INTERNET BANKING AND FACTORS AFFECTING ON ADOPTION OF INTERNET BANKING: A REVIEW OF LITERATURE

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Abstract:
Purpose – The development of the Internet is changing the way financial services are provided in all over the world. The Internet banking facility has resulted in new ways of delivering banking services. The purpose of this paper is to study internet banking technology and identify the various factors affecting on consumer adoption of internet banking.

Design/Methodology/Approach – For this research only secondary data source are used. To accomplish the study aims, this research is based on the examination of various journals, all of which are directly related to Internet banking and its adoption. The secondary data were collected from various online journals, magazines, text books, new paper articles etc.

Findings – It shows that two models are very popular for predicting consumer behavior and attitude are Theory of Reason Action (TRA) and Theory of Planned Behavior (TPB). Available literature shows that, Technology Acceptance Model (TAM) is very useful for analyzing acceptance of technology among users. PU, PEOU, trust, security and privacy, demographic profile of user are very important factors for internet banking adoption process.

Keywords – Internet banking, PU, PEOU, Security-Privacy, Trust, Easiness.

1. INTRODUCTION

Delivery of banks services to a customer at his office or home by using electronic technology can be termed as e-banking. The new world of electronic banking is changing day by day. It is very important to understand the customer's perception on Internet banking. Now, there are number of financial institutes and pressurized banks whose main intension is to attract the customers and improve customer's perception by introducing many alternate delivery channels. Many banks have implemented Internet banking to offer their customers a variety of online services with the more convenience for accessing information and making transaction.

Banks are always forced by the customers to device their strategy to grow in a global competitive market environment. Now a day's customer wants every service at his place. The concept of banking has drastically changed, where technology is the most dominating factor which has helped the banks to have mixed knowledge with innovative products/services to win the competitive market. Before some years ago all the business were managed manually, with little use of computers, but now a day's, every transaction is done electronically through various e-channels like, ATM's, Credit/Debit cards, Internet-Banking, Mobile-Banking, Tele-Banking etc. which is known as e-banking.

Customer satisfaction and customer retention are increasingly developing into key success factor in e-banking. The Consumer refers to the individual who uses a

product or service. Dynamic changes in the competition as well as customer expectations have resulted in a dramatic shift from one time transaction based approach to long-term relationship orientated approach. Increasing demands of the customers as well as the intense competition in the marketplace forced banks to device their strategies accordingly to tap the growing market potential. There will be huge acceptance of online banking with the passage of time with growing awareness and education.

With the advent of Internet and popularity of personal computers, there is both an opportunity and a challenge for the financial service industry, particularly the banking industry. Internet banking is changing the banking industry and is having major effects on banking relationship. The purpose of this study is to understand internet banking technology in detail and to study most influencing factors that forces to individual for the adoption of internet banking service.

2. METHODOLOGY AND SOURCE OF DATA:

The purpose of this study is to understand internet banking technology in detail and to study most influencing factors that forces to individual for the adoption of internet banking service. To accomplish the study, this research is based on the examination of various journals, all of which are directly related to internet banking and its application. As we believe that journals are the recourses that are most commonly used to acquire information and release new findings, conference papers, Master Theses, doctoral dissertations, text books, news reports, and unpublished working papers are excluded. Due to the youth and diversity of this area of research, journals, and thus a literature search was conducted using the various electronic databases.

3. REVIEW OF LITERATURE

Perkins et al. (2013) studied the factors affecting the adoption of online banking in Ghana and they found that all the factors such as PU, PEOU, Government Support, Trust and Security have a significant influence on Ghana's customer's intention to use internet banking. Study suggest to the bank managers to more concentrate on the promotional and advancement on the priceless paybacks to gain more internet banking adopters in Ghana. The study was very restricted scope about only for factors. To identify predictable results on adoption process, the scope of study should be increased by considering other important internet banking adoption factors. Based on the qualitative data collected for this study it is found that Government of Ghana shown a lot of support for internet banking over last few years but still awareness about internet banking among the banking customer is not meet as it was initially expected.

Mohan et al (2013) evaluated determinants of internet banking intention in Malaysia by using TAM and TRP model. The result of the study revel that as compared to self-efficacy and trust factor, PEOU is the main factor towards the use of internet banking service among the customers in Malaysia. The study also found that self- efficacy and trust are negatively related to each other with intention towards online banking. In Malaysia, the adoption ration of internet banking is more among customers when they feel that it is very much necessary, easy and useful to them. The scope of the study was very restricted due to time limit. Also the important factors such as security and privacy are not covered in this study which is very much important to identify the perception of customers. Study found very interesting result about relation of sex with internet banking adoption and researchers found that there is more number of female internet banking users than male banking customers. In Malaysia, media reference has a significant impact on intention towards internet banking usage.

Giordani (2012) has examined electronic banking in Greece. The study was aimed to identify the adoption of electronic banking (e-banking) services offered by commercial banks in Greece. Two factors such as income level and higher education have positive impact on the adoption of internet banking in Greece. Especially homeowner peoples avoid for internet banking because of complexity in the online transactions and some other online banking issues. Because of high electronic risk, Greek customers mostly prefer traditional way of baking that is branch banking transactions. The cost of using internet banking is very less as compared to the branch banking. The findings provide recommendations to the banks managers in the Greek that, they should improve customer relationship management by adoption latest CRM tools. By proper marketing campaigns and providing necessary awareness sessions about internet banking to their existing customer's internet banking adoption ratio about internet banking service can be increased.

Mansumitrchai and AL-Malkawi (2011) examined factors underlying the adoption of online banking by Mexican customers. The study focused on the innovation of delivering financial services through the internet by using Rogers (1983) model. In the study two phases of research methods used such as qualitative and quantitative research methodologies. In Mexico, difficulty was the first most important attribute for adoption of internet banking and second attribute was trust. Non adopters feels that internet banking is very difficult, complicated, confusing and very risky also. But adopters trusted on the security and privacy concerns provided by banks. Adopters prefers internet banking system in Mexico because to maintain life style and innovation in the services. Both adopters and non-adopters agreed that to carry internet banking services individuals requires lack of computer skills. Compatibility was the important attribute for internet naming adoption but reference group plays an important role too.

Kumbhar (2010) has investigated satisfaction level of customers with an alternative banking and to understand problems in alternative banking which adversely effects on customer satisfaction. The gender and income level of customer were not significant factor in determination of customer satisfaction. Study also found that some factors such as efficiency, responsiveness, easy to use, convenience etc. were found major effect on customer satisfaction in alternative banking. By providing high quality to the customers, customer satisfaction in alternative banking can be increased. Some services such as front office, core banking, EFT, MICR, credit card, ATM, internet banking and mobile banking services should be provided to improve service quality and customer satisfaction in alternative banking system.

Zhao et al (2009) investigated adoption of internet banking service in China. The study used Qualitative and Quantitative methodologies in this research and to validate proposed structural framework, Structure Equation Modeling (SEM) approach was used. Findings say that, perceived risk of IBS has a significant negative effect on behavioral intension to adopt internet banking and high trust in the institution the lower perceived risk in internet banking. To increase the adoption rate in China, banks have to publish data protection policy supported by Chinese government. Banks should guarantee that data of a customer id protected by best security method available in information technology.

Ozdemir and Trott (2008) examined the effect of internet banking adoption factors by adopting multi-method approach with the use of qualitative and quantitative types of research. Researchers applied an extended TAM with IDT and theory of perceived risk to evaluate different internet banking adopters and non-adopter categories. In Turkey, perceptual factors in relation to banks also influence in internet banking adoption process. The result shows that in Turkey, there is a positive relationship between PU and internet usage frequency using internet banking. The internet banking adopters had trust worry regarding banks, also they use internet banking service for only banking transactions with low monetary value. In Turkey, there is a big security problem regarding transaction passwords. Users getting frustrated because of monthly password change system because the process was very long and difficult to. For the growth of internet banking in Turkey, study suggests to educate the customers regarding the security issues.

Table 1: Factors Used For The Studies on Adoption of Internet Banking

Sr.No	Researcher	Year	Factors Used
1.	Hari Mohan et al.	2013	Self-efficacy, Trust, PEOU, Media reference
2.	Donnelie K Muzividzi et al.	2013	Perceived security, Internet experience, Internet prestige, Marketing exposure, Internet skills, Reliability, Demographic characteristics
3.	Peter Kamau Njuguna et al.	2012	PU, PEOU, Perceived self- efficacy, Perceived compatibility, Perceived relative advantage, Perceived result demonstrability
4.	Chao Chao Chuang and Fu-Ling Hu	2012	Convenience, Accessibility and feature availability, Security, Privacy, Speed, Fees and Charges
5.	Apostolos N. Giovanis et al.	2012	PU, PEOU, Compatibility, Security and Privacy, BI
6.	Wadie Nasri,	2011	Demographics Characteristics, Convenience, Prior internet knowledge, Security Perception, Perceived Risk, Information on online banking
7.	Shumaila Yousafzai and Mirella Yani-de-Soriano	2011	PU, PEOU, Age, Gender, TR, BI
8.	Neha Dixit and Dr. Saroj K. Datta,	2010	Security and Privacy, Trust, Innovativeness, Familiarity, Awareness
9.	Anita Lifen Zhao et al.	2009	Perceived risk of IBS, Trust in bank, IBS Competence, Behavioral intension of using IBS
10.	Guangying Hua	2009	PEOU, Security, Privacy Policy
11.	Hakan Celik,	2008	PU, PEOU, PBC, PPL (Perceived Playfulness), PR (Perceived Risk), ATT (Attitude), BI (Behavioral Intension)
12.	Amin Hanudin	2007	PU, PEOU, Perceived credibility, Computer self-efficacy
13.	Sharman Lichtenstein and Kirsty Williamson	2006	Accessibility, Self-efficacy, Convenience, Usability Risk and Cost, Relative advantage, Knowledge and support

Source: Review of Literature

4. CONCLUSION

This study shows that, many researchers used theoretical models to predict behavioral intentions of an individual are presented. It shows that two models are very popular for predicting consumer behavior and attitude are Theory of Reason Action (TRA) and Theory of Planned Behavior (TPB). Available literature shows that, Technology Acceptance Model (TAM) is very useful for analyzing acceptance of technology among users. Many studies used an integrated approach of TRA, TPB and TAM to identifying internet banking acceptance among customers. Many factors that effects on adopting or rejecting internet banking varies from country to country. Literature shows that many studies added some factor in TAM model to evaluate their research. PU, PEOU, trust, security and privacy, demographic profile of user are very important factors for internet banking adoption process. All these factors found very common in the researches related identifying technology acceptance among customers. For the growth of internet banking many researcher suggest to the bank managers of their respective country to adopt better internet banking advertisement policy, market campaign, conducting some online sessions etc. Banks managers should create awareness among their existing banking customers about internet banking system.

