collected for a period from 2001-2002 to 2012-13 from the database maintained and made available by several organizations viz, cement manufacturers association, Centre for monitoring Indian economy (CMIA), CRISIL Sector Review, Executive.

(Ajmal, 2015) Examine the liquidity position of Cement Corporation of India. The data for the study is taken for five years i.e. 2008-2009 to 2012-2013. In order to evaluate the financial performance of Cement Corporation of India, a number of financial and statistical tools have been applied. Financial tools include liquidity, profitability and solvency ratios have been applied.

(Devi & Sabarinathan, 2015) The research conducted to analyze the production and sales trend of select cement companies in Tamil Nadu. It also measure, the short term financial feasibility of the sample companies. The results and discussions of this objective is present with the support of multiple regression test.

(Mawon, Rashid, Sarker, Rahman, Abrar, & Ghosh, 2015) The report gives a narrative overview of the cement industry in Bangladesh. This report deals with the analysis of financial statements of the cement companies listed in Dhaka Stock Exchange. This study should analyze the financial statement first in order to make investment decisions. Data has been taken from previous 5 years (2010-2014). Cash Flow Analysis has been presented to analyze the movement of cash flow of the company and whether they are utilizing the money in the proper manner.

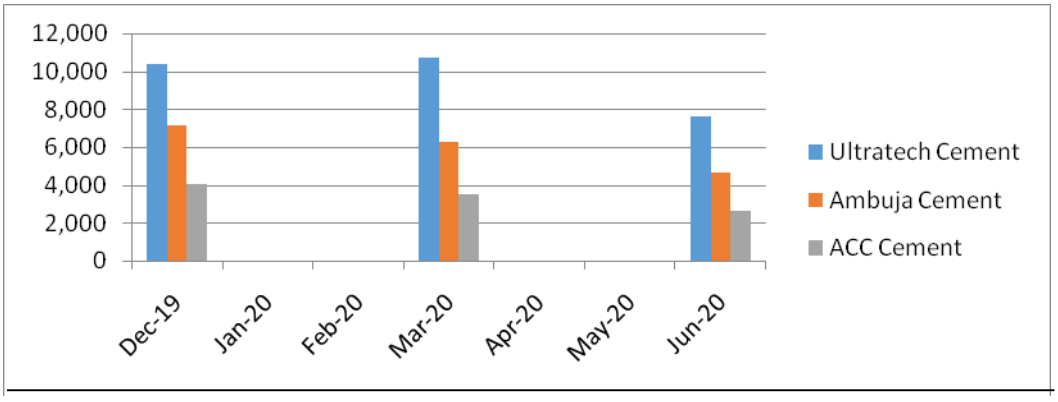
Research Methodology

This research paper is exploratory and descriptive by its research design. The goal of this study to analysis or determining the efficiency and performance of firm's management as reflected in the financial records and report.

This research is based on secondary data. Data regarding industries is collected from the annual report of selected companies with the help of website or journals. The present study is purely based on the evaluation of financial performance of Selective Company's in Cement Industry. The companies selected for this study are taken on the basis of their current share and according to the availability of data. Out of ten companies three Cement Companies namely UltraTech Cement, Ambuja Cement and ACC Cement have been selected as sample for the following reasons. All selected companies shares have been listed both in NSE and BSE stock market. Financial Ratio have been applied to measure the performance of Selective Companies in the Cement Industry. The main sources of project statistics are balance sheet, cash flow statements for the three-year period 2017-2019, and internal and textual sources. Data was analyzed by using descriptive statistics on MS-Excel.

Data Analysis

The Cement sales in India have been expanding on the back of increasing infrastructure activities and demand from the housing sector. The housing segment accounts for a major portion of the total domestic demand for cement in India. In the 12th Five Year Plan government of India, there is a strong focus on infrastructure development and it plans to increase investment in infrastructure.



Sales Trend			
Year	**UltraTech Cement**	**Ambuja Cement**	**ACC Cement**
Dec 2019	10,353	7,126	4,060
Mar 2020	10,745	6,249	3,501
Jun 2020	7,633	4,644	2,602

Figure 1 Sales Trend

The Figure-1 indicates the Quarterly cement sales of cement companies during the Pandemic from Dec-2019 to Jun-2020.

Table-1Comparative financial performance analysis

Financial Ratio	**Types of Ratio**	**2017**			**2018**			**2019**		
		Ultra Tech Cement	**Ambuja Cement**	**ACC**	**Ultra Tech Cement**	**Ambuja Cement**	**ACC**	**Ultra Tech Cement**	**Ambuja Cement**	**ACC**
Profitability Ratio	**Net Profit Margin**	7.18	8.18	6.87	5.76	11.36	10.2	13.79	10.19	8.7
	Return on Equity	8.43	7.33	9.88	8.47	9.73	14.43	14.86	8.7	11.92
	Earnings per share	80.92	7.64	49.23	87.54	10.97	80.98	201.49	10.55	73.36
Liquidity Ratio	**Current Ratio**	1	1.25	1.18	0.83	1.48	1.42	0.9	1.58	1.6
	Quick Ratio	0.71	1.06	0.89	0.57	1.13	1.06	0.65	1.35	1.36

It was observed that for Ultra Tech Cement Ltd the highest net profit margin was 13.79% during the year 2019-2020 and lowest net profit margin was 5.76 during the year 2018-2019. Table-1 indicates that, the company's net sales are increasing year by year. The highest profit margin for Ultra Tech Cement Ltd was 11.36 during the year 2018-2019 and lowest net profit margin was 8.18 during the year 2017-2018. The ratio had increased in the year 2018-2019 and again decreased in the year 2019-2020. The above table shows that, the highest net profit margin was 10.20 during the year 2018-2019 and lowest net profit margin was 6.87 during the year 2017-2018 for Ultra Tech Cement Ltd.

The net profit of the company was increased in the year 2018-2019 and it shown increasing trend. UltraTech Cement Ltd is very efficient at converting its sales into actual profit. The ratio of Ambuja Cement Ltd. states that the company is least efficient at converting its sales into actual profit. ACC Cement Ltd is not very efficient at converting its sales into actual sales.

The Return on equity of UltraTech Cement Ltd ranges minimum of 8.43 during the year 2017-2018 and maximum of 14.86 during the year 2019-2020. The above ratio shows that the Company utilized the investors funds most effectively. For Ambuja Cement Ltd it ranges minimum of 7.33 during the year 2017-2018 and maximum of 9.73 during the year 2018-2019. The Return on equity was increased in the year 2018-2019. Return on equity of ACC Cement Ltd ranges maximum of 14.43 during the year 2018-2019 and minimum of 9.88 during the year 2017-2018. The company need to improve their investors return. The Return on equity for three years from 2017-2018 to 2019-2020 are calculated and presented in the above table. The above figures mentioned that, the UltraTech Cement Ltd. is showing upward trend and the company utilized the investors funds most effectively. Ambuja Cement Ltd. ratio was increased in the year 2018-2019 that means the company utilized their funds effectively and need to improve its position. Hence, from the above table it is understood that UltraTech Cement Ltd. earned more net income than other companies. It also revealed the profit generated by the company with the money invested by the shareholders. The Earnings per share for three years from 2017-2018 to 2019-2020 are calculated and presented in the following line graphs (Figure 2). The table shows that UltraTech Cement Ltd. has the highest earnings per share ratio. The profitability position is increasing year by year. EPS is not efficient for Ambuja Cement Ltd. and it's not suitable for generating a significant dividend for investors. The profitability situation of ACC Cement Ltd. is not much better.

Based on the ratio calculation, it is found that the liquidity position of the ACC Cement Ltd. is much better than other company. UltraTech Cement Ltd. is required to improve its liquidity position. The company should maintain current assets to improve position of the company. The liquidity position of Ambuja Cements Limited is increasing year by year. The quick ratio for three years from 2017-2018 to 2019-2020 are calculated and presented in the table-1.

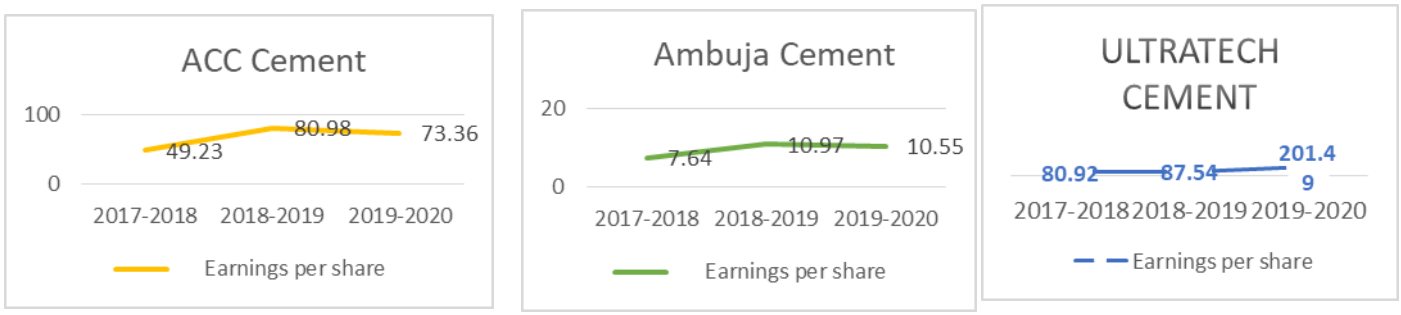


Figure-2 Comparative Earning Per Share values

The above figures shows that, the UltraTech Cement Ltd. has the assets to pay its short- term liabilities. The liquidity position of Ambuja Cement Ltd. is very good. The ratio indicates that, the company can meet its current financial obligations with the available quick funds on hand. ACC Cement Ltd. indicated that the company has too much inventory or other assets to pay its short-term liabilities. Therefore, from the above table it is understood that quick ratio is good for Ambuja Cement Ltd. and ACC Cement Ltd.

Conclusion

Among the Current ratio analysis, highest current ratio was 1.60 in ACC Cement Ltd and lowest current ratio was 0.90 in UltraTech Cement Ltd. The current ratio position of Ambuja Cement Ltd is also good. In the Quick ratio analysis, highest quick ratio was 1.36 in ACC Cement Ltd. and 1.35 was in Ambuja Cement Ltd. It was also seen that lowest quick ratio was 0.65 in UltraTech Cement Ltd. Which shows that ACC Cement Ltd has a good quick ratio as compared to other companies. In the Net profit ratio analysis, the highest net profit ratio was 13.79 in UltraTech Cement Ltd and the lowest net profit ratio was 8.70 in ACC Cement Ltd. It clear that UltraTech Cement Ltd. earns more net profit than other companies other companies and it is more efficient in converting its sales into actual profit. Among the Return on Equity ratio analysis, the highest return on equity was 14.86 in UltraTech Cement Ltd. and the lowest return on equity was 8.70 in Ambuja Cement Ltd. It was observed that UltraTech Cement Ltd earns more net income than other companies and profit was generated by the company with the money invested by the shareholders. UltraTech Cement Ltd. had the highest earnings per share at 201.49 and Ambuja Cement had the lowest earnings per share at 10.55.

It has been observed that UltraTech Cement Ltd is suitable for generating a significant dividend for investors as compared to other company. In the analysis of sales trend during pandemic, the highest sales was 7,633 of UltraTech Cement Ltd. and lowest sales was 2,602 of ACC Cement Ltd.

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Social Security Schemes by Government of India: An Evaluation

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Abstract

India is a democratic country where our government is committed for the welfare of its citizens. Our government has imposed various schemes which are controlled by it with the objective to provide social benefits to the society as a whole or at times to some specific segments. These schemes were launched on May 9, 2015 for providing life and accident risk insurances at affordable cost, medical benefits, unemployment benefit, family allowances, working injury compensation and public assurance. To achieve these objectives various retirements, disability and supplementary benefits were announced by the government.

The objective of the present paper is to encompass all those social security schemes announced by government of India since 2015 and evaluate their importance for the underserved segment of the society.

Keywords: India, Welfare, Under segment section, Insurance, Social Security

INTRODUCTION

The aim of any government is the welfare of its people. The government strives to provide schemes such as food policies, insurance policies and farmer welfare policies for the welfare of the general public. Providing long-term social security is likely to result in the sustainable development of the country.

One of the welfare schemes provided by the Government of India is the social security scheme. The Social security scheme aims to confer security to the people, especially in their old age when they may no longer be able to earn a livelihood. It also includes an insurance scheme that grants financial protection from several factors including sickness, accident and unemployment. This scheme benefits not only the insurers but also their spouses and family as in the event of death of the insurer, the insured pension amount is made available to the spouse/family.

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In 2018, the Melbourne Mercer Global Pension Index ranked India second lowest among 34 countries in providing its senior citizens retirement income systems with good benefits. The study also states that India has diverse demographics and macro-economic factors, and thus its pension schemes need to be aligned with other schemes and programs available to the citizens.

According to the findings of the Insurance Regulatory and Development Authority of India (IRDAI), as published in the handbook on Indian Insurance Statistics (2016-17), 328 million life insurance policies were active in India in 2017. Even if it is assumed that there is a unique policy holder for each insurance, still only about 25% of the Indian population has a life insurance. Thus, a minimum of 75% or 988 million people in India have no life insurance cover. This leaves a huge number of Indians financially vulnerable in the unfortunate circumstances of the death of the primary earner of the family. The instability is felt more severely by the members of the unorganized sector of the economy, which accounts for most of the rural and a significant part of the urban labor force in India. More than 90% of the total 500 Million Indian workforce belongs to the unorganized sector. These individuals are deprived of not only the security of a minimum wage but also of any kind of social and financial security, whether in the form of pension or insurance. Thus, about 450 million Indian workers and their families (which is more than the entire population of the USA), live under a constant threat of financial instability. This "informal workforce" of India faces higher risks- they often work in hazardous conditions, have a volatile source of income, and are devoid of any old- age benefits. These risks can be minimized through insurance schemes.

Understanding the need of a universal social security system for all Indians, especially the poor and the under privileged, three general welfare schemes were announced in the Parliament under the 2015-2016 budget. All three schemes- "Pradhan Mantri Suraksha Bima"(PMSB),"Pradhan Mantri Jeevan JyotiBimaYojana"(PMJBY) and "Atal Pension Yojana" (APY)—aim to provide social security to the uncovered segment of the Indian population and were launched simultaneously across 115 locations on 9th May 2015.

Pradhan Mantri Suraksha BimaYojana (PMSBY)

PMSBY covers insurance for accidental death. It is common for the middle and rich class to opt for accidental insurance, but it is difficult for the poor to avail any cover. PMSBY would allow even the financially weaker sections to be able to afford such insurance at a very low cost. The scheme is applicable to people in the age group of 18 to 70 years that have a functional bank account. An annual premium of Rs 12 will be auto debited from the insurer's account on or before 31st May every year. This policy gives risk coverage of Rs 2 Lakh in case of accidental death and permanent full disability, and Rs 1 Lakh for permanent partial disability.

Banks have reported a cumulative gross enrolment of Rs 15.47 crore (Subject to verification of eligibility) under PMSBY till 31 March 2019. Out of the 40,749 claims registered, 32176 have been disbursed.

Pradhan Mantri Jeevan BimaYojana (PMJBY)

People in the age group of 18-50 years are covered under PMJBY. The risk coverage is Rs 2 lakh in case of death and the premium amount is Rs 330 P.A. The premium amount will be auto debited in one installment from the insurer's bank account on or before 31st May annually. The insurer must have a bank account for which the KYC document used is Aadhar card.

This scheme is provided by Life Insurance Corporation of India and other insurers who are willing to offer the policy under similar terms and tie up with banks for this purpose.

As on 31st March, 2019, cumulative gross enrollment reported by banks (Subject to verification of eligibility) is over Rs 5.91 crore under PMJBY. A total of 1, 45,763 claims were registered of which 1, 35,212 have been disbursed so far.

Atal Pension Yojana (APY)

As the name indicates APY, is a pension scheme offering a guaranteed monthly pension of minimum Rs 1,000, Rs 2,000, Rs 3,000 or Rs 4,000 (depending upon the contribution), once the subscriber is of 60 years of age.

The aim of the scheme is to provide the benefits of pension to people working in the unorganized sector, so that they do not have to worry about livelihood in their old age. It is also applicable to those people who are working in the private sector where pension benefits are not provided under the terms of their job. The amount of pension received depends on the amount of contribution and the age of the insurer. In case of the insurer's death, the spouse can claim the pension and in case the spouse also dies, the nominee mentioned will be returned the corpus accrued.

Atal Pension Yojana is managed by the Pension Regulatory Development Authority of India (PFRDA) under the instructions of the Government of India. Under APY, the government ensures a minimum pension even if the rate of return on the accumulated contribution is not enough to provide the minimum guaranteed pension. The balance amount will be funded by the central government. If the rate of return is high, the pension amount will be hiked.

As on 31st March 2019, a total of 149.53 lakh individuals had been enrolled under APY with a total pension wealth of Rs 6,860.3 crores.

"Pradhan MantriShram Yogi Maan-Dhan (PM-SYM)"

Along with APY, another grand pension scheme was introduced – Pradhan MantriShram Yogi Maan-Dhan. The scheme targets the unorganized laborers whose monthly income is up to Rs. 15,000- which includes a large variety of unorganized labor class belonging to the low-income group such as street vendors, rickshaw pullers, construction workers, rag pickers, and agricultural workers. The monthly contribution is Rs 55–200, depending on the age. The government contributes an equal amount monthly and the subscribers receive a monthly pension of Rs. 3,000 once they attain the age of 60 years.

All the above-mentioned schemes will help ease the financial worry of individuals who had no support or relief in the event of a sudden tragedy. These schemes will also promote a culture of saving and investments among the poor and lower middle class sections of the society. Of course, poorer sections of the society will have the greatest benefits of the schemes.

Not only in the urban areas, but in rural India also, thousands of people and families are now being covered under these schemes.

However, there is a flip side to it as well. The schemes are not beneficial to the banks. Since the pricing has been kept low, the revenue is also low. Some banks have claimed that the amount they are receiving is not sufficient to cover the service costs.

Unlike other insurance policies, it is not necessary to submit either a health certificate or pre- existing disease information while applying for these new insurance policies.

Moreover, there is a possibility of the individual applying for the same policy more than once, with two different lenders. To avoid this, a strong data bank would be needed to be maintained by the banks.

No doubt, welfare policies have been framed very attractively, but at the same time, effective implementation is also required to achieve the intended objectives of inclusive and equitable growth.

The underserved sections of the society would not be able to enjoy the benefits unless they have appropriate information. For this it is required that the underserved people should be well informed through different various ways so that they can reap the benefits of the social security schemes.

India has the largest youth population in the world (UN report) (The Economics Times 18, November, 2014). The youth is full of potential and is characterized by many positive characteristics, including high expectations, drive to lead and innovation. Indians have been evolving culturally as well and have incorporated many factors of the western world. Indians are no longer rigidly following old habits and methodologies and are open to new ideas and ways of thinking.

The future looks promising for this generation aided by new social security schemes with several changes in its implementation and regulatory framework that will enhance the welfare of the society.

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A Sectoral Analysis of PCR and Gross NPA Ratio: An Explanatory Study on SBI

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Abstract:

Wealth creation in the bank based economy relies on the performance of its banking sector which provides the supply of money and enhances credit creation. Creation of credit augments the opportunities to generate employment which fuels up with the economic development. But excess credit creation without considering the risk associated with it depletes the economic output over the time horizon. Easy credit availability for the short term gain to compete in the financial market is the pertinent problem faced by the banking system in recent time. Therefore, provision is an important tool in banking practices that has been employed to reduce the risk of borrowers' failure to repay their liabilities to the bank. As higher NPAs require higher loan provisions which means a large portion of the profits need to be kept untouched to protect bad assets, so it hampers the profitability significantly. This study evaluates the growth of NPAs and the growth of provisions under housing, education and agriculture category so that volatility under credit risk can be identified and efficient credit risk management tools and stringent policies can be implemented. The result of our analysis shows the significant negative impact of Housing sector advances on total NPA and lower Provisions Coverage ratio of SBI during the study period. Concrete efforts have to be made to improve recovery performance.

Keywords: Gross NPA, Provisions Coverage Ratio, Credit Risk, Asset Quality, State bank of India.

Introduction:

Banking sector plays a vivacious role for the economic growth and development of any nation. In India, banking sector has seen a rapid growth in the post reform period. However this sector is facing big threat to its growth which is Non-Performing Assets (NPAs). In present scenario, growing NPAs is the core of financial fragility and is one of the major concerns for banks in India. NPA reflects the underperformance of banks as well as its inefficiency. A high level of NPAs of commercial banks reflect high probability of a large number of loan defaults that will create adverse impact on profitability, net worth and also erodes the value of the economic assets. create adverse impact on profitability, net worth and also erodes the value of the economic assets.

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Commercial banks, as financial institutions, act as an intermediary between two groups of economic agents- the first one has the surplus of fund and the second one has the need for the investment purpose and employment. Therefore, it acts as the facilitator to create capital formation by supporting trade activities, services, industrial and agricultural, as well as customers' finance to meet their needs through the granting of credit facilities and other banking services. Wealth creation in the bank based economy relies on the performance of its banking sector which provides the supply of money and enhances credit creation. Creation of credit augments the opportunities to generate employment which fuels up with the economic development. But excess credit creation without considering the risk associated with it depletes the economic output over the time horizon. Easy credit availability for the short term gain to compete in the financial market is the pertinent problem faced by the banking system in recent time.

This study focuses on the asset quality of SBI, as a Government –owned heritage bank of India. According to the last quarter (March end) 2019 report, the assets of the bank raised at Rs. 3888467.07 crores and had more than 22010 branches and 43.51 crores customers for providing financial services. Forbes has ranked SBI as 216th position in its 'Fortune Global 500' list which includes the largest corporation around the world. The bank also enjoys its international presence with 195 branches set up in more than 30 countries (September, 2020).SBI report declared that bank's total advances stood at 23.85 lakh crore of which domestic advances remained at Rs. 20.41 lakh crore, where corporate and retail personal loan was 39.65% and 36.69% respectively in domestic advances. Banking sector reforms were initiated to upgrade the operating standards, health and financial soundness of banks to internationally accepted levels in an increasingly globalized market. A Non - Performing Asset or NPA, in a narrow sense, may be defined as an asset which does not directly contribute to the corporate profits or yield any positive returns. It is a credit facility in respect of which the interest and/ or installments of principal has remained "over- due" for a specified length of time. With an aim to moving towards the international best practices and ensuring greater transparency, a standard criterion of "90 days" overdue norm was fixed for identification of NPA from Fiscal Year ending March 2004 in the Indian financial system. Amongst the various desirable characteristics of a well-functioning financial system the maintenance of NPA is prerequisite for sustainable banking practices.