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“Measuring the influence of familiarity, security-privacy and trust on the adoption of Internet Banking: An empirical evidence from Western Maharashtra”

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Abstract

Purpose – The purpose of this paper is to measure the effect of familiarity, security-privacy and trust on the adoption of Internet banking in western Maharashtra.

Methodology - Researcher used extended Technology Acceptance Model (TAM). Some parameters used from TAM and some other parameters explored by the researcher. Primary as well as secondary data sources are used for this research. The primary data of 200 internet banking users were collected through structured questionnaire using convenience sampling method. Only the customers who were using the internet banking service are considered as an effective sample respondent.

Findings – Study found that more number of internet banking adopters are from private banking category. Female internet banking adopters were found to very less in count as compared to male internet banking adopters. Other factor such as easiness, saving, speed and prestige are also found to be having indirect influence on the adoption behavior of customer.

The result of the hypothesis testing indicates that all the defined factors such as familiarity, security-Privacy and trust have significant impact on internet banking adoption.

Keywords – Internet banking, familiarity, security-privacy, trust

1. INTRODUCTION:

For every country the backbone of any economy can be best evaluated by the strength and flexibility of its banking structure. Since independence India’s financial services industry is dominated by the banking sector. This research has been done to identify the effect of familiarity, security-privacy and trust on the adoption of Internet Banking in Western Maharashtra. With the advent of Internet and popularity of personal computers, there is both an opportunity and a challenge for the financial service industry, particularly the banking industry.

Always there arises a gap between financial services and information technology while being diffused, since the banks are increasingly adopting the innovated technology.

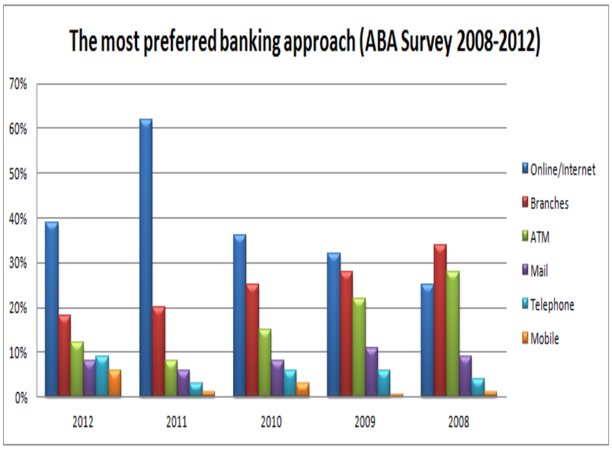

Fig 1: The most preferred banking approach in American Banking
Source – American Bank Association Survey (October, 2012)
(http://www.hooklee.com/default.asp?t=e-Banking)

Figure 1 describes that trend of using internet banking among American customers is increasing as compared to other online banking systems such as ATM, mobile banking, Tele banking etc. The ABA survey released on 2012 and shows that 39% bank customers prefers internet banking and only 6% customers prefers mobile banking system. According to (ABA survey, 2012) the group of customers who are of age greater than or equal to 55, internet banking has become first choice of banking.

This information gap can be viewed in terms of the extent of awareness and adoption of innovated products and services offered by the bank to their customers and also the risk involved in their execution. Internet banking is changing the banking industry and is having major effects on banking relationship. The purpose of this study is to identify the effect of familiarity, security-privacy and trust on the adoption of Internet Banking in Western Maharashtra.

2. Review of Literature:

Internet banking provides many benefits to banks as well as to customers. Some studies have shown that, still most of the consumers are not using internet banking channel. Since internet banking is largely a technology based process. To consume the service like internet banking, it requires good knowledge about technology. There could be the two fundamental reasons for explosion and development of internet banking on this basis of which no bank can underestimate the power of internet banking channel. First, banks get notable cost savings by offering internet banking services. According to Sathye (1999), it has been proved that internet banking channel is one of the cheapest delivery channel for banking products once established. Second, banks have reduced their branch networks and downsized the number of service staff, which has paved the way for self-service channels as quite many customers felt that branch banking took too much time and effort. Table 1 illustrates factors used for the Studies on Adoption of Internet Banking by various researchers.

To accomplish the study aims, this research is based on the examination of various journals, all of which are directly related to Information Technology and its application. As we believe that journals are the recourses that are most commonly used to acquire information and release new findings, conference papers, Master Theses, doctoral dissertations, text books, news reports, and unpublished working papers are excluded. Due to the youth and diversity of this area of research, journals, and thus a literature search was conducted using various electronic databases.

- Liao and Cheung (2002) stated that willingness to use Internet banking depends on the expectations of accuracy, security, network speed, user-friendliness, user involvement, and convenience.
- Lasar and et.al (2004) studied an integrated framework of TAM with adoption of innovative framework to predict online banking adoption. They found that there is a positive relationship between interne related innovativeness and online banking adoption. The income is only one demographic factor that significantly affects the adoption process whereas other factors do not affect the adoption process of internet banking. The domain specific innovativeness has positive effect on the adoption of online banking. Factors such as self-efficacy related measure of technology comfort, length of web usage, age and education level do not have impact on internet banking adoption.
- Gerrard and Cunningham (2003) studied the diffusion of internet banking among Singapore customers. The result showed that adopters of internet banking perceived the service to be more convenient, less complex, and more compatible to them and more studied to those who are PC proficient.
- Hill (2004) conducted a study concerned with identifying the characteristics of online banking users. She mentioned that it is commonly assumed that demographics do influence the acceptance of electronic self-service tools, such as online banking. The results of the study were that people who use such services are young, trendy and high earning.
- Laforet and Li (2005) conducted the survey on consumers attitude towards online banking and stated that consumers attitude towards online banking are influenced by the prior experience of computer and on new technology.
- Ndubisi and Sinti (2006) examined consumer’s attitude, system’s characteristics and internet banking adoption in Malaysia. The result of the study concludes that the attitudinal factors play a significant role in the internet banking adoption.
- Benamati and Serva (2007) states that the adoption of electronic banking forces consumers to consider concerns about password integrity, privacy, data encryption, hacking and protection of personal information.

- Norazah Mohd Suki (2010) conducted an empirical study of factors affecting the internet banking adoption among Malaysian consumers. The study concludes that, that complex design internet banking sites, perceived importance of internet banking to banking needs and compatibility all affect the adoption of Internet banking by Malaysian consumers.

Table 1: Factors Used For The Studies on Adoption of Internet Banking

Researcher	Year	Factors Studied
Hari Mohan et al.	2013	Self-efficacy, Trust, PEOU, Media reference
Donnelie K Muzividzi et al.	2013	Perceived security, Internet experience, Internet prestige, Marketing exposure, Internet skills, Reliability, Demographic characteristics
Peter Kamau Njuguna et al.	2012	PU, PEOU, Perceived self-efficacy, Perceived compatibility, Perceived relative advantage, Perceived result demonstrability
Chao Chao Chuang and Fu-Ling Hu	2012	Convenience, Accessibility and feature availability, Security, Privacy, Speed, Fees and Charges
Apostolos N. Giovanis et al.	2012	PU, PEOU, Compatibility, Security and Privacy, BI
Wadie Nasri,	2011	Demographics Characteristics, Convenience, Prior internet knowledge, Security Perception, Perceived Risk
Shumaila Yousafzai and Mirella Yani-de-Soriano	2011	PU, PEOU, Age, Gender, TR, BI
Neha Dixit and Dr. Saroj K. Datta,	2010	Security and Privacy, Trust, Innovativeness, Familiarity, Awareness
Anita Lifen Zhao et al.	2009	Perceived risk of IBS, Trust in bank, IBS Competence, Behavioral intension of using IBS
Guangying Hua	2009	PEOU, Security, Privacy Policy
Hakan Celik,	2008	PU, PEOU, PBC, PPL (Perceived Playfulness), PR (Perceived Risk), ATT (Attitude), BI (Behavioral Intension)
Amin Hanudin	2007	PU, PEOU, Perceived credibility, Computer self-efficacy
Sharman Lichtenstein and Kirsty Williamson	2006	Accessibility, Self-efficacy, Convenience, Usability Risk and Cost, Relative advantage, Knowledge and support
Neha Dixit and Dr. Saroj K. Datta,	2010	Security and Privacy, Trust, Innovativeness, Familiarity, Awareness

3. OBJECTIVES OF THE STUDY:

- To measure the influence of familiarity, security-privacy and trust on the adoption of Internet Banking
- To identify the determinants of Internet banking adoption.
- To identify the important factors affecting on adoption of Internet banking.

- To suggest policy measures and recommendations based on empirical evidences.

4. HYPOTHESIS OF THE STUDY:

Hypothesis -1

- **H_0:** Familiarity doesn't have significant impact on adoption of Internet banking among customers.
- **H_1:** Familiarity has significant impact on adoption of Internet banking among customers.

Hypothesis -2

- **H_0:** Security-privacy doesn't have significant impact on adoption of Internet banking among customers.
- **H_1:** Security-privacy has significant impact on adoption of Internet banking among customers.

Hypothesis -3

- **H_0:** Trust doesn't have significant impact on adoption of Internet banking among customers.
- **H_1:** Trust has significant impact on adoption of Internet banking among customers.

5. RESEARCH DESIGN:

To measure above stated objective, this research requires primary as well as secondary data. For above stated objective primary data were collected from western Maharashtra state of India. Basically western Maharashtra contains five districts namely Pune, Satara, Sangli, Solapur and Kolhapur. With the help of simple random sampling method Pune, Solapur and Kolhapur districts were selected.