NPAs beyond a certain level are indeed cause for concern for economic wellbeing because credit is essential for economic growth and NPAs affect the smooth flow of credit. Thus when a loan becomes non-performing, it affects recycling of credit and credit creation. Apart from this, NPAs affect profitability as well, since higher NPAs require higher provisioning, which means a large part of the profits need to be kept aside as provisions against bad loans. According to banking guidelines, commercial banks are required to keep aside a certain portion of their loan assets as a safeguard against unprecedented losses aroused by non-recovery of loans. In recent times, banks are more exposed to credit risk due to the huge amount of money channelized to the customers through loans and advances which may threat the stability of the financial system. The solution introduced in the banking sector in order to reduce credit risk exposure is by keeping some portion of capital as loan loss provisions.

Therefore, provision is an important tool in banking practices that has been utilised to reduce the risk of borrowers' failure to repay their liabilities to the bank. Commercial banks are not only raising resources on deposits liability but also by recycling the financial resources received from the existing borrowers. Therefore, when a loan becomes non-performing, it adversely affects the recycling of credit and in turn capital creation. Thus the concern of NPAs is not only for banks but a concern for Government as well. As on 31stMarch 2017, Government of India held around 61.23% equity shares in SBI. The Life Insurance Corporation of India, itself state-owned, is the largest non-promoter shareholder in the company with 8.82% shareholding, therefore higher loan loss provisions are not only the loss of profit of SBI but it has great impact on economic health of country as well.

Provisions Coverage Ratio (PCR) as a factor to measure Credit Risk:

Provisions Coverage Ratio (PCR) is essentially the ratio of provisioning to gross non-performing assets. It indicates the extent of funds a bank has kept aside to cover loan losses. From a macro- prudential perspective, banks should build up provisioning and capital buffers when profits are satisfactory, then can be used for absorbing losses in a downturn. This will enhance the soundness of individual banks, as also the stability of the financial sector.

It was, therefore, decided that banks should augment their provisioning cushions consisting of specific provisions against NPAs as well as floating provisions, and ensure that their total provisions coverage ratio, including floating provisions, is not less than 70 per cent. Majority of the banks had achieved PCR of 70 percent and had represented to RBI whether the prescribed PCR is required to be maintained on an ongoing basis. The matter was examined and RBI introduced a more comprehensive methodology of counter cyclical provisioning taking into account the international standards developed by Basel Committee on Banking Supervision (BCBS).

This study, analyses the cross sectoral NPA levels of State Bank India (SBI), one of the largest public sector banks in India. The purpose of this research is to show the contribution of three main sub sectors i.e., Housing or real estate sector, Education sector and Agricultural or primary sector to the total NPA of SBI in the past ten years (2008-2017). This study evaluates the growth of NPAs and the growth of provisions under housing, education and agriculture category such that volatility under credit risk can be identified and efficient credit risk management tools and stringent policies can be implemented. The result of our analysis shows the significant impact of Housing sector advances on total NPA and lower Provisions Coverage ratio of SBI during the study period. Concrete efforts have to be made to improve recovery performance. This study is beneficial to the banking sector, regulators of banks and investors respectively. Lastly, measures to rectify NPA is explored which determines the required preventive and corrective actions of NPA management, the technological advancement in managing and prior warning the officials seems to be crucial.

Review of Literature:

Aamir Azeem, Amara (2014) stated in the research article, “Issue of non- performing Loans (NPLs) to be vital for banking system since its evolution”. It is a well-known debate among bankers to mitigate problem of NPLs by different policies and methods. Impact of NPLs had been quantified in this article with data of sixteen major banks irrespective of size, ownership and functionality, from 2006 to 2012 by using panel fixed effect model. It had been revealed that impact of NPLs on profitability is negative.

Chaitanya.V.Krishna(2004) inferred that a strong banking sector is important for flourishing the economy as “the failure of the banking sector may have an adverse impact on other sectors. Non- performing assets are one of the major concerns for banks in India. NPA reflects the performance of banks”.

Chaudhary & Singh (2012) reviewed banking sector reforms proposed by Narasimham Committee to study the problems faced by Indian banking sector and suggested relevant measures to revitalize the sector. They identified NPA as a major threat and thus the measures embarked on transformation of the Indian banking sector into a viable, competitive and vibrant sector. The recommended measure was “to improve operational flexibility and functional autonomy so as to enhance efficiency, productivity and profitability”.

C.S. Balasubramaniam (2012) investigated the Indian banking system financial sector to bring down NPA to improve the profitability and overall financial health of the banks in general.

Das. Abhiman (1997) introduced a decomposition model to compare the interbank performance of public sector banks during the reforms period. He analyzed a certain convergence in performance. He also found that while there is a welcome increase in emphasis on non-interest income, banks have tended to show risk-averse behaviour by opting for risk-free investments over risky loans.

Das and Dutta (2014) studied the NPA of Public sectors banks in India using ANOVA and SPSS software. Secondary data collected from RBI database of 6 years (2008-2013), it was found that there is no significant variances.

Ganeas and Santhane Krishna (2013) inferred that sound financial position of banks depend upon the recovery of loans or its level of NPAs. The study emphasized on evaluating the NPAs of SBI since 2002. The scientific analytical statistical work was carried out by secondary data collected from SBI annual reports and RBI bulletins and the primary data in form of pre structured questionnaire. The study highlighted the importance of credit management and prescribed that Government of India should also initiate the regulatory steps to reduce NPAs at considerable and manageable level.

Patidar Suresh & Kataria Ashwini (2012) conducted the study to analyze priority sectors lending by selected public and private sector banks in India. They assessed using statistical tools like regression analysis, ratio analysis and t-test and found that there is significant impact of priority sectors lending on total NPA of public Sector banks whereas in case of private sector banks, there was no significant impact of priority sector lending on total NPAs of banks.

Also, the result showed significant difference between NPA of SBI and its associates, Old Private Banks and New Private Banks with the NPA of Nationalized Banks, the benchmark category.

Pradhan Tanmaya Kumar (2012) found that “higher level of NPA forced the banks to charge higher PLR and PLR related interest rates. This attract high risk borrowers which, in turn, may result in higher level of non-performing advances in future. Large borrowers are found to be the principal defaulters. Mismanagement or diversion of fund is also one of the main causes of NPA”.

Rao and Patel (2015) emphasized to analyse and interpret the NPA management from the year 2009 to 2013 of public sector, private sector and foreign banks. The research paper used ratios related with NPAs, Least square method and Annova test. The paper revealed that ratio of Gross NPA to Gross advances for public, private and foreign banks do not have significant differences and estimated Gross NPA for 2014 was more in public sector banks as compared to private and foreign banks.

Reddy (2004) critically examined the various issues pertaining to terms of credit of Indian banks. In this context, it was viewed that “the element of power has no bearing on the illegal activity. A default is not entirely an irrational decision rather a defaulter takes into account probabilistic assessment of various costs and benefits of his decision”.

Saxena Shipra (2013) said that “the concept of Non-Performing Asset (NPA) can be understood in simple terms of an asset, which ceases to yield income to the bank”. The study is aimed at understanding the concept of non - performing assets and the efforts on behalf of the banks and financial institutions in harnessing the NPA. “The growth in NPA can be checked considerably if banks and financial institutions take suitable internal measures”.

Shalini (2013) studied the impact of different variables on non performing farmers and difficulties faced by Indian farmers in paying back borrowed amount with regular payment of interest. Data collected from both methods along with Telephonic interview method and chi square analysis test. The research paper inferred that bankers should focus on post sanction inspection and farmers should beware regarding the effects and consequences of defaulting.

Sharda, Gaurav & Swamy Namratha, Singh Charan (2014) examined the impact of foreign banks on Indian economy. Further, it discusses the various opinions toward the foreign banks operations in the host country, with India as the example.

Singh (2018) examined the relationship between Gross NPA and the Net Profit of selected four banks, i.e., SBI, nationalized bank and foreign banks through the correlation analysis. The outcome of the study showed that all the banks had a negative correlation between Gross NPA and Net Profit. Researcher concluded that NPA damages the performance of financial institution both financially and psychologically, especially PSBs must focus on their NPA management to improve their profitability.

Singh. Balraj (2011) analyzed that a high level of NPAs affect the profitability and net worth of banks and also erodes the value of the asset.

SBI Research Department (2000) stated that the problems of NPAs and capital adequacy remain to be taken care of. Researchers inferred that greater operational flexibility and functional autonomy should be given to SBI especially to strengthen their capital base. As far as NPA s are concerned, they believe that the outdated laws and regulations that pose hindrance to banks in getting back their dues need to be suitably amended.

Veera Kumar (2012) in "Non-Performing Assets in Priority Sector: A Threat to Indian Scheduled Commercial Banks" aimed to find out the categories of priority sector advances which contribute to the growth of total priority sector NPAs during the study period of 10 years between 2001-02 and 2010-11. The researcher found that, the Gross NPAs of Scheduled Commercial Banks had been increasing year after year. The NPAs in priority sectors were more in Public Sector Banks when compared to private and foreign banks.

Zahoor Ahmad (2013) examined the ranks of individual banks as per their performance in management of NPA and also tested that there is significant difference in the level of NPA of nationalized banks which reflect their varied efficiency in the management of NPA.

The Indian viewpoint alluding to the concepts of 'credit culture' owing to Reddy (2004) and 'lazy banking' owing to Mohan (2003) has an international perspective since several studies in the banking literature agree that banks' lending policy is a major driver of NPA (McGovern 1993, Christine 1995, Sergio 1996, Bloem & Gorters, 2001). This attributes to lower efficiency in banking practices achieved by the bank.

Past studies have observed that both bank specific and macroeconomic factors impacts on the loan portfolios of commercial banks in India. Further, the commercial banks which are aggressive and charge relatively higher interest rates incur greater NPAs. It has been revealed that large banks are not necessarily more effective in screening loan when compared to their smaller counterparts as there is no significant relationship between the size of a banking institution and the level of NPAs, reports (Dash & Kabra, 2010) a synoptic view of the literature brings to the fore insights into the determinants of NPAs. A considered view is that banks' lending policy could have crucial influence on non-performing loans.

Research Objectives:

- To understand the significance of Provisions Coverage Ratio (PCR) and Gross NPA Ratio (GNPAR) as a crucial factor to measure credit risk in commercial banking.
- To identify the separate PCR for disaggregated loan data of SBI in the selected time periods of the study.
- To analyse the impact of provisions on credit risk management of SBI for agriculture, education and housing loan sector.
- To evaluate the concentration of credit risk within three types of asset quality considered in the study.