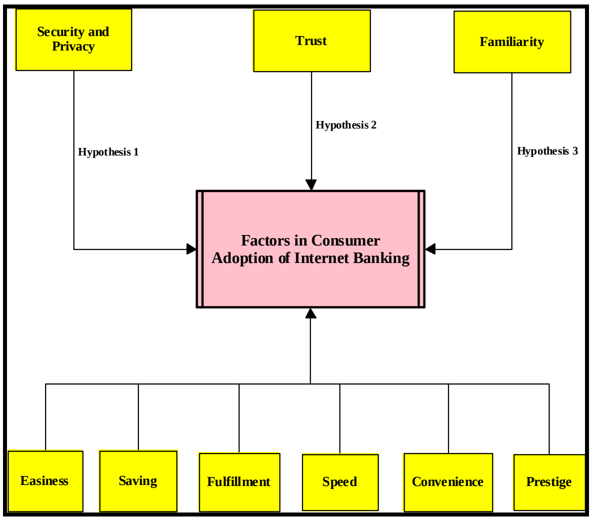

Fig2: Research Model
(Source: Developed by the researcher)

Figure 2 highlights all the factors which are having direct as well as indirect on the adoption of internet banking among customers. Some of the parameters are from Technology Acceptance Model (TAM) and some of the parameters are explored by the researcher. From the review of literature it was identified that factors such as saving and prestige were never studied by any researcher in this kind of similar studies.

Total 268 questionnaires were distributed to the customers of various banks and out of them 200 sample respondents have clearly filled and returned. The sample respondent should be the existing customer of bank. So, only the customers who were using the internet banking service were covered for this study. The variables were measures using multiple items. All the respondents were selected using convenience sampling method. It is a type of non-probability sampling which involves the sample being drawn from that part of the population which is close to hand. The respondents from various categories like sex, age-groups, professionals, salary levels, educational sectors were considered for this research.

With the use of questionnaire information regarding demographic characteristics of the customers, customers perception about internet banking service and other services provided by the banks, various aspects which forces customers to adopt internet banking etc. were collected. The questions were phrased in the form of statements scored on a 5-point Likert-type scale, where 1 = "strongly disagree", 2 =

"Disagree", 3 = "Neutral", 4 = "Agree" and 5 = "Strongly agree"

Sampling method for area selection	Simple Random Sampling
Sampling method for data collection	Convenience sampling
Sample size	200
Target sample respondent	Internet banking user of any bank.
Data collection method	Questionnaire
Statistical tool	IBM, SPSS 20.0

6. DATA ANALYSIS:

6.1 Demographics of the respondents:

Table 2 shows that demographical characteristics of the respondents where each sample respondent is selected using convenience sampling method from the cities mentioned above.

Table 2: Demographic profile of the respondents

Category	Frequency	Total
Gender		
Male	158	79
Female	42	21
Age		
Less than 19 years	9	4.5
20-29 years	63	31.5
30-39 years	75	37.5
40-49 years	40	20
50-59 years	9	4.5
Above 60 Years	4	2
Education		
Diploma or less than Diploma	9	4.5
Graduate degree	73	36.5
Post-Graduate	97	48.5
Other	21	10.5
Occupation / Profession		
Salaried	101	50.5
Self-Employed	31	15.5
Student	53	26.5
Other	15	7.5
Income (in Indian Rs.)		
No Income	55	27.5
Less than 10,000	7	3.5
10,000 – 20,000	19	9.5
20,000 – 30,000	22	11
30,000 – 40,000	44	22
40,000 – 50,000	31	15.5
More than 50,000	22	11
Category	**Frequency**	**Total**
Residence City		
Pune	93	46.5
Solapur	48	24
Kolhapur	59	29.5

6.2 Bank wise responses received from study region:

A district wise data (in Table 3) show that out of 200 internet banking services users, 93 were belongs to Pune, 48 were from Solapur and 59 were from Kolhapur. Figure 2 also describes that majority of the responses from private bank category (54.5%) followed by Nationalized bank (33%), Foreign bank (9.5%) and Co-operative bank (3%).

Table 3 : Bank Wise Responses received from Study Region

City	Type of bank				Total
	Nationalized	Private	Foreign	Co-operative	
Pune	32	51	8	2	93
Solapur	14	29	4	1	48
Kolhapur	20	29	7	3	59
Total	66	109	19	6	200
%	33	54.5	9.5	3	100

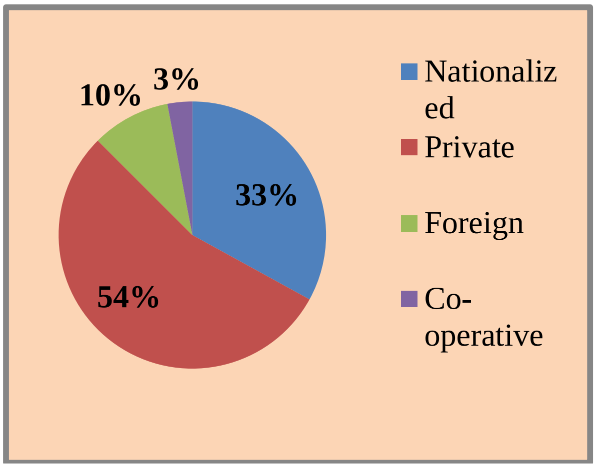

Figure 3: Bank Wise responses received from study region

6.3 Hypothesis Testing:

In this section researcher tested hypotheses under study. For the purpose of the testing hypothesis researcher has used Chi Square Test for testing significant effect.

Impact of Security-Privacy, Trust and Easiness on Adoption of Internet Banking: For understating the significant impact of familiarity, security-privacy and trust on adoption of Internet Banking, researcher has used regression technique to assess impact of various dimensions on adoption of internet banking services.

Table 4: Results of Pearson Chi-Square Tests

	Cal. Value	df	Asymp. Sig. (2-sided)	Result
Familiarity and adoption of IB	48.670	3	.000	Null Rej.
Security-Privacy and adoption of IB	70.480	2	.000	Null Rej.
Trust and adoption of IB	54.310	3	.000	Null Rej.

Hypothesis -1 (Null Rejected)

- **H_0:** Familiarity doesn't have significant impact on adoption of Internet banking among customers.
- **H_1:** Familiarity has significant impact on adoption of Internet banking among customers.

These results indicate that there is statistically significant relationship between the Familiarity and Adoption of IB (chi-square with 3 degree of freedom = 48.670, p = 0.000). Here expected table value is 10.597 however actual calculated value is more than table value.

***Hypothesis -2* (Null Rejected)**

- **H_0:** Security-privacy doesn't have significant impact on adoption of Internet banking among customers.
- **H_1:** Security-privacy has significant impact on adoption of Internet banking among customers.

These results indicate that there is statistically significant relationship between the Security-Privacy and Adoption of IB (chi- square with 2 degree of freedom = 70.480, p = 0.000). Here expected table value is 12.838 however actual calculated value is more than table value.

***Hypothesis -3* (Null Rejected)**

- **H_0:** Trust doesn't have significant impact on adoption of Internet banking among customers.
- **H_1:** Trust has significant impact on adoption of Internet banking among customers.

These results indicate that there is statistically significant relationship between the Trust and Adoption of IB (chi- square with 3 degree of freedom = 54.310, p = 0.000). Here expected table value is 10.597 however actual calculated value is more than table value.

7. CONCLUSION:

The result of the study indicates that around 54.5% of the responses are from private bank. From 33% respondents from Nationalized bank, 9.5% respondents from Foreign banks and only 3% respondents from Co-Operative banks.
The results shown that out of 200 respondents 158 were male and 42 were female. 75 respondents out of 200 were in the age group of 30-39 years. i.e. 37.5% customers. Also 31.5% customers were in the age group of 20-29. The result also concludes that 50.5% internet banking users were salaried peoples and 26.5% students are also using internet banking service. 48.5% internet banking users are having their qualification as Post-graduation and 36.5% internet banking users are having their qualification as graduation.
The result of the hypothesis testing indicates that all the defined factors such as familiarity, security-privacy and trust have significant impact on internet banking adoption.
While collecting the data collection it was identified that factor such as Easiness, Saving, Speed and Prestige are also having indirect influence on the adoption behavior of customer.

8. SUGGESTION:

Based on the findings of the present study researcher have suggested some suggestions for more adoption of internet banking services among the users and improvement in service quality of internet banking.

- There is need to increase awareness among the female customers to using internet banking services. Because many of the female persons are techno savvy but they are not using internet banking service due to the poor awareness about the benefits of internet banking services and lack of proper skill of using internet banking services.
- There is need to increase confidence about using internet banking services and promote to customers above 40 years old to use internet banking because there are very few respondents from this groups are using internet banking.
- The bank should take efforts to educate business and professional customers to use internet banking.
- It is observed that many customers have not either proper idea about the various services available through internet banking or not having confidence about those services. Hence, there is need to inform them about such a services in proper way.
- It is found that familiarity, Security-privacy and trust are very important factors in adoption of internet banking services. Hence, bank should keep their attention to the security aspect of the internet banking services

9. LIMITATION AND FUTURE SCOPE OF THE STUDY:

The present research is one of the best research documents for further researchers who want to carry further research on similar issue. We know that the present research is based on limited size of sample but researcher have done systematic efforts to cover all types of customers who are using internet banking services of nationalized, cooperative, private and foreign banks in the study area. However, there are some possibilities of lacunas and limitations in this study hence; there is room for further investigation in adoption of internet banking.

In the present study researcher has covered only users of internet banking but there is also need to cover non-users of internet banking to compare that why they are not using internet banking. Study like this will be provide more insights of adoption of internet banking. Hence, we recommend the researchers for conducting such a research. Here we have studies only 200 samples but there is also need to further investigation with more sample for fix the findings and conclusions of the present study and eradicate the errors of the present study.

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ONLINE BANKING AND ITS ADOPTION FOR DIGITAL INDIA: A LITERATURE REVIEW

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Abstract:
Purpose – The development of the Internet is changing the way financial services are provided in all over the world. The Internet banking facility has resulted in new ways of delivering banking services. The purpose of this paper is to study internet banking technology and identify the various factors affecting on consumer adoption of internet banking.

Design/Methodology/Approach – For this research only secondary data source are used. To accomplish the study aims, this research is based on the examination of various journals, all of which are directly related to Internet banking and its adoption. The secondary data were collected from various online journals, magazines, text books, new paper articles etc.

Findings – It shows that two models are very popular for predicting consumer behavior and attitude are Theory of Reason Action (TRA) and Theory of Planned Behavior (TPB). Available literature shows that, Technology Acceptance Model (TAM) is very useful for analyzing acceptance of technology among users. PU, PEOU, trust, security and privacy, demographic profile of user are very important factors for internet banking adoption process for betterment of digital India.

Keywords – Internet/online banking, PU, PEOU, Security-Privacy, Trust, digital India.

1. INTRODUCTION

Delivery of banks services to a customer at his office or home by using electronic technology can be termed as e-banking. The new world of electronic banking is changing day by day. It is very important to understand the customer’s perception on Internet banking. Now, there are number of financial institutes and pressurized banks whose main intension is to attract the customers and improve customer’s perception by introducing many alternate delivery channels. Many banks have implemented Internet banking to offer their customers a variety of online services with the more convenience for accessing information and making transaction. Digital India is a campaign launched by the Government of India to ensure that Government services are made available to citizens electronically by improving online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. Basically government wants to educate citizens of India in Information and Technology and force them for electronical transactions. In this upcoming era, online banking / internet banking will play an extremely important role.

Banks are always forced by the customers to device their strategy to grow in a global competitive market environment. Now a day’s customer wants every service at his place. The concept of banking has drastically changed, where technology is the most dominating factor which has helped the banks to have mixed knowledge with innovative products/services to win the competitive market. Before some years ago all the business were managed manually, with little use of computers, but now a day’s, every transaction is done electronically through various e-channels like, ATM's, Credit/Debit cards, Internet-Banking, Mobile-Banking, Tele-Banking etc. which is known as e-banking.

Customer satisfaction and customer retention are increasingly developing into key success factor in e-banking. The Consumer refers to the individual who uses a product or service. Dynamic changes in the competition as well as customer expectations have resulted in a dramatic shift from one time transaction based approach to long-term relationship orientated approach. Increasing demands of the customers as well as the intense competition in the marketplace forced banks to device their strategies accordingly to tap the growing market potential. There will be huge acceptance of online banking with the passage of time with growing awareness and education.

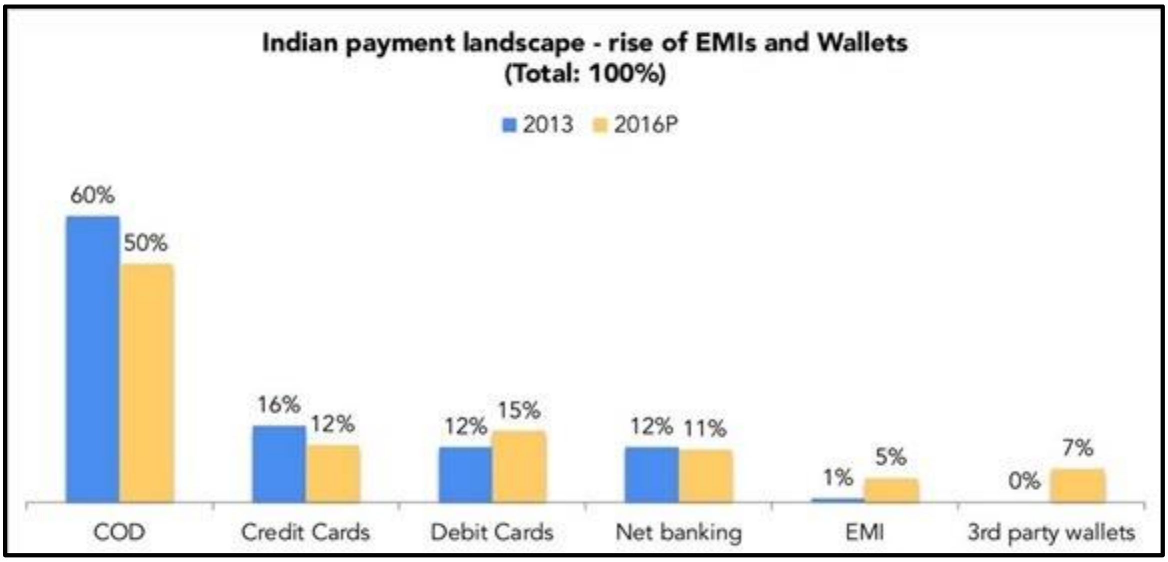

Fig 1: Statistics of Indian Payment Landscape (From 2013 to 2016)

Fig 1 describes Indian payment landscape – rise of EMI's and Wallets from year 2013 to 2016. With the advent of Internet and popularity of personal computers, there is both an opportunity and a challenge for the financial service industry, particularly the banking industry. Internet banking is changing the banking industry and is having major effects on banking relationship. The purpose of this study is to understand internet banking technology in detail and to study most influencing factors that forces to individual for the adoption of internet banking service.

2. METHODOLOGY AND SOURCE OF DATA:

The purpose of this study is to understand internet banking technology in detail and to study most influencing factors that forces to individual for the adoption of internet banking service. To accomplish the study, this research is based on the examination of various journals, all of which are directly related to internet banking and its application. As we believe that journals are the recourses that are most commonly used to acquire information and release new findings, conference papers, Master Theses, doctoral dissertations, text books, news reports, and unpublished working papers are excluded. Due to the youth and diversity of this area of research, journals, and thus a literature search was conducted using the various electronic databases.

3. REVIEW OF LITERATURE

Perkins et al. (2013) studied the factors affecting the adoption of online banking in Ghana and they found that all the factors such as PU, PEOU, Government Support, Trust and Security have a significant influence on Ghana's customer's intention to use internet banking. Study suggest to the bank managers to more concentrate on the promotional and advancement on the priceless paybacks to gain more internet banking adopters in Ghana. The study was very restricted scope about only for factors. To identify predictable results on adoption process, the scope of study should be increased by considering other important internet banking adoption factors. Based on the qualitative data collected for this study it is found that Government of Ghana shown a lot of support for internet banking over last few years but still awareness about internet banking among the banking customer is not meet as it was initially expected.

Mohan et al (2013) evaluated determinants of internet banking intention in Malaysia by using TAM and TRP model. The result of the study revel that as compared to self-efficacy and trust factor, PEOU is the main factor towards the use of internet banking service among the customers in Malaysia. The study also found that self- efficacy and trust are negatively related to each other with intention towards online banking. In Malaysia, the adoption ration of internet banking is more among customers when they feel that it is very much necessary, easy and useful to them. The scope of the study was very restricted due to time limit. Also the important factors such as security and privacy are not covered in this study which is very much important to identify the perception of customers. Study found very interesting result about relation of sex with internet banking adoption and researchers found that there is more number of female internet banking users than male banking customers. In Malaysia, media reference has a significant impact on intention towards internet banking usage.

Giordani (2012) has examined electronic banking in Greece. The study was aimed to identify the adoption of electronic banking (e-banking) services offered by commercial banks in Greece. Two factors such as income level and higher education have positive impact on the adoption of internet banking in Greece. Especially homeowner peoples avoid for internet banking because of complexity in the online transactions and some other online banking issues. Because of high electronic risk, Greek customers mostly prefer traditional way of baking that is branch banking transactions. The cost of using internet banking is very less as compared to the branch banking. The findings provide recommendations to the banks managers in the Greek that, they should improve customer relationship management by adoption latest CRM tools. By proper marketing campaigns and providing necessary awareness sessions about internet banking to their existing customer's internet banking adoption ratio about internet banking service can be increased.

Mansumitrchai and AL-Malkawi (2011) examined factors underlying the adoption of online banking by Mexican customers. The study focused on the innovation of delivering financial services through the internet by using Rogers (1983) model. In the study two phases of research methods used such as qualitative and quantitative research methodologies. In Mexico, difficulty was the first most important attribute for adoption of internet banking and second attribute was trust. Non adopters feels that internet banking is very difficult, complicated, confusing and very risky also. But adopters trusted on the security and privacy concerns provided by banks. Adopters prefers internet banking system in Mexico because to maintain life style and innovation in the services. Both adopters and non-adopters agreed that to carry internet banking services individuals requires lack of computer skills. Compatibility was the important attribute for internet naming adoption but reference group plays an important role too.

Kumbhar (2010) has investigated satisfaction level of customers with an alternative banking and to understand problems in alternative banking which adversely effects on customer satisfaction. The gender and income level of customer were not significant factor in determination of customer satisfaction. Study also found that some factors such as efficiency, responsiveness, easy to use, convenience etc. were found major effect on customer satisfaction in alternative banking. By providing high quality to the customers, customer satisfaction in alternative banking can be increased. Some services such as front office, core banking, EFT, MICR, credit card, ATM, internet banking and mobile banking services should be provided to improve service quality and customer satisfaction in alternative banking system.

Zhao et al (2009) investigated adoption of internet banking service in China. The study used Qualitative and Quantitative methodologies in this research and to validate proposed structural framework, Structure Equation Modeling (SEM) approach was used. Findings say that, perceived risk of IBS has a significant negative effect on behavioral intension to adopt internet banking and high trust in the institution the lower perceived risk in internet banking. To increase the adoption rate in China, banks have to publish data protection policy supported by Chinese government. Banks should guarantee that data of a customer id protected by best security method available in information technology.

Ozdemir and Trott (2008) examined the effect of internet banking adoption factors by adopting multi-method approach with the use of qualitative and quantitative types of research. Researchers applied an extended TAM with IDT and theory of perceived risk to evaluate different internet banking adopters and non-adopter categories. In Turkey, perceptual factors in relation to banks also influence in internet banking adoption process. The result shows that in Turkey, there is a positive relationship between PU and internet usage frequency using internet banking. The internet banking adopters had trust worry regarding banks, also they use internet banking service for only banking transactions with low monetary value. In Turkey, there is a big security problem regarding transaction passwords. Users getting frustrated because of monthly password change system because the process was very long and difficult to. For the growth of internet banking in Turkey, study suggests to educate the customers regarding the security issues.