RESEARCH METHODOLOGY

A. Research Design:

In this research, explanatory research design is used to find the relationship within the important financial ratios to assess and analyse credit risk exposure of SBI from the time period of 2008 to 2017. Though the research starts with the relevant description of the required variables, ultimate aim is to enquire the extent in which the sector wise loan portfolio under combined of priority and non-priority sector is exposed to credit risk which adversely impact the financial health of SBI.

Data collection technique:

1. Secondary data:

The present study has been conducted on the basis of secondary data and is descriptive in nature. The study period is confined to a period from 2008 to 2017. The required secondary data for the study was collected through annual reports of SBI, RBI Annual Reports.

The data points are limited till 2017 because the segregated data was not available in same manner.

2. Tool used for analysis:

To make the analysis meaningful in respect of the objectives of the study Ratio analysis, Descriptive statistics limited with mean, standard deviation, correlation, and regression analysis are done with the help of Excel.

Variables estimated in this study are as follows:

1. Gross NPA ratio (GNPAR) of Agricultural, Educational and Housing loan.
2. Provisions Coverage Ratio (PCR) of Agricultural, Educational and Housing loan.
3. Growth of Gross NPA
4. Growth of Provisions

Estimation of the variable:

- Gross NPA ratio= (Gross NPAs/Gross Loans & Advances)*100
- Provisions Coverage ratio = (Total Provisions/ Gross NPAs) * 100
- Growth of Gross NPA = $((\text{Gross NPA}_t - \text{Gross NPA}_{t-1})/ \text{Gross NPA}_{t-1}) * 100$
- Growth of Provisions = $((\text{Provisions}_t - \text{Provisions}_{t-1})/ \text{Provisions}_{t-1}) * 100$

Statistical estimation derived in the study:

1. Correlation of the series of Gross NPA and Provisions Coverage Ratio
2. Correlations of the series of Provisions and Provisions Coverage Ratio
3. Correlation of the series of Gross NPA and Gross NPA ratio
4. Correlation of the series of Total advances and Gross NPA ratio
5. Standard Deviation of PCR
6. Standard Deviation of GNPAR
7. Regression analysis of Provisions and Gross NPA

Data Collection and Interpretation:

Table 1: Financial ratios of Agricultural Loan							
Year	**Total Gross Advances (in crores)**	**Gross NPA**	**Gross NPA Ratio**	**Pro-visions**	**Provisions Coverage Ratio**	**Growth of NPA**	**Growth of Provisions**
2008	23,35,750	55695	2.38	2001	3.59		
2009	548540	54678	9.96	2475	4.53	-1.83	23.69
2010	2019847.54	61605.35	3.05	5148	8.36	12.67	108
2011	1560652.13	51189.39	3.28	8792	17.18	-16.91	70.78
2012	893613.96	39676.46	4.44	11546	29.10	-22.49	31.32
2013	533185.05	25326.29	4.75	11368	44.89	-36.17	-1.54
2014	394644.24	19534.89	4.95	14229	72.84	-22.87	25.17
2015	1335424	23796	1.78	17284	72.63	21.81	21.47
2016	1509500	98173	6.53	26984	27.49	312.56	56.12
2017	609222	201560	33.08	32247	15.99	105.31	19.50

Descriptive statistics: Provisional Coverage Ratio (Agriculture)
Mean = 29.66
Median = 22.33
S.D = 25.94
$r_{Prov, PCR}$ =Correlation between Provisions and Provisions Coverage Ratio = 0.29
$r_{GNPA, PCR}$ =Correlation between Gross NPA and Provisions Coverage Ratio = -0.44

We find that there is a weak negative correlation between Gross NPA and Provisions Coverage ratio of SBI in the agricultural sector. Statistically, for every 100% rise in Gross NPA, there has been a fall of 44% in Provisions Coverage Ratio of the SBI and there is a weak positive correlation between Provisions and Provisions Coverage Ratio, statistically for every 100% rise in Provisions, there has been an increase of 29% in Provisions Coverage Ratio. It is also evident that in the agricultural sector, SBI has the highest Provisions Coverage ratio (72.83) in the year 2014 and the lowest in 2008 (3.59).

Descriptive statistics: Gross NPA Ratio (Agriculture)
Mean = 22.33
Median = 4.595
S.D = 9.32
$r_{GNPA, GNPAR}$ =Correlation between Gross NPA and Gross NPA Ratio = 0.91
$r_{TAdv, GNPAR}$ =Correlation between Total advances and Gross NPA Ratio = -0.42

We find that there is a strong positive correlation between Gross NPA and Gross NPA ratio of SBI in the agricultural sector. Statistically, for every 100% rise in Gross NPA, there has been an increase of 91% in Gross NPA Ratio of the SBI and there is a weak negative correlation between Total advances and Gross NPA Ratio, statistically for every 100% rise in Total Advances, there has been a fall of 42% in Gross NPA Ratio. It is also evident that in the agricultural sector, SBI has the highest Gross NPA ratio (33.08) in the year 2017 and the lowest in 2015 (1.78).

Graphical Representation of Gross NPA Ratio for Agricultural Loan:

Following chart shows the Gross NPA ratio of SBI for the past ten years (2008-2017). It can be seen that after 2009, there was a declining trend till 2015. In 2015, there was a steep decline in the ratio which reflects that the significant improvement of credit risk profile. There was a uniform fluctuation until the year 2017, when the Gross NPA ratio reached its peak with It is evident from the chart 1 that Gross NPA has been considerably low in the year 2015.

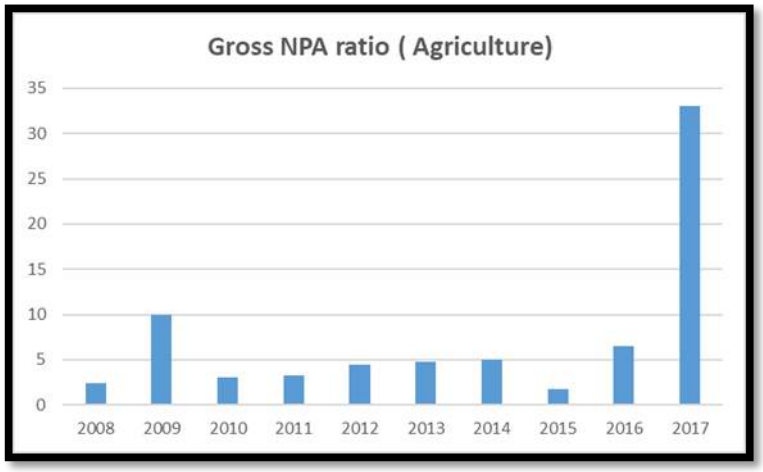


Chart 1

This is due to the good monsoon seasons in these years. As agriculture in India is highly dependent on the monsoons, owing to good monsoon seasons, the farmers were able to repay their loans. But, the year 2017 witnesses the maximum amount of NPA. The Gross NPA ratio in 2017 (33.08%) has increased almost 5 times than that in 2016 (6.53). This can be mainly attributed to existing policy prescriptions such as mandatory agricultural credit target, fulfilling credit targets declared in the Annual Budget and aggressively marketing Kisan Credit Cards. It is pretty evident from the above table that the outstanding agricultural credit has been increasing over the years.

PCR in Agricultural Sector

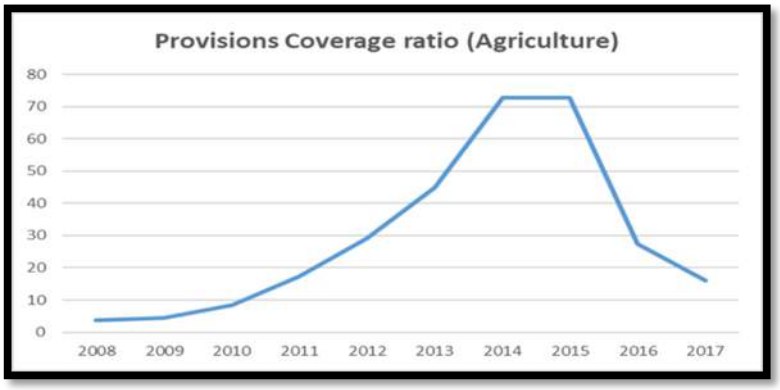


Figure 1

The figure 1 depicts that Provisions Coverage Ratio (PCR) was significantly low from 2008 to 2011 in agricultural sector. After that it has an upward trend and reached at maximum level at 72% in 2014 and 2015 consequently due to the reduction of Gross NPA in 2013, 2014 and 2015. In 2016 the growth of Gross NPA shoot up very high at 312.56%, so Provisions Coverage Ratio declined that represent as higher credit risk exposure in agriculture sector. Although the growth of NPA has been reduced from 312.56 in 2016 to 105.31 in 2017, but the Provisions Coverage Ratio reduced at 15.98% in 2017 due to the reduction of the growth of total provisions set by SBI**.**

Provisional coverage ratio as one of the factor to measure credit risk was continuously increasing from 2008 to 2015, which infers that the credit risk in agricultural loan of SBI was reducing which was a good indicator to measure the financial health of SBI in the exposure of agricultural loan, but 2016 and 2017 loan data disappoints in the field of credit risk exposure as the PCR was significantly reduced to 15.99 in 2017 from 72.63 in 2015. If the increase of credit risk in this priority sector is due to the favorable policy to support the underprivileged sector in the perspective of development issue of the country and the inclusive policy of the Government then it is not the highly concerned matter.

Table 2: Financial ratios of Educational Loan							
Years	**Total Gross Advances (in crores)**	**Total Gross NPA (in crores)**	**Gross NPA Ratio**	**Provisions (In crores)**	**Provisions Coverage ratio**	**Growth of NPA**	**Growth of Provisions**
2008	2331750	55695	2.388	2001	3.59		
2009	2788424	68216	2.446	2475	3.63	22.49	23.69
2010	3264907	81808	2.505	5148	6.29	19.92	108
2011	3992145	94121	2.357	8792	9.34	15.05	70.78
2012	867578	39676	4.573	11546	29.10	-57.84	31.32
2013	1045616	51189	4.895	11368	22.21	29.02	-1.54
2014	1209828	61605	5.092	14229	23.09	20.35	25.17
2015	1300026	56725	4.363	17284	30.47	-7.92	21.47
2016	1463700	98172	6.707	26984	27.49	73.07	56.12
2017	2044751	81600	3.99	32247	39.51	-16.88	19.50

Descriptive statistics: Provisional Coverage Ratio
Mean = 19.47
Median = 22.65
S.D = 12.82
rProv, PCR =Correlation between Provisions and Provisions Coverage Ratio = 0.881904247
rGNPA, PCR =Correlation between Gross NPA and Provisions Coverage Ratio = -0.092361745

We find that there is a very weak negative correlation between Gross NPA and Provisions Coverage ratio of SBI in the educational loan. Statistically, for every 100% rise in Gross NPA, there has been a fall of 9% in Provisions Coverage Ratio of the SBI and there is a strong positive correlation between Provisions and Provisions Coverage Ratio, statistically for every 100% rise in Provisions, there has been an increase of 88% in Provisions Coverage Ratio. It is also evident that in the educational loan segment SBI has the highest Provisions Coverage ratio (39.52) in the year 2017 and the lowest in 2008 (3.59).