Table 1: Factors Used For The Studies on Adoption of online Banking

Sr.No	Researcher	Year	Factors Used
1.	Hari Mohan et al.	2013	Self-efficacy, Trust, PEOU, Media reference
2.	Donnelie K Muzividzi et al.	2013	Perceived security, Internet experience, Internet prestige, Marketing exposure, Internet skills, Reliability, Demographic characteristics
3.	Peter Kamau Njuguna et al.	2012	PU, PEOU, Perceived self- efficacy, Perceived compatibility, Perceived relative advantage, Perceived result demonstrability
4.	Chao Chao Chuang and Fu-Ling Hu	2012	Convenience, Accessibility and feature availability, Security, Privacy, Speed, Fees and Charges

5.	Apostolos N. Giovanis et al.	2012	PU, PEOU, Compatibility, Security and Privacy, BI
6.	Wadie Nasri,	2011	Demographics Characteristics, Convenience, Prior internet knowledge, Security Perception, Perceived Risk, Information on online banking
7.	Shumaila Yousafzai and Mirella Yani-de-Soriano	2011	PU, PEOU, Age, Gender, TR, BI
8.	Neha Dixit and Dr. Saroj K. Datta,	2010	Security and Privacy, Trust, Innovativeness, Familiarity, Awareness
9.	Anita Lifen Zhao et al.	2009	Perceived risk of IBS, Trust in bank, IBS Competence, Behavioral intension of using IBS
10.	Guangying Hua	2009	PEOU, Security, Privacy Policy
11.	Hakan Celik,	2008	PU, PEOU, PBC, PPL (Perceived Playfulness), PR (Perceived Risk), ATT (Attitude), BI (Behavioral Intension)
12.	Amin Hanudin	2007	PU, PEOU, Perceived credibility, Computer self-efficacy
13.	Sharman Lichtenstein and Kirsty Williamson	2006	Accessibility, Self-efficacy, Convenience, Usability Risk and Cost, Relative advantage, Knowledge and support

Source: Review of Literature

4. CONCLUSION

This study shows that, many researchers used theoretical models to predict behavioral intentions of an individual are presented. It shows that two models are very popular for predicting consumer behavior and attitude are Theory of Reason Action (TRA) and Theory of Planned Behavior (TPB). Available literature shows that, Technology Acceptance Model (TAM) is very useful for analyzing acceptance of technology among users. Many studies used an integrated approach of TRA, TPB and TAM to identifying internet banking acceptance among customers. Many factors that effects on adopting or rejecting internet banking varies from country to country. Literature shows that many studies added some factor in TAM model to evaluate their research. PU, PEOU, trust, security and privacy, demographic profile of user are very important factors for internet banking adoption process.

This initiative was started on 1st of July in 2015 to connect people of rural areas with the high-speed internet networks to access any information needed. Three important elements of digital India are like creation of digital infrastructure, digital literacy and delivering services digitally all over the country. This project has been aimed to be completed by 2019. It is the programme which will benefits both, service providers and consumers.

All these factors found very common in the researches related identifying technology acceptance among customers. For the growth of digital India through internet banking many researcher suggest to the bank managers of their respective country to adopt better internet banking advertisement policy, market campaign, conducting some online sessions etc. Banks managers should create awareness among their existing banking customers about internet banking system and definitely it would lead digital India through Indian citizens.

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A STUDY TO MEASURE SIGNIFICANCE OF EQUITY AND DEBT OF SELECTED AUTOMOBILE COMPANY

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Abstract - *The debt and equity are long term sources of corporate finance. In this study, the researcher investigates the amount of debt and equity in total capital structure of selected Minda Industries ltd.. The capital structure is formation of long term as well as short-term financing. It covers share capital, commercial papers, debentures and other long term financing securities. The selected company for this study is Minda Industries Limited which is one of leading supplier in automobile equipment's. This company is located in Pune. Researcher has covered the study of financial statements from 2011 to 2016.*

Key words: *Debt and Equity, total cost, debt equity ratio, debt service coverage ratio (DSCR).*

1. Introduction

This paper examines the amount of debt and equity which have acquired in last five financial year i.e 2011 to 2016. The acquisition and allocation of money is challenging task to financial manager. The company pays charges that are know by cost of capital against acquired fund .The process of acquiring fund or capital from different alternatives it is known as capital structure. The different alternatives of long term financial securities are categorized in equity or debt. In this study researcher has calculated DSCR, debt ratio, debt equity ratio and also presented changes in cost of capital and debt-equity in total capital. The researcher has analyzed last five years financial statement.

2. Literature Review

(Dhankar & Boora, July-September 1996) examined whether to exist optimal capital structure in Indian companies, at the micro level and macro level, also investigated the relation between Cost of Capital, Optimal Capital Structure, and Value of Firm. The study took 26 of top 300 large scale companies in the Indian private sector for the period 1981-82 to 1990-91. It is observed that change in capital structure and the value of a firm is no significant relationship at the micro level whereas significant relationship at macro level. It is further found that significant negative relationship between changes in capital structure and cost of capital. The study concluded that Indian companies not use any specific model for calculating the cost of capital and defining capital structure.

(Myers S. C., Capital Structure, 2001) The study of capital structure attempted to explain the different financing sources and combination of sources used by firm to finance actual investment. For this study researcher had taken the review of pecking order, tradeoff and cash flow theories of capital structure. This study presents that not any theories defined financing strategy for raising the fund. These theories are based on certain condition, they are not general theories. Every alternatives has certain costs and benefits, testing them with mixed sample of firms can be unproductive.

This paper concluded that the theories were not capable to decide the amount of debt and equity in total capital structure but certain theories were useful under several condition such as tradeoff theory states that debt gets additional tax advantage in total capital structure. The pecking order theory defined that if firm has shortage cash flow then firm should borrow the funds rather than issuing equity to meet the capital expenditure. The free cash flow theory explained that high debt amount in capital structure increase value even this occur the threat of financial agony and firm's exceeds operating cash flow will generates profitable investment opportunities. The free cash flow theory is specially framed for developed firms that are liable to excess invest.

3. Objectives of the study

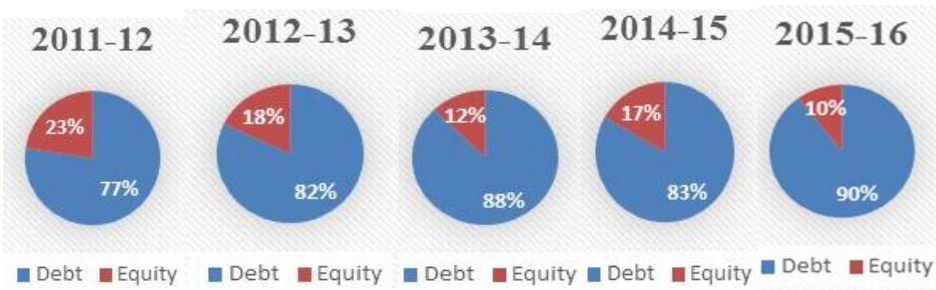
1. To analyze the amount of debt and equity in total capital.
2. To examine financial strength of firm by calculating debt equity ratio and DSCR.

4. Data collection and analysis

The required capital structure data collected from financial statement of Minda industries ltd. The graphical presentation, pie chart and tables are used for analyzing data.

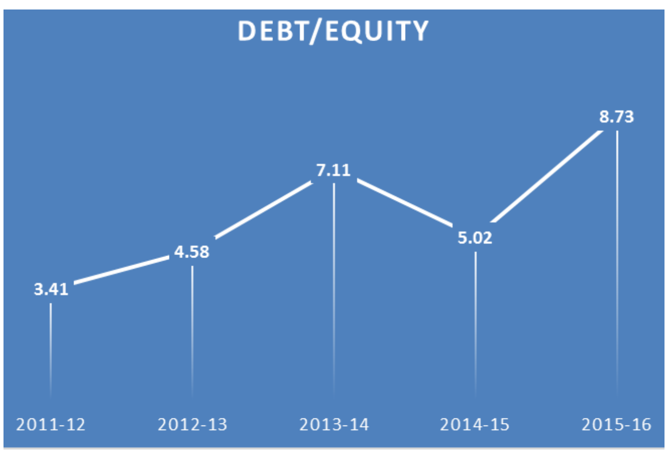
Financial Year	2011-12	2012-13	2013-14	2014-15	2015-16
Debt	66.12	88.7	137.64	97.2	169.01
Equity	19.37	19.37	19.37	19.37	19.37
Total Capital	85.49	108.07	157.01	116.57	188.38

(in Rs. Cr.)



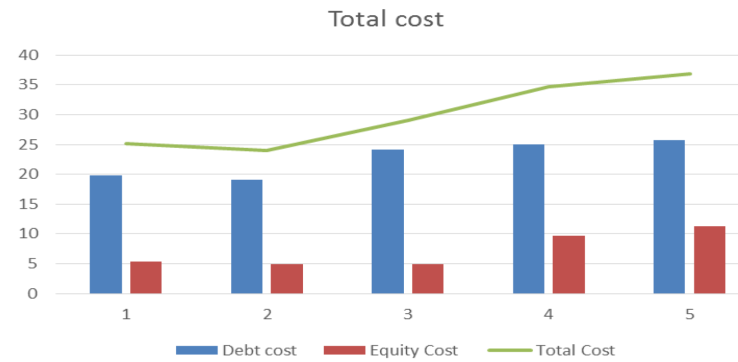
The above pie charts show that percentage amount of debt and equity in total capital structure. The pie chart indicates that the portion of debt is increasing over the period that is almost more than average 80% in last five years.

Financial Year	2011-12	2012-13	2013-14	2014-15	2015-16
Debt/Equity	3.41	4.58	7.11	5.02	8.73



Debt cost	19.78	19.06	24.18	25.01	25.68
Equity Cost	5.42	4.87	4.87	9.63	11.22
Total Cost	25.2	23.93	29.05	34.64	36.9

(in Rs. Cr.)