Descriptive statistics: Gross NPA Ratio
Mean = 3.93
Median = 4.18
S.D = 1.48
rGNPA, GNPAR =Correlation between Gross NPA and Gross NPA Ratio = -0.02
RTAdv, GNPAR =Correlation between Total advances and Gross NPA Ratio = -0.79

We find that there is a very weak negative correlation between Gross NPA and Gross NPA ratio of SBI in the educational loan. Statistically, for every 100% rise in Gross NPA, there has been a fall of 2% in Gross NPA Ratio of the SBI and there is a strong negative correlation between Total advances and Gross NPA Ratio, statistically for every 100% rise in Total advances, there has been a decrease of 79% in Gross NPA Ratio. It is also evident that in the educational loan segment SBI has the highest Gross NPA ratio (6.71) in the year 2016 and the lowest in 2011 (2.36).

Graphical Representation of Gross NPA Ratio for Educational Loan

The trend of Gross NPA of SBI from 2008 to 2017 is shown in the chart 2. It is observed that Gross NPA ratio was highest in 2016, followed by a substantial reduction in 2017. Gross NPA ratio was low from the year 2008 to 2011 due to the creation of job opportunities which has empowered borrowers to repay the amount.

SBI failed to recover the loans early to control NPA only in the year 2016 in which it recorded the highest NPA in the past ten years. Perhaps, the bankmust have implemented some strategies to control over NPA in that area by 2017 which had resulted in a substantial decrease from 3.99% from 6.71%. Various policies and financial support of the government related to skill enhancement programmes such as Skill India, Make-in India, would have incentivized people to borrow less from the bank.

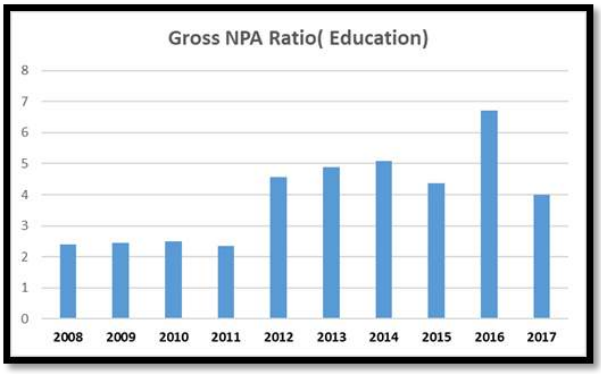


Chart2

Education loans have started bleeding the banking sector with the default in repayment rising. The rise in bad loans in the education loan coincided with the Indian industry battling overcapacity, demand slowdown, stalling of new projects and defaults by top corporates. At the same time, the demand for loans was up as educational institutions, especially engineering and management colleges, mushroomed, without a check on quality.

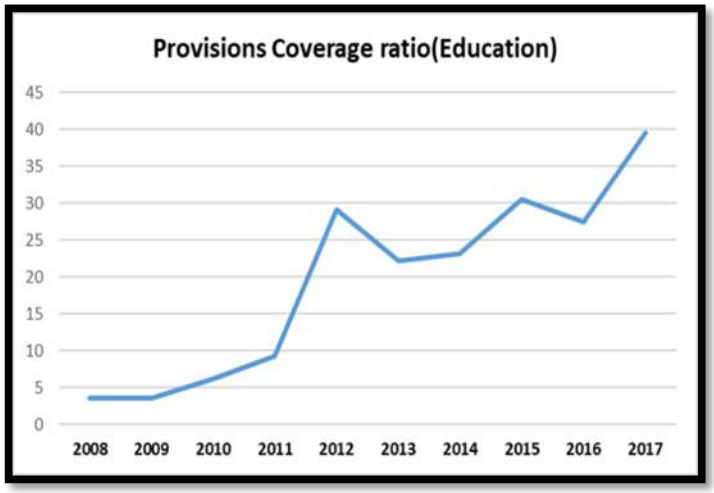


Figure: 2

From the figure 2 it can be analysed that the growth of provisions was very high as 108 compared to the growth of NPA in educational loan sector in 2010 which helped to shoot up Provisional Coverage Ratio of SBI from the previous year. Although NPA growth reduced from 19.92 in 2010 to 15.05 in 2011 but the growth of provisions also set high as 70.78. 2012 marked as -57.84 as the growth of NPA and the growth of provisions also has been reduced from 70.78 in 2011 to 31.32 in 2012 which pushed Provisional Coverage Ratio as 29% which is a satisfactory outcome in respect of credit risk management of educational loan sector of SBI. 2013 and 2014 loan data on the growth of NPA represented as sudden high from – 57.84 in 2012.

Growth of Provisions in 2013 significantly reduced and then it increased in subsequent year 2014 as 25.16%. In 2016 Growth of NPA in education has been increased significantly as 73.06% and provisions growth also increased to 56.12% but Provisional Coverage ratio reduced to 27.48% which indicates as high credit risk exposure in education loan segment. 2017 data shows that the growth of NPA reduced significantly from 73.06% in 2016 to -16.88% and the growth of provisions declined from 56.12% in 2016 to 19.50% in 2017, which signifies better financial health of SBI in respect of credit risk management of educational loan. Provisional coverage ratio as one of the factor to measure credit risk is continuously increasing from 2008 to 2017, which infers that the credit risk in education loan of SBI is reducing which is a good indicator to measure the financial health of SBI in the exposure of Education loan.

Table 3: Financial ratios of Housing Loan

Years	Total Gross Advances (in crores)	Total Gross NPA	Gross NPA Ratio	Provisions (in crores)	Provisions Coverage ratio	Growth of Gross NPA	Growth of Provisions
2008	411476	44626	10.84	2001	4.48		
2009	548540	54063	9.85	2475	4.57	21.15	23.68
2010	641480	71193	11.09	5148	7.23	31.68	108
2011	662444	89914	13.57	8792	9.78	26.29	70.78
2012	757889	102739	13.55	11546	11.24	14.26	31.32
2013	909492	119467	13.13	11368	9.52	16.28	-1.54
2014	1030820	140738	13.65	14229	10.11	17.80	25.16
2015	1100892	159237	14.46	17284	10.85	13.14	21.47
2016	12142683	190552	1.56	26984	14.16	19.66	56.12
2017	222605	283568	127.38	32247	11.37	48.81	19.50

Descriptive statistics: Provisional Coverage Ratio
Mean = 9.332236709
Median = 9.944254182
S.D = 12.82
$r_{Prov, PCR}$ =Correlation between Provisions and Provisions Coverage Ratio= 0.829009472
$r_{GNPA, PCR}$ =Correlation between Gross NPA and Provisions Coverage Ratio= -0.743985627

We find that there is a very strong negative correlation between Gross NPA and Provisions Coverage ratio of SBI in the housing loan. Statistically, for every 100% rise in Gross NPA, there has been a fall of 74% in Provisions Coverage Ratio of the SBI and there is a strong positive correlation between Provisions and Provisions Coverage Ratio, statistically for every 100% rise in Provisions, there has been an increase of 82% in Provisions Coverage Ratio. It is also evident that in the housing loan sector, SBI has the highest Provisions Coverage ratio (14.16) in the year 2016 and the lowest in 2008 (4.48).

Descriptive statistics: Gross NPA Ratio
Mean = 22.91
Median = 13.34
S.D = 36.90
$R_{GNPA, GNPAR}$ =Correlation between Gross NPA and Gross NPA Ratio = 0.74
$R_{TAdv, GNPAR}$ =Correlation between Total Advances and Gross NPA Ratio = --0.25

We find that there is a very strong positive correlation between Gross NPA and Gross NPA ratio of SBI in the housing loan sector. Statistically, for every 100% rise in Gross NPA, there has been an increase of 74% Gross NPA Ratio of the SBI and there is a weak negative correlation between Total advances and Gross NPA Ratio, statistically for every 100% rise in Total advances, there has been a decrease of 25% Gross NPA Ratio. It is also evident that in the educational loan segment SBI has the highest Gross NPA ratio (127.38) in the year 2017 and the lowest in 2016 (1.56).

Graphical Representation of Gross NPA Ratio:

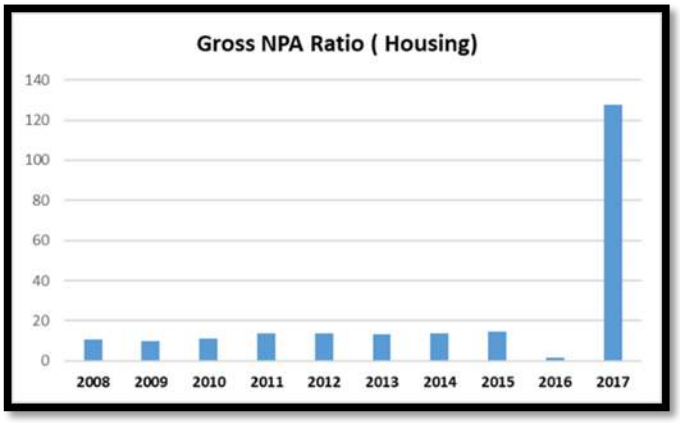


Chart 3

The financial crisis of 2007-08 was related to the bursting of real estate bubbles. A real estate bubble is a type of bubble that occurs periodically typically following a land boom. Chart 3 shows a land boom is a rapid increase in the market price of housing until they reach unsustainable levels and then decline. However, SBI reduced its interest on home loans during that period and was the winner of “Most Preferred Housing Loan Provider” in CNBC Awaaz Consumer Awards.

Towards 2016-17, the real estate sector started collapsing due to increasing costs of financing. Real estate projects in India take long time to complete due to complicated and corrupt regulatory mechanism. According to Mumbai based Market Research Agency, 30% of the transaction in the real estate sector is done with black money. Demonetization of 500 and 100 rupees’ notes proved to be the last straw that broke the black money camel’s back. To top it all, SBI introduced home loans for non-salaried segment (who do not have fixed salary per month) and “SBI Top- Up” scheme, an instant paperless e-top up loan to meet the increased demand for home loans post demonetization. All these factors contributed to the largest Gross NPA ratio of SBI in 2017.

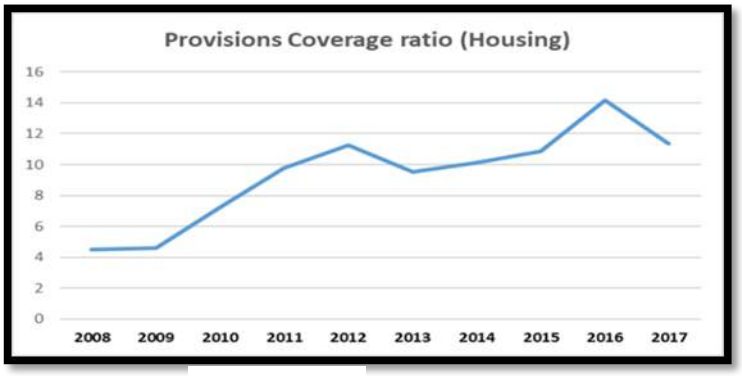


Figure: 3

From the figure 3, it is observed that PCR is very low in housing loan sector which is alarming to the bank under the credit risk assessment and accounting practices. Although graph shows positive trend but the value of PCR is below the average value considered in banking guidelines. Growth of Gross NPA was highest in 2017 as 48.81% but the growth of loan provisions reduced from 56.12% to19.50% which reduces PCR from 14.16 % to 11.37%.

Comparative analysis:

In this study two variables are considered to measure credit risk, as PCR and GrNPAR for the allocation of the three types of assets of SBI, Agriculture (Agr), Education (Edu) and Housing loan (Hou). The comparison of the statistical results are shown below.

Table 4: Descriptive statistics: PC.

	PCR(Agr)	PCR (Edu)	PCR (Hou)
Mean	29.66	19.47	9.33
Median	22.33	22.65	9.94
S.D	25.94	12.82	3.07
rProv, PCR	0.29	0.88	0.83
rGNPA, PCR	-0.44	-0.09	0.74

Table 5 : Descriptive statistics : GrNPAR

	GrNPA(Agr)	GrNPA(Edu)	GrNPA(Hou)
Mean	22.33	3.93	22.91
Median	4.595	4.18	13.34
S.D	9.32	1.48	36.90
rGNPA, GNPAR	0.91	-0.02	0.74
RTAdv,GNPAR	-0.42	-0.79	-0.25

From the above tables it is shown that the standard deviation of Agricultural loan is highest followed by Education and Housing. This result implies that there is more fluctuation in credit risk management in agricultural loan compare to educational and housing. It is because of uncertainty associated with agricultural production which is dependent on climate that is external in nature. The fluctuation of Credit risk management in educational loan which is represented as 12.83 standard deviation is mostly due to the uncertain economic environment of the country. If the economic conditions are favourable then there is less

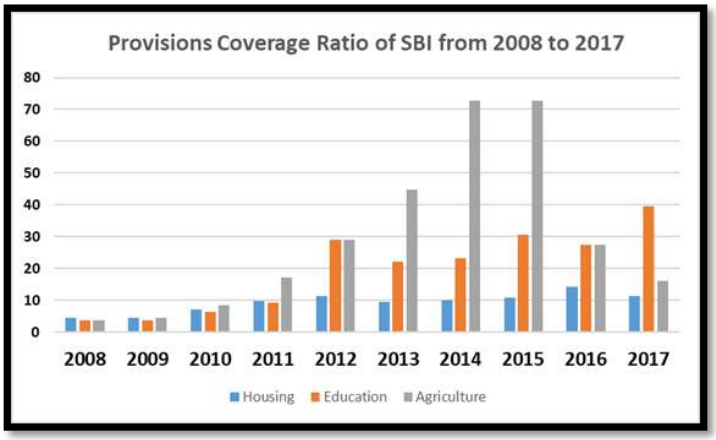
default in educational loan sector of SBI. Housing has lowest standard deviation but very low provisional coverage ratio and very high gross NPA ratio is due to the mismanagement of the credit risk and improper screening and monitoring in this sector.

Graphical representation of Provisional Coverage ratio of SBI:

The key ratio in analysing the asset quality of the Housing, Education and agricultural loan of SBI depicts in the above chart indicates the extent to which the bank has provided the cushion for the weaker part of its loan portfolio. As we know that high ratio recommends that further provisions made by the bank in the following years would be relatively less as the provisions coverage is high.

Chart: 4 Comparisons of PCR

The above graph shows that from 2008 to 2010 there were not much discrepancies of PCR of three types of loan and it also infers that PCR was very less (less than 10%) which is alarming to bank in respect of the asset quality in three different types of assets. In 2012, PCR of Agriculture and Education shoot up but housing was in risky zone which was not showing any improvement compare to previous years. The reason behind the increase of PCR for Education was the opportunity of the creation of employment due to the liberal policies of the Govt in respect of FDI and incentives to private sector. Agriculture also shows high recovery of loan due to favourable monsoon and higher domestic and international demand due to positive global cues in 2014 to 2016. Proper stringent guidelines and effective monitoring is essential in housing loan sector of SBI, otherwise it leads to more vulnerable situation in asset quality.



Graphical representation of Gross NPA ratio of SBI:

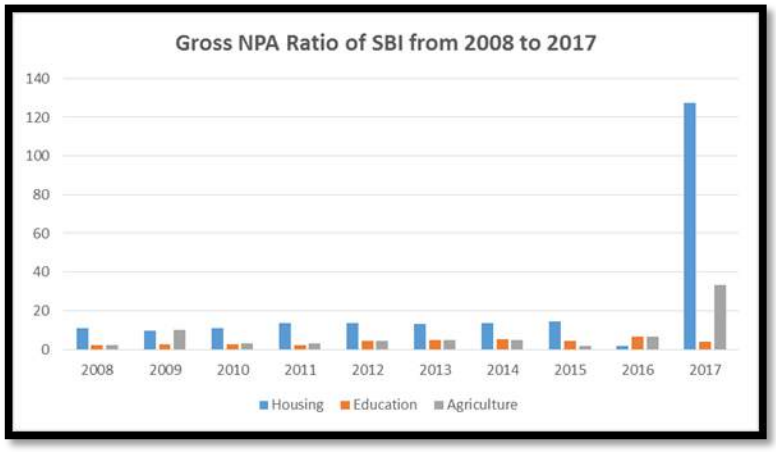


Chart: 5 Comparisons of GNPAR

From the above chart it is shown that Gross NPA ratio was always high in housing compare to other two sectors till 2015, then it declined surprisingly in 2016. 2017 is symbolised as highest abnormal credit risk exposure of SBI in all three sectors but Housing has unprecedented shock compare to other loan assets.

The above statistical results and charts indicate that NPAs for the SBI bank for the asset quality of the housing sector has been rising compare to other two which is a serious note for the bank and the bank should take some strict action to avoid it, proper system of recovery should be expected and the loan portfolio should be revived by the bank.

Regression analysis: Comparisons with Housing, Education and Agriculture Loan:

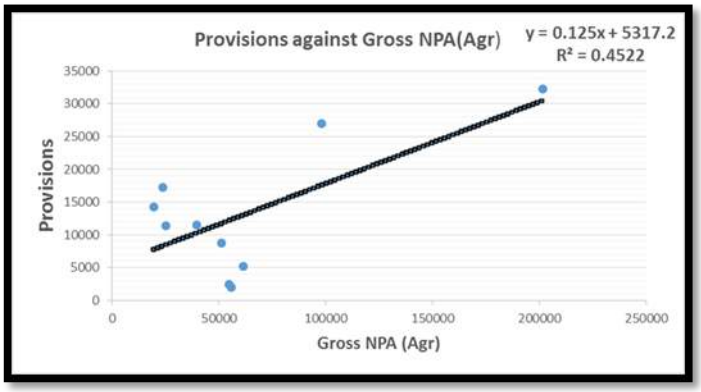


Figure 4: Regression between Provisions and GNPA (Agr)

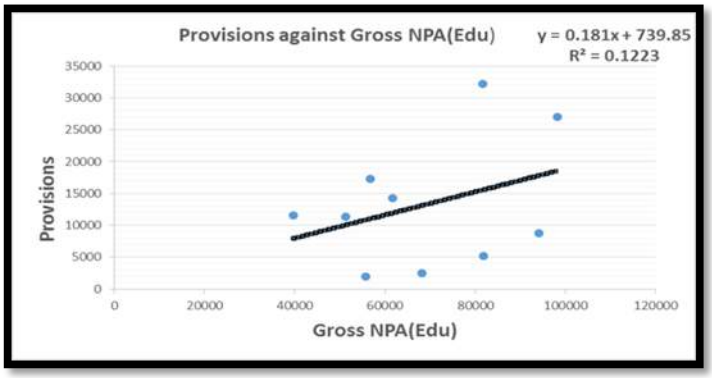


Figure 5: Regression between Provisions and GNPA(Edu)

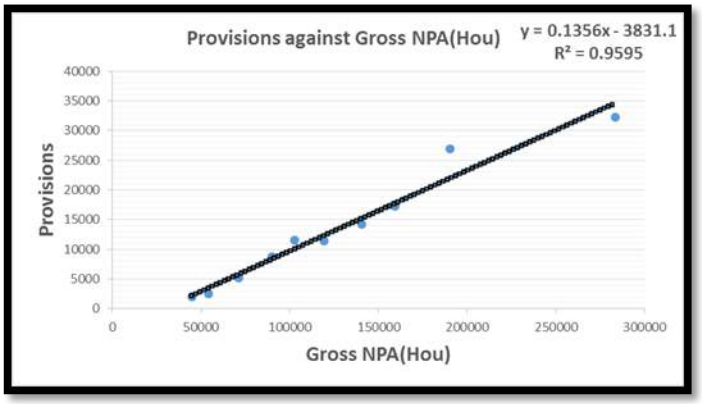


Figure 6: Regression between Provisions and GNPA (Hou)

Figure 4: From the graph it is shown that if there is no Gross NPA in Agr then the provisions kept for safe guard of other bad loan is 5317.

Figure 5: : From the graph it is shown that if there is no Gross NPA in Edu then the provisions kept for safe guard of other bad loan is 739.

Figure 6: For housing loan the regression model states that if there is no Gross NPA then the loan provision amount is – 3831, which indicates bank's potential of income generation and net profit at substantial level.

Interpretation of R Square in Regression analysis:

Statistical estimate R Square denotes the coefficient of determination, gives the contribution made by regression in explaining the variation of the dependent variable. R Square value for housing loan is 0.95 signifies 95% variation of Provisions is explained by the explanatory variable Gross NPA. About 5% are accounted by error or residual terms. R Square value for education loan is

0.12 defines 12% variation of Provisions is explained by the explanatory variable Gross NPA. About 88% are accounted by error or residual terms. R Square value for agriculture loan is 0.45 signifies 45% variation of Provisions is explained by the explanatory variable Gross NPA. About 55% are accounted by error or residual terms. So the model fitted for Education is not accurate, where for agriculture is moderately accurate and Housing is perfectly accurate.

Impact of Gross NPA on Provisions in housing loan sector is highest followed by agriculture and then education in the study period selected in the study. This regression analysis signifies that provisions against bad loans kept by banks to provide safeguard against financial vulnerability has highest impact on Housing loan compare to education and agriculture. The high credit risk in this sector has detrimental impact on the profitability of the banks due to higher loan loss provisions.

As the coefficient value of housing is highest, therefore mean response value Provisions increases at a highest rate for a change in the predictor variable Gross NPA. The reason behind this is due to the very high Gross NPA in housing loan sector compare to education and agriculture.

Findings of the study:

Provisions coverage ratio (PCR) as one of the factor to measure credit risk was continuously increasing from 2008 to 2015, which infers that the credit risk in agricultural loan of SBI was reducing which was a good indicator to measure the financial health of SBI in the exposure of agricultural loan, but 2016 and 2017 loan data disappoints in the field of credit risk exposure as the PCR was significantly reduced to 15.99 in 2017 from 72.63 in 2015.

SBI failed to recover the loans to control NPAs only in the year 2016 in which it recorded the highest NPA in the past ten years for Educational sector. Perhaps, the bank must have implemented some strategies to control over NPA in education by 2017 so that the figure came down to 3.99% from 6.71%. Also, various policies of the government such as Skill India, Make-in India, etc which requires skill enhancement programmes to be built in the academic courses of the educational institutions itself, would have given an incentive to the students to take less loans from the bank. 2017 data shows that the growth of NPA reduced significantly from 73.06% in 2016 to -16.88% and the growth of provisions declined from 56.12% in 2016 to 19.50% in 2017, which signifies better financial health of SBI in respect of credit risk management of educational loan.