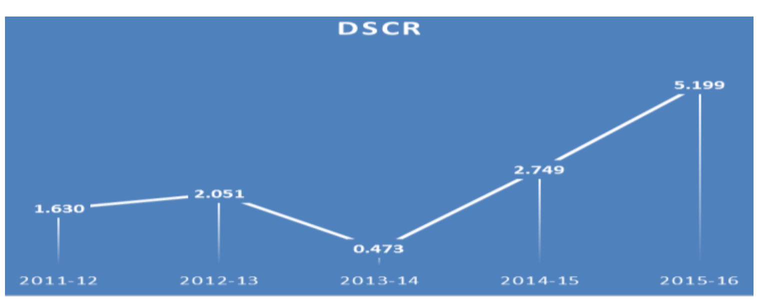


Financial Year	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**
Debt	66.12	88.7	137.64	97.2	169.01
Total Assets	716.77	805.57	981.42	996.61	1486.85
Debt Ratio	0.092	0.110	0.140	0.098	0.114

(in Rs. cr.)

Financial Year	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**
EBIT	32.240	39.100	11.430	68.760	133.51
Debt cost	19.780	19.060	24.180	25.010	25.680
DSCR	1.630	2.051	0.473	2.749	5.199

(in Rs. cr.)



5. Conclusion

It has been found that in total capital of Mindas' Industries ltd. debt amount is more than equity it indicats that company is more dependent on external financial securities. Due to more amount of debt the company has been incurred more expenses on debt cost. Debt service coverage ratio (DSCR) also shows that company has more expenses on interest.

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An Empirical study to understand influence of Security-Privacy, Trust and Easiness towards Mobile Banking Adoption with respect to rural areas of Pune district.

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Abstract
Purpose – The purpose of this paper is to identify the effect of Security-Privacy, Trust and Easiness towards Mobile Banking adoption in in rural areas of Pune district.

Design/Methodology/Approach – This research used extended Technology Acceptance Model (TAM). Some determinants used from TAM and some determinants explored by the researcher. Primary as well as secondary data sources are used in this research. The primary data of 200 mobile banking users were collected through questionnaire. Only the customers who were using the monile banking service are considered as a sample respondent.

Findings – Study found that more number of mobile banking adopters are from Private banking category. The count of male users found very much higher than female internet banking users. The result of the hypothesis testing indicates that all the defined factors such as Security-Privacy, Trust and Easiness have significant impact on mobile banking adoption.

Keywords –Mobile banking, Security-Privacy, Trust, Easiness.

1. INTRODUCTION

This research has been done to identify the effect of Security-Privacy, Trust and Easiness towards Internet Banking adoption in rural areas of Pune district. Maharashtra. Since independence India's financial services industry is dominated by the banking sector. For every country the backbone of any economy can be best evaluated by the strength and flexibility of its banking structure. Always there arises a gap between financial services and information technology while being diffused, since the banks are increasingly adopting the innovated technology.

This information gap can be viewed in terms of the extent of awareness and adoption of innovated products and services offered by the bank to their customers and also the risk involved in their execution.

With the advent of Internet and popularity of personal computers, there is both an opportunity and a challenge for the financial service industry, particularly the banking industry. Internet banking is changing the banking industry and is having major effects on banking relationship. The purpose of this study is to understand effect of Security-Privacy, Trust and Easiness towards Internet Banking adoption.

2. REVIEW OF LITERATURE

The aim of this study is to analyze impact Security-Privacy, Trust and Easiness on mobile banking adoption. To accomplish the study aims, this research is based on the examination of various journals, all of which are directly related to Information Technology and its application. As we believe that journals are the recourses that are most commonly used to acquire information and release new findings, conference papers, Master Theses, doctoral dissertations, text books, news reports, and unpublished working papers are excluded. Due to the youth and diversity of this area of research, journals, and thus a literature search was conducted using various electronic databases.

Mobile banking provides many benefits to banks as well as to customers. Some studies have shown that, still most of the consumers are not using internet banking channel. Since internet banking is largely a technology based process. To consume the service like internet banking, it requires good knowledge about technology. There could be the two fundamental reasons for explosion and development of internet banking on this basis of which no bank can underestimate the power of internet banking channel. First, banks get notable cost savings by offering internet banking services. According to Sathye (1999), it has been proved that internet banking channel is one of the cheapest delivery channel for banking products once established. Second, banks have reduced their branch networks and downsized the number of service staff, which has paved the way for self-service channels as quite many customers felt that branch banking took too much time and effort. Table 1 illustrates factors used for the Studies on Adoption of Internet Banking by various researchers.

- Liao and Cheung (2002) stated that willingness to use Internet banking depends on the expectations of accuracy, security, network speed, user-friendliness, user involvement, and convenience.
- Gerrard and Cunningham (2003) studied the diffusion of internet banking among Singapore customers. The result showed that adopters of internet banking perceived the service to be more convenient, less complex, and more compatible to them and more studied to those who are PC proficient.
- Hill (2004) conducted a study concerned with identifying the characteristics of online banking users. She mentioned that it is commonly assumed that demographics do influence the acceptance of electronic self-service tools, such as online banking. The results of the study were that people who use such services are young, trendy and high earning.
- Laforet and Li (2005) conducted the survey on consumers attitude towards online banking and stated that consumers attitude towards online banking are influenced by the prior experience of computer and on new technology.
- Ndubisi and Sinti (2006) examined consumer’s attitude, system’s characteristics and internet banking adoption in Malaysia. The result of the study concludes that the attitudinal factors play a significant role in the internet banking adoption.
- Benamati and Serva (2007) states that the adoption of electronic banking forces consumers to consider concerns about password integrity, privacy, data encryption, hacking and protection of personal information.
- Norazah Mohd Suki (2010) conducted an empirical study of factors affecting the internet banking adoption among Malaysian consumers. The study concludes that, that complex design internet banking sites, perceived importance of internet banking to banking needs and compatibility all affect the adoption of Internet banking by Malaysian consumers.

Table 1: Factors Used For The Studies on Adoption of Internet Banking

Sr.No	Researcher	Year	Factors Used
1.	Hari Mohan et al.	2013	Self-efficacy, Trust, PEOU, Media reference
2.	Donnelie K Muzividzi et al.	2013	Perceived security, Internet experience, Internet prestige, Marketing exposure, Internet skills, Reliability, Demographic characteristics
3.	Peter Kamau	2012	PU, PEOU, Perceived self- efficacy, Perceived

	Njuguna et al.		compatibility, Perceived relative advantage, Perceived result demonstrability
4.	Chao Chao Chuang and Fu-Ling Hu	2012	Convenience, Accessibility and feature availability, Security, Privacy, Speed, Fees and Charges
5.	Apostolos N. Giovanis et al.	2012	PU, PEOU, Compatibility, Security and Privacy, BI
6.	Wadie Nasri,	2011	Demographics Characteristics, Convenience, Prior internet knowledge, Security Perception, Perceived Risk, Information on online banking
7.	Shumaila Yousafzai and Mirella Yani-de-Soriano	2011	PU, PEOU, Age, Gender, TR, BI
8.	Neha Dixit and Dr. Saroj K. Datta,	2010	Security and Privacy, Trust, Innovativeness, Familiarity, Awareness
9.	Anita Lifen Zhao et al.	2009	Perceived risk of IBS, Trust in bank, IBS Competence, Behavioral intension of using IBS
10.	Guangying Hua	2009	PEOU, Security, Privacy Policy
11.	Hakan Celik,	2008	PU, PEOU, PBC, PPL (Perceived Playfulness), PR (Perceived Risk), ATT (Attitude), BI (Behavioral Intension)
12.	Amin Hanudin	2007	PU, PEOU, Perceived credibility, Computer self-efficacy
13.	Sharman Lichtenstein and Kirsty Williamson	2006	Accessibility, Self-efficacy, Convenience, Usability Risk and Cost, Relative advantage, Knowledge and support

Source: Review of Literature

3. HYPOTHESES OF THE STUDY

Hypothesis -1

- **H_0:** Security and Privacy doesn't have significant impact on adoption of Mobile banking among customers.
- **H_1:** Security and Privacy has significant impact on adoption of Mobile banking among customers.

Hypothesis -2

- **H_0:** Trust doesn't have significant impact on adoption of Mobile banking among customers.
- **H_1:** Trust has significant impact on adoption of Mobile banking among customers.

Hypothesis -3

- **H_0:** Easiness doesn't have significant impact on adoption of Mobile banking among customers.
- **H_1:** Easiness has significant impact on adoption of Mobile banking among customers.

4. METHODOLOGY AND SOURCE OF DATA:

To measure above stated objective, this research requires primary as well as secondary data. The main objective of this research is to identify perceptive of customers towards the mobile banking service. For this primary data were collected from rural areas of Pune district, Maharashtra state of India. Basically western Maharashtra contains five districts namely Pune, Satara, Sangli, Solapur and Kolhapur. And from rural areas of Pune district, a simple random sample method was used to select threes places for this study. So, according to simple random sampling method Junnar, Mawal and Indapur areas were selected. Total 268 questionnaires were distributed to the customers of various banks and out of them 200 sample respondents have clearly filled and returned. The sample respondent should be the existing customer of bank.

So, only the customers who are using the mobile banking service or not using the mobile banking service were covered for this study. The questionnaire was made up the dimension which measures the rate the adoption of e-banking. The variables were measures using multiple items. All the respondents were selected using convenience sampling method. It is a type of nonprobability sampling which involves the sample being drawn from that part of the population which is close to hand. Required data were collected through questionnaire. The respondents from various categories like sex, age-groups, professionals, salary levels, educational sectors were considered for this research.

With the use of questionnaire information regarding demographic characteristics of the customers, customers perception about internet banking service and other services provided by the banks, various aspects which forces customers to adopt internet banking etc. were collected. The questions were phrased in the form of statements scored on a 5-point Likert-type scale, where 1 = "strongly disagree", 2 = “Disagree”, 3 = “Neutral”, 4 = “Agree” and 5 = “Strongly agree”

Sample Distribution:

Table 2 show the demographical characteristics of the respondents where each sample respondent is selected randomly from the cities mentioned above.