PCR is very low in housing sector which is alarming to the bank under the credit risk assessment and accounting practices. Although graph shows positive trend but the value of PCR is below the average value considered in banking guidelines.

Growth of Gross NPA was highest in 2017 as 48.81% but the growth of loan provisions reduced from 56.12% to 19.50% which reduces PCR from 14.16 % to 11.37%. Two parameters estimated in this study, PCR and GNPAR, focuses that housing needs more efficient policy prescription under credit risk management. A macro-economic interpretation of the tremendous failure of SBI in recovering loans and incurring huge losses in housing sector hinders the balanced growth of the economy as there is less credit available for other sectors of the economy.

Conclusions and Recommendations:

Provisions Coverage ratio (PCR) increases by the central bank due to expected downfall of the economy or other shocks created in domestic and international perspectives. This metric assesses a bank's credit risk profile that captures the total provisions held by a bank as a proportion of total Gross NPAs (GNPAs). The risk profile of three sectors are investigated to determine the sector/s where most of the provisions are utilised to protect underperforming assets.

As provisions are the part of profit that stays idle to protect bad assets therefore it is worthwhile to examine the reasons for the growth of provisions. Loan provisions kept by banks as per the guidelines of central bank are covered for all types of loan assets but here concern areas are agricultural, education and housing. The simple regression model fitted here by considering Provisions as dependent variable and Gross NPA as explanatory one. As we have considered only three sectors, so it might not derive accurate results but the analysis may show the meaningful direction towards the most vulnerable one among these. From the regression model it is clear that housing sector only has negative intercept (-3831) and other twos have positive i.e., agriculture (5317) and education (739) respectively. Negative value of provisions signifies additional net profit. Therefore, it can be inferred from this analysis that housing is the most vulnerable among the three sectors studied here.

As the Govt. is constantly infusing more capital to strengthen the capital base of PSBs to enhance economic activity but the proper utilization of the state capital and effective monitoring is prerequisite for the success of banks, otherwise if PSBs continuously incur losses then it would have an adverse impact on economic indicators like GDP growth, inflation, unemployment. Higher Gross NPAs lead to higher requirement of loan loss provisions which is the idle capital in the banking system.

The growth of NPAs can damage the economy in two aspects, one is the capital loss due to default payment of loan and another is the idle capital kept for the safeguard against the zero yield NPAs. Both the aspects generate enormous financial loss which lead to lower growth of GDP. According to banking practices it is recommended to maintain higher Provisions Coverage Ratio to strengthen the financial stability of commercial banks. But due to the growth of Gross NPAs on the loan assets banks have to increase their loan provisions significantly which lead to the reduction of net profits of banks. This study concluded that most of the provisions are kept due to the bad debt created in the housing sector, therefore banks should be cautious to create more assets in this segment and new potential sectors should be identified which can have more balanced risk-return portfolio.

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A Study on Evaluation of Consumer attitude towards Electric Vehicles

Pankaj Chauhan[1]
Karmendra Singh[2]

ABSTRACT

This research paper focuses on the consumer attitude towards electric vehicles, policies as well as consumers awareness, preference and consumption patterns. The results of analysis explain the level of awareness and their belief about electric vehicles. The findings are useful as an indicator for the industry professionals as it has also revealed the reasons that motivate people to buy electric vehicle. This research paper is rooted to the detailed exploration of literature on the electric vehicle so it has intrinsic academic value as a research paper.

Key Words–Electric Vehicles (EVs), Consumer's attitude, sustainability transport

Introduction

The growing population around the world has created many challenges for the society. One of the challenges is regarding energy. The growing population accounts for increased demand of energy for various needs. Out of these needs, one is transportation need for which majority of the countries are dependent on hydrocarbon fuel which is available in various forms. The growing population is going to escalate the energy consumption every year. Researchers in past have found that the emission of the greenhouse gases (GHG) had also increased at a high rate with the increased use of fossil fuel. Research studies about the exploration of methods that can help to minimize the burning of fossil fuels stated that nations need to move towards the adoption of renewable energies or green -energy alternatives. The shift towards renewable or green energies in the transportation industry demand customers' intention to drop the idea to buy vehicle that use the internal combustion engine (ICE) vehicles and fossil fuel and by building favourable attitude towards EVs.

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Literature Review

India has been one of the most important market for variety of industries and India is also a growing market for automobile industries in the world. India is among the countries that account for a significant sale of cars and other motor vehicles (Paudel, Govind, Bhattarai, & Shrestha, 2019). Apart from private vehicles, commercial and public transport vehicles also contributed to the sales figures. The positioning of India as a growing market for automobiles also caused some serious issues and one of these is pollution. Every year millions of people die due to air pollution (Okada, Tamaki, & Managi, 2019). As per a research study conducted by Green peace about 1.2 million people die due to air pollution and it was recommended that India should move to the eco-friendly, green energy sources.

Government of India had formulated and implemented the National Electric Mobility Mission Plan (NEMMP) -2020 in the year 2013. As per this plan India will initiate policy level changes and programs that motivate people to buy electric vehicle (Morton, Anable, & Nelson, 2016). A highly ambitious plan of Indian government is to transform Indian transport system into hundred percent electric vehicle driven by 2030. To motivate the manufacturer, government of India has planned to offer subsidy and funding for research and development projects. State of Karnataka has become the first state to implement policy for electric vehicle and energy storage in 2017. State of Telangana has drafted policy for electric vehicle manufacturer and customers (Penev & Ivan, 2011).

Some of the states has already started the sale of electric vehicle. For example, Gujrat, West Bengal and Uttar Pradesh are among those states where companies have started the sale of electric vehicle. For year 2016-17 more than 25000 units of electric vehicles of different categories have been sold. The research conducted by ASSOCHAM and Earnest and Young has projected double digit growth in the annual sales volume of electric vehicle (Rezvani, Jansson, & Bodin, 2015).

Apart from the population some other set of factors make India a favourable place for electric vehicle. India has a natural advantage to have large number of sunny days so India can research and develop solar based electric vehicle. Infrastructure and technology have been updated and developed especially in previous decade and that is among one of the advantages (Singer, 2016).

Some of the limiting factors in the adoption of electric vehicle is cost of batteries, availability of charging stations, management of waste produced by electric vehicles such as run-out parts and used batteries. The other important factor that causes hindrance in the adoption of electric vehicle is the price of electric vehicle.

Government has taken initiatives to building charging infrastructure across India. Automobile Industry has been encouraged to develop electric vehicle supportive manufacturing and customer service ecosystem. Companies that manufacture electric motor, and the suppliers of electronic items required in electric vehicle have been considered as one of the important stakeholders in the development of the electric vehicle related ecosystem (Thiel, Alemanno, Scarcella, Zubaryeva, & Pasaoglu, 2012).

For the beginning years, the focus will be on to produce small and budgeted electric vehicle so that large number of people can buy. Such segment will be helpful in building positive environment for the rest of the people who are either considering to buy electric vehicle or who are planning to shift from fossil fuel-based vehicles. Government should try to involve app-based taxi services such as Uber and OLA in building sustainable mobility transport system for cities (Bigerna & Micheli, 2018).

The research on attitude of customers who drive their car revealed that most of the customers consider electric vehicle as a concept car that may not be successful in meeting their long-distance transport need. A segment of customers was concerned about the range of problems that will only be appeared when electric vehicles will be in use and the other concern of these customers is about the performance of the car (Liao, Molin, & Wee, 2017).

Research Methodology

This research paper has been developed by using mix method research design. The population of this study consisted of the general consumers who may or may not be having electric vehicle but have enough exposure about vehicles and their use. A sample of 80 customers were selected by using non-probability convenience sampling. The questionnaire was used to collect primary data from the sample customers. Data was analyzed by using descriptive statistics on MS-Excel.

Data Analysis

Demographic Profile of Sample

The sample respondents are mainly young age people. 89% of the respondents belonged to the age of 20-30 years however the sample is dominated by female respondents. The sample consist of 44% of male and 56% of female. Majority (54%) of respondents have master degree while 40% have bachelor's degree. 42% of the sample respondents earn less than 10000 rupees per month and 79% are unmarried.

Table. 1 Demographic Profile of Sample

Demographic Variable		Respondents	Percentage
Age	20-30	71	89%
	31-40	7	9%
	41-50	2	2%
	Above 50	0	0%
	Total	80	100%
Gender	Male	35	44%
	Female	45	56%
	Total	80	100%
ducation Level	High school	4	5%
	Bachelor's degree	32	40%
	Master degree	43	54%
	Other	1	1%
	Total	80	100%
Monthly Income Level	Less than 10,000	34	42%
	10,000 – 20,000	6	7%
	20,000 – 30,000	14	18%
	30,000 – 50,000	14	18%
	Above 50,000	12	15%
	Total	80	100%
Marital status	Unmarried	63	79%
	Married	14	17%
	Married withkids	2	3%
	Divorce	1	1%
	Total	80	100%

Consumer attitude towards electric vehicles

Although traditionally attitude measurement involves the measurement of affective and behavioural component of the customers. In this study consumer's attitude has been explored by using the analysis of ratings for various commonly hold beliefs about electric vehicles (EVs). The results of the analysis about such common beliefs are mentioned in the figure-1. These common beliefs have been explored during the review of literature.

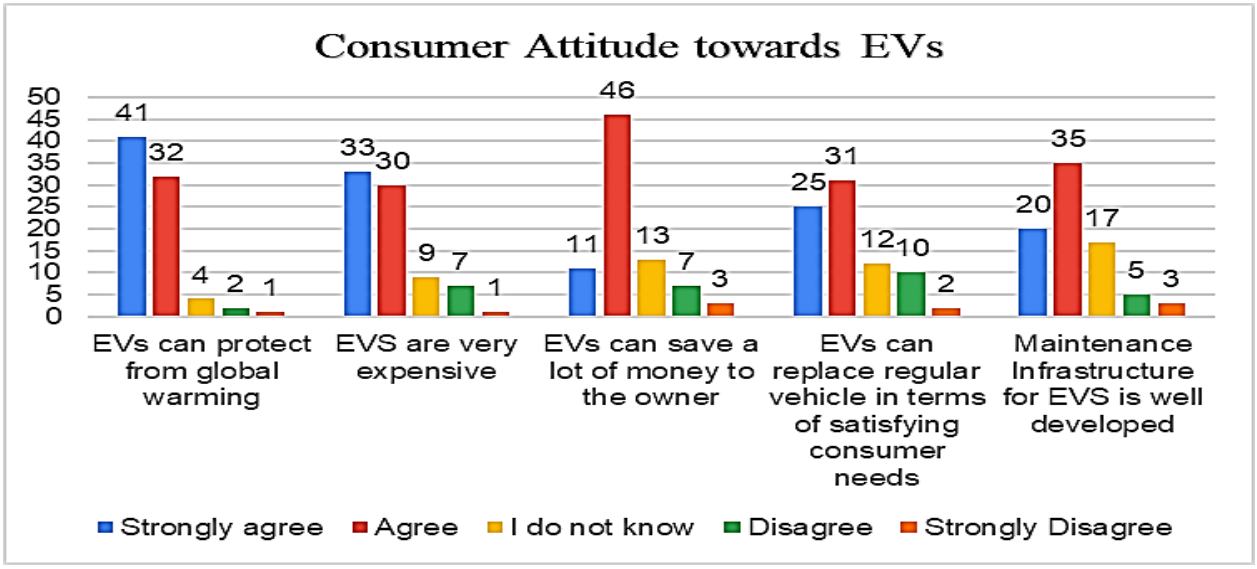


Figure 1 Consumer attitude towards electric vehicles.