Table 2: Demographics of the respondents

Sr. No	Category	Frequency	Total
1	**Gender**		
	Male	158	
	Female	42	200
2	**Age**		
	Less than 19 years	9	
	20-29 years	63	
	30-39 years	75	
	40-49 years	40	
	50-59 years	9	
	Above 60 Years	4	200
3	**Education**		
	Diploma or less than Diploma	9	
	Graduate degree	73	
	Post-Graduate	97	
	Other	21	200
4	**Occupation / Profession**		
	Salaried	101	

	Self-Employed	31	
	Student	53	
	Other	15	200
5	**Income (in Indian Rs.)**		
	No Income	55	
	Less than 10,000	7	
	10,000 – 20,000	19	
	20,000 – 30,000	22	
	30,000 – 40,000	44	
	40,000 – 50,000	31	
	More than 50,000	22	200
6	**Residence City**		
	Junnar	93	
	Mawal	48	
	Indapur	59	200

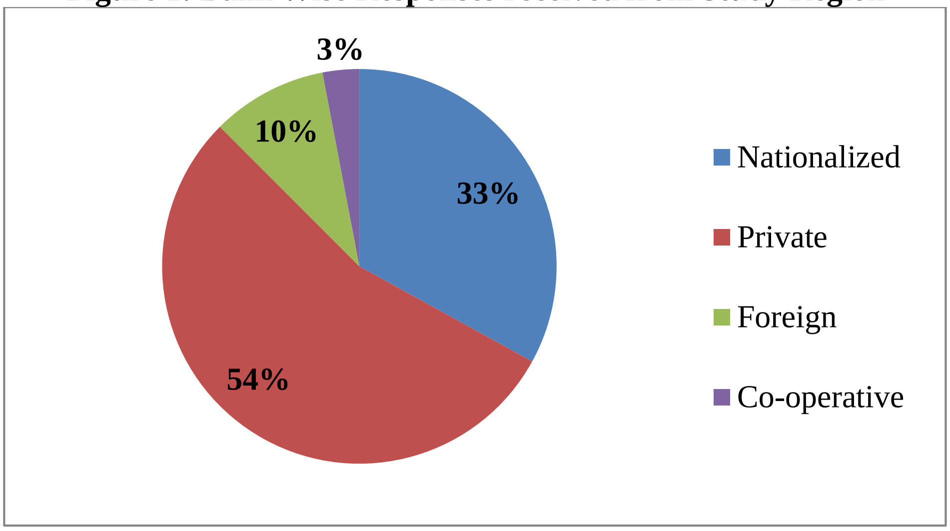
Bank Wise Responses received from Study Region

A district wise data (in Table 3) show that out of 200 internet banking services users, 93 were belongs to Junnar, 48 were from Mawal and 59 were fromIndapur. Table 2 also describes that majority of the responses from private bank category (54.5%) followed by Nationalized bank (33%), Foreign bank (9.5%) and Co-operative bank (3%).

Table 3 : Bank Wise Responses received from Study Region

	Type of bank				**Total**
	Nationalized	**Private**	**Foreign**	**Co-operative**	
Junnar	32	51	8	2	93
Mawal	14	29	4	1	48
Indapur	20	29	7	3	59
Total	66	109	19	6	200
%	33	54.5	9.5	3	100

Figure 1: Bank Wise Responses received from Study Region



HYPOTHESIS TESTING

In This section researcher tested hypotheses under study. For the purpose of the testing hypothesis researcher has used Chi Square Test for testing significant effect.

Impact of Security-Privacy, Trust and Easiness on Adoption of Internet Banking

For understating, is there significant impact of Familiarity, Security-Privacy and Trust on Adoption of Internet Banking? Researcher has used regression technique to assess impact of various dimensions on adoption of internet banking services.

Table 4: Results of Pearson Chi-Square Tests

	Calculated Value	df	Asymp. Sig. (2-sided)	Results
Security-Privacy and Adoption of Mobile Banking	70.480	2	.000	Null Rejected
Trust and Adoption of Mobile Banking	54.310	3	.000	Null Rejected
Easiness and Adoption of Mobile Banking	48.670	3	.000	Null Rejected

Hypothesis -1 (Null Rejected)

- ***H_0: Security and Privacy doesn't have significant impact on adoption of Mobile banking among customers.***
- ***H_1: Security and Privacy has significant impact on adoption of Mobile banking among customers.***

These results indicate that there is statistically significant relationship between the Security-Privacy and Adoption of IB (chi- square with 2 degree of freedom = 70.480, p = 0.000). Here expected table value is 12.838 however actual calculated value is more than table value.

Hypothesis -2 (Null Rejected)

- ***H_0: Trust doesn't have significant impact on adoption of Mobile banking among customers.***
- ***H_1: Trust has significant impact on adoption of Mobile banking among customers.***

These results indicate that there is statistically significant relationship between the Trust and Adoption of IB (chi- square with 3 degree of freedom = 54.310, p = 0.000). Here expected table value is 10.597 however actual calculated value is more than table value.

Hypothesis -3 (Null Rejected)

- ***H_0: Easiness doesn't have significant impact on adoption of Mobile banking among customers.***
- ***H_1: Easiness has significant impact on adoption of Mobile banking among customers.***

These results indicate that there is statistically significant relationship between the Easiness and Adoption of IB (chi- square with 3 degree of freedom = 41.337, p = 0.000). Here expected table value is 10.597 however actual calculated value is more than table value.

5. CONCLUSION

The result of the study indicates that around 54.5% of the responses are from private bank. From 33% respondents from Nationalized bank, 9.5% respondents from Foreign banks and only 3% respondents from Co-Operative banks.

The results show that out of 200 respondents 158 were male and 42 were female. 75 respondents out of 200 were in the age group of 30-39 years. i.e.37.5% customers. Also 31.5% customers were in the age group of 20-29. The result also concludes that 50.5% mobile banking users were salaried peoples and 26.5% students are also using mobile banking service. 48.5% mobile banking users are having their qualification as Post-graduation and 36.5% mobile banking users are having their qualification as graduation.

The result of the hypothesis testing indicates that all the defined factors such as Security-Privacy, Trust and Easiness have significant impact on mobile banking adoption. As all the null hypotheses are rejected. In Banking Industry the Mobile Banking is a new era which explores the new horizons of success and development to facilitate and for the betterment of society and open the door of development for banking industry to enhance businesses operations.

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AN APPLICATION OF DATA MINING IN THE MODEL OF GPS BASED VEHICLE MANAGEMENT SYSTEM: A VEHICLE TRAFFIC SOLUTION FOR THE SMOOTH ROADMAP OF UPCOMING SMART CITIES IN INDIA

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Abstract:

This paper embed the various data mining techniques in the GPS services into a system so that many problem related to transportation system can be resolved in real time by providing data and information into our own pre-set format and provide individual vehicle data such as location and velocity by using GPS, estimated time of arrival, the speed count, number of passengers and seat availability and these details can be sent to passengers by SMS using GSM technology. In the proposed roadmap of Indian context, Smart cities will be an important issue and till now none of the system is exists which provides all kind of a result we want for any types of vehicles. This research project is aimed to design with an embedded system which will use for tracking and positioning of vehicles with GPS. The initial data will be captured by GPS device. Again the captured data will be sent to one data cleaning device and finally it is considered as an input file for data parsing tool for analysis purpose. With the use of data parsing tool the next processing will be done. This project also uses sensors to detect the speed of vehicle, passengers present in the bus. The Microcontroller is programmed to control and display the information according to the received signal from the GPS and sensors placed satellite and the position of a satellite implies that the GPS receiver is on the surface of a sphere centered at the position of a satellite. Thus the indicated position of the GPS receiver is calculated and with the help of Data Mining technique, a Vehicle traffic jam solutions can be obtained optimally.

Keywords: GPS, Data Mining, GSM, Smart Cities

1. INTRODUCTION:

Data Mining is the process of extracting information from large data sets through the use of algorithms and techniques drawn from the field of statistics, machine learning and database management systems. In Indian context, at the level of the smart city, the digital and physical cities can be linked by the Internet of Things, thereby forming an integrated cyber-physical space along with Artificial and Business Intelligence. In this space, the state and changes in the real world of both people and logistics will be sensed automatically in real time. Cloud computing handles the massive, complex computation and control in data management where data mining techniques with optimality algorithms plays very important role. Nowadays vehicle (BUS) is very important mode of transport to move from one place to other place. During the time of travel passengers face many problems such as seat availability, arriving time of bus and travelling time. The important objectives of this paper are:

1. Vehicle's real time parameter such as speed, current bus location, number of passengers in bus, seat availability is gathered and used for benefit.
2. Improve the quality of transportation system.

3. Developing Automatic Vehicle Location system using GPS for positioning information and GSM/GPRS or information transmission.
4. Tracking the driver's activity whether he/she is following the pre-define route and speed.
5. To send information about the location of vehicles (buses) to the passenger by SMS.
6. Getting the data into our pre-set format.