The most important common belief was electric vehicles can save lots of money. About 70% (n=57) customers agreed or strongly agreed to the stated belief about saving money. There has been a strong belief that electric vehicles do have the ability to replace regular vehicles in terms of satisfying consumer needs. The electric vehicles have been considered very expensive by the sample respondents (Figure 1). More than 90% (n=73) of the respondents agreed to the opinion that electric vehicles can protect from global warming.

Table 2: Preference for vehicles

S. No.	Electric Vehicles types	No. of respondents	Percentage
1.	Hybridvehicles	41	51%
2.	Electricvehicles	39	49%
3.	Total	80	100%

It has been found that close to half of the respondents of the sample have shown preferences for electric vehicles where as 51% of the sample customers willing to prefer hybrid vehicles (Table 2). This shows that customers have becoming quite positive towards electric vehicles or if not electric than for hybrid vehicles. From Figure 2 it can be observed that what factors encourage consumers to buy the electric vehicles. Price (16 out of 80) of electric vehicles create encouragement because government has been offering subsidies. Government's subsidies have been explored in the review of literature. Promotion (19) of electric vehicles and Test drive (4) are also one of the factor for encouraging to consumer. The positive environment effects (43) and also the low noise levels (41) and new trends (35) have created an encouragement to consumer to buy electric vehicles. On other hand, cheaper in operations (20), Reference (4) and Beneficial financial or insurance options (8) have also created some shot of encouragement to consumer.

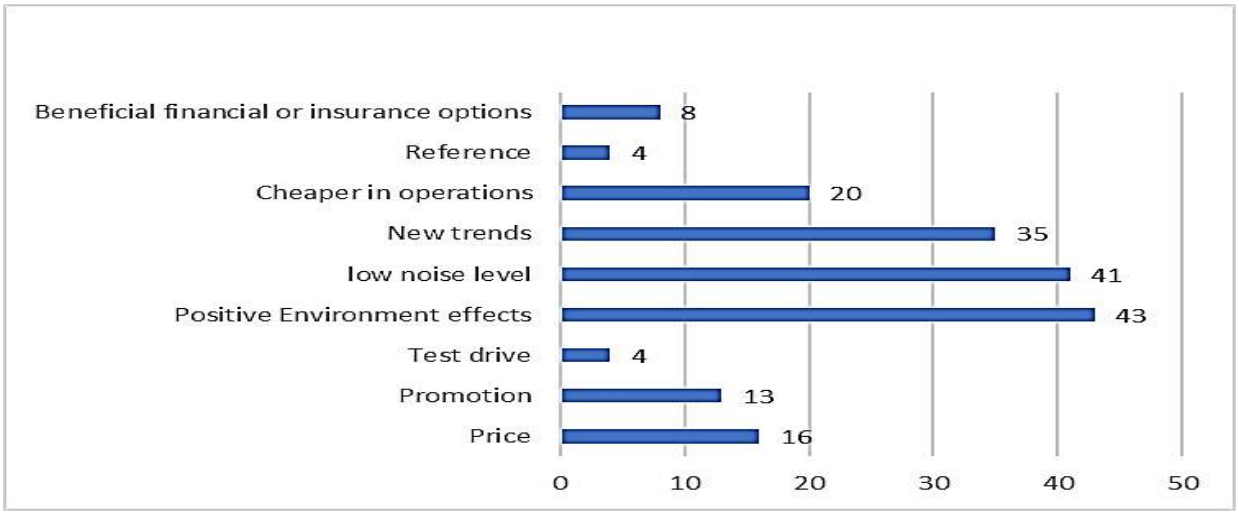


Figure 2: Respondent's encouragement factors to buy EVs

Some factors that discourage consumer to buy the electric vehicles are also analyzed (Figure 3). From figure-3 “Limited range” of electric vehicles create much discouragement as 38 out of 80 respondents opted for this. Price (19) and Long recharge time (15) are also among the major factors for discouragement. A smaller number of respondents considered lack of consumer choice (3), lack of trust to new technologies (4) and unwillingness to change a life style (1) were among the factors that discourage buy of electric vehicle.

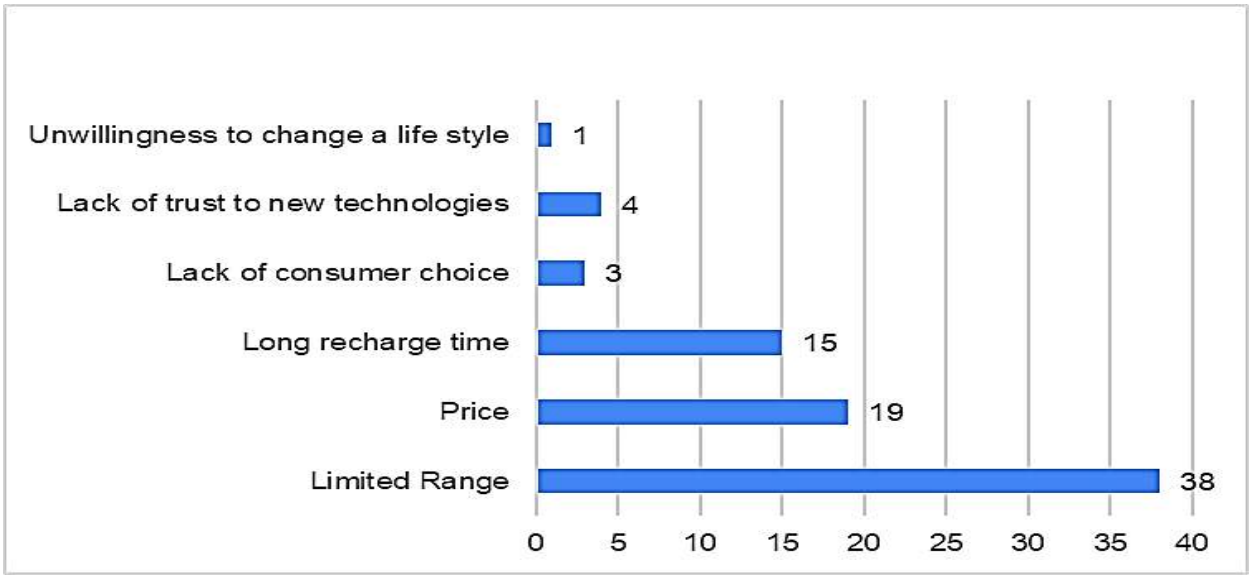
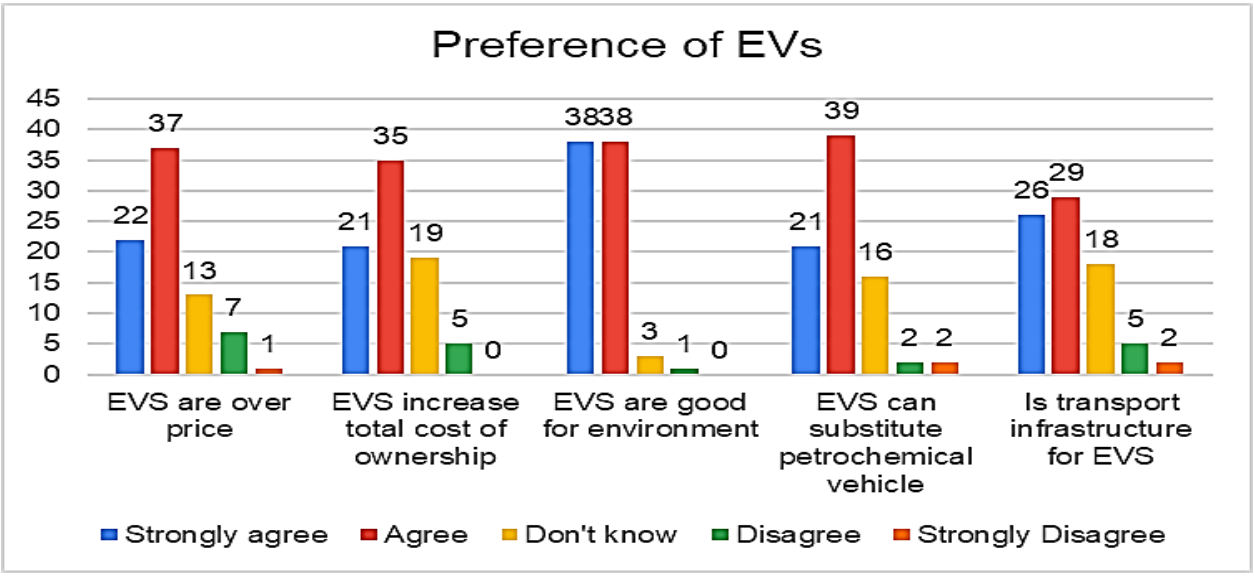


Figure 3: Respondent’s Discouragement factor to buy EVs

The preferences of customers have been evaluated by analyzing their belief about various attributes related to electric vehicles (EVs) (Figure 4). About price, customers were asked are electric vehicles overpriced. Out of 80, total 59 of respondents were agree and Strongly agree. While 13 of the respondents did not know much about price of EVs and 8 of respondents were disagree. Customers were asked whether Electric vehicles increase total cost of ownership. 56 of the respondents agree, 19 of them did not know about total cost of ownership and how it will be affected by EVs. Five respondents of 80 were disagree. Majority of the respondents agreed with the belief that they prefer EVs because Electric vehicles are good for environment. When respondents were asked about whether Electric vehicles can substitute petrochemical vehicles it was found that majority (60 out of 80) agreed to this belief. Respondents were asked about transport infrastructure for electric vehicle . 55 out of 80 respondents were agreed and strongly agreed about the sufficiency of transport infrastructure for electric vehicle.

Figure 4:Respondent's Preference of EVs



In this study it was evaluated that how many people want to buy electric vehicles. Out of 80 respondents there were 70% people who were thinking of buying, 25% people were confused whether to take it or not and 6-7% people were such that they did not want to buy electric vehicles right now. So, there is a need to make people aware, and tell them why EVs are necessary for society and our environment.

Table. No. 03: Chances to Buy Electric Vehicles.

S. No	Chances to buy electric vehicles	No. of respondents	Percentages
1.	Definitely will buy	33	41%
2.	Probably will buy	22	27%
3.	Might buy	21	26%
4.	Probably will not buy	2	3%
5.	Definitely not	2	3%
6.	Total	80	100%

Conclusion

Respondent's knowledge and confidence about electric vehicles is good. Research indicates that awareness about the availability of electric vehicles is fine but preference is average.

Most respondents know about electric vehicles but some of them don't have any idea because of low awareness or lack of information regarding electric vehicles. It can be said that income of respondents plays a vital role for purchasing electric vehicles.

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