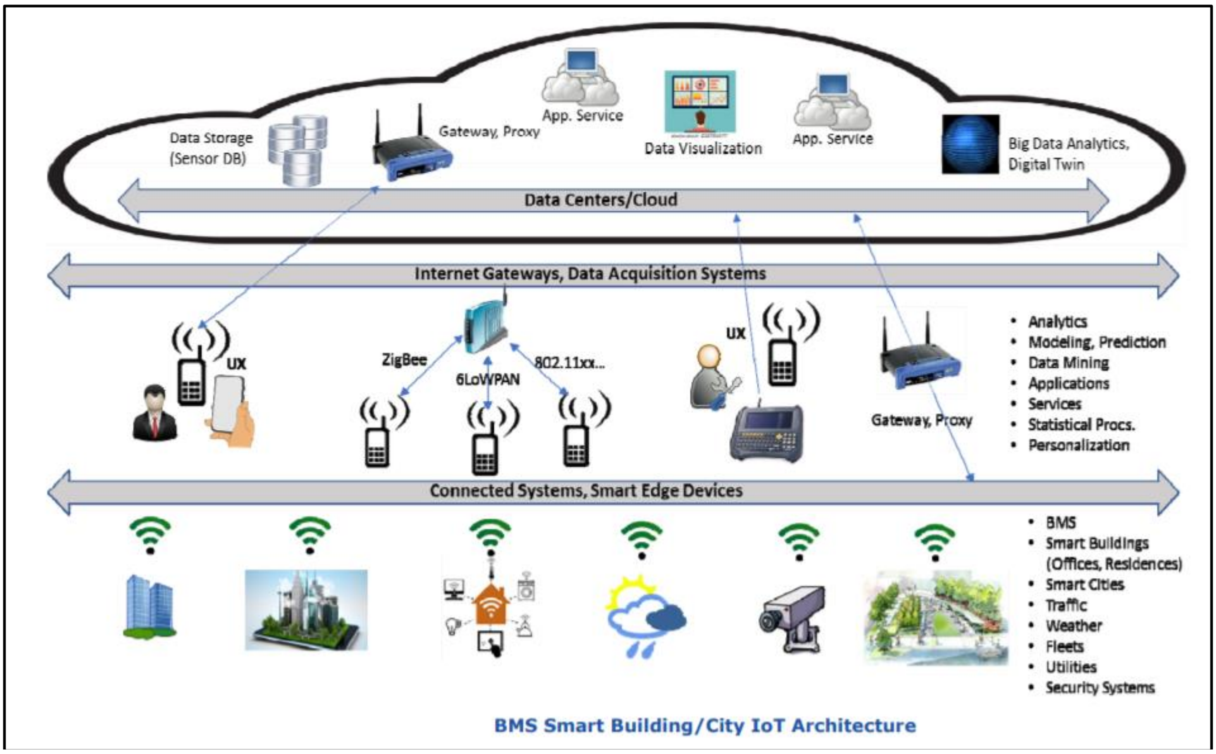

Figure 1.0: Overview of the System

Figure 1.0 highlights an important components of Smart City. All the digital world of a city is communicating to each other through a Cloud database where Traffic Management Systems plays extremely important role along with Global Positioning System. Data Analysis, Business Intelligence, Data Mining, Web Services, Smart buildings, Traffic Management System, Weather Forecasting System and Security Systems are the components of a Smart City Architecture. The initiative of building smart work was started on 1st of July in 2015 to connect people of rural areas with the high-speed internet networks to access any information needed. Three important elements of digital India are like creation of digital infrastructure, digital literacy and delivering services digitally all over the country. This project has been aimed to be completed by 2019. It is the programme which will benefits both, service providers and consumers.

This research paper consists of GSM modem, level converter, microcontroller, Speed Sensor, passenger counter, display, power supply, GSM modem and data parsing tool. The data parsing tool helps us in getting the data and information into our required format. This paper embed the various GPS services into a system which is used for tracking and positioning of vehicle by using the global positioning system (GPS) and using sensors to detect the speed of vehicle, passengers present in the bus. The Microcontroller is programmed to control and display the information according to the received signal from the GPS and sensors placed in the bus. GSM modem is used to transmit and receive information. Mobile is used to get the information about bus. When the people are sending SMS to bus unit, the GSM modem in bus unit receives the SMS and signal is given to level converter and level converted signal is given to microcontroller, which is used to process the signal. GSM modem is used to send the information to the mobile. The overview of the system is shown in fig 1.1.

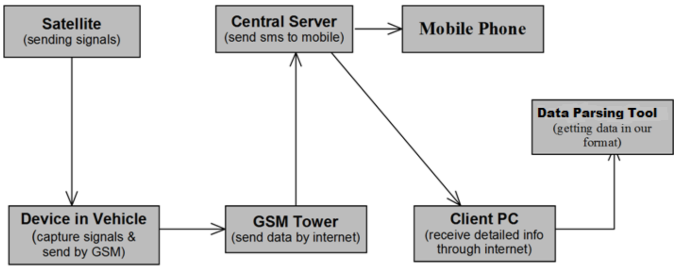

Figure 1.1: Overview of the System

2. POSITION CALCULATION THROUGH GPS:

To provide an introductory description of how a GPS receiver works, measurement errors will be ignored in this section. Using messages received from a minimum of four visible satellites, a GPS receiver is able to determine the satellite positions and time sent. The x, y, and z components of position and the time sent are designated as where the subscript i is the satellite number and has the value 1, 2, 3, or 4. Knowing the indicated time the message was received, the GPS receiver can compute the indicated transit time of the message. Assuming the message travelled at the speed of light, the distance travelled, can be computed. Knowing the distance from GPS receiver to a satellite and the position of a satellite implies that the GPS receiver is on the surface of a sphere centered at the position of a satellite. Thus the indicated position of the GPS receiver is calculated.

3. GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS:

Global System for Mobile Communications is one of the widely used mobile standards. As the name specifies, it enables the mobile users to interact all over the world at any time. GSM was actually designed to be platform independent. Because GSM provides a common standard, cellular subscribers can use their telephones over the entire GSM area which includes all the countries around the world where the GSM system is used. In addition, the GSM provides user services such as high-speed data communication, facsimile and a Short Message Service (SMS). The GSM technical specifications are also designed to work with other standards as it guarantees standard interfaces.

The figure 1.2 tells about the concept how to deliver the SMS to the appropriate receiver mobile. According to this paper the information about the location of the vehicle which is trapped is received by the GPS receiver then it is send to the user by using GSM technology.

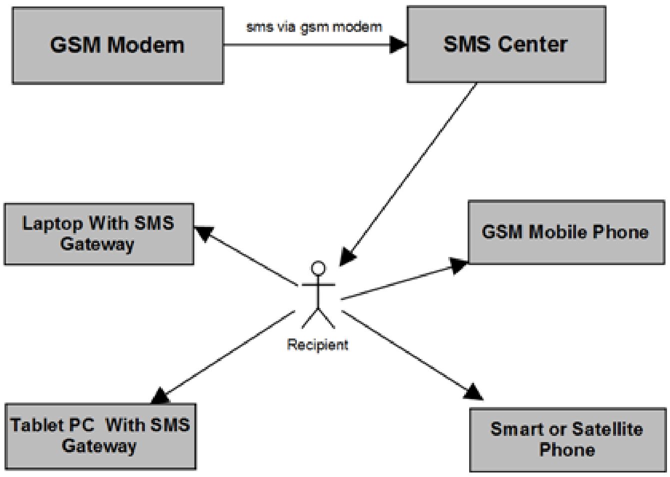

Figure 1.2: Delivering the SMS to the receiver mobile.

4. COUNTING PASSENGER USING SENSOR

To count the No. of passenger in bus, we setup a pair of sensors on the doors of vehicle (bus) i.e. on the front and back door which is connected to GPS device installed in vehicle. In this case we consider that the front door of bus will be used for passenger entry and rear door of bus will be used for passenger exit, if any passenger enters into the bus from front door then the set counter increases by 1 and if any passenger get out from the rear door of the bus then the set counter reduced by 1. Therefore, the sensors automatically are able to count the number of incoming and outgoing passenger in real time and data is sent to the database.

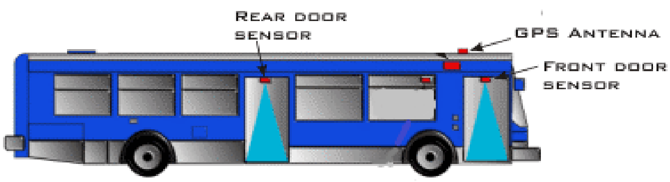

Figure 1.3: Sensor System on Bus

5. PROPOSED WORK:

The system being proposed makes use of the GSM and GPS technologies that allows the system to track vehicle and provides the most up-to-date information. The system tasks advantage of wireless technology in providing powerful management transportation engine. Overall system is partitioned into two major design units.

1. Vehicle unit
2. Tracking Server

This system is based on a stand-alone single-board embedded system that is equipped with GPS and GSM modems that is installed in the vehicle.

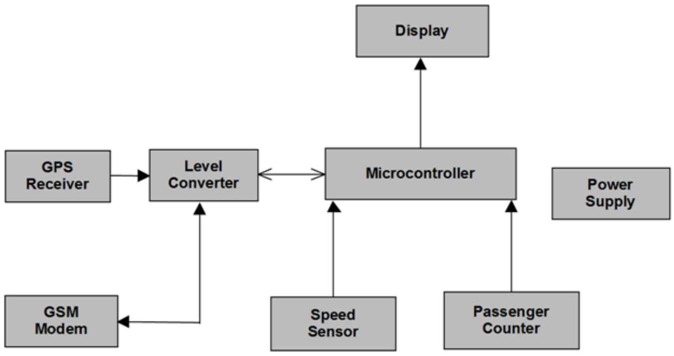

Figure 1.4: Block Diagram of Vehicle Unit

6. VEHICLE UNIT:

This is major part of the system and it will be installed into the vehicle. It is responsible for capturing following information for the vehicle

1. Current location of vehicle.
2. Speed of the vehicle.
3. No of passenger in vehicle(bus)

Vehicle unit is also responsible for transmitting this information to Tracking Server located anywhere in the world.

7. DATA TRANSCEIVER:

When all required information is extracted and processed, it needs to be transmitted to a remote. Tracking Server which will be able to display this information to the end user. For real time tracking of vehicle, reliable data transmission to remote server is very important. Wireless network is required to transmit

Vehicle information to remote server. Existing GSM network is selected to transmit vehicle information to remote server because of broad coverage of GSM network. It is also cost effective rather than to deploy own network for transmission of vehicle information. For data transmission over GSM network GSM modem is required. GSM modem can send and receive data SMS text messages and GPRS data over GSM network. Location data is transferred to microcontroller through serial interface. After processing of the data provided by GPS receiver, microcontroller transmits this information to remote location using GSM/GPRS modem. Microcontroller controls the operation of GSM/GPRS modem through serial interface using AT commands.

8. SOFTWARE FLOW:

Microcontroller is acting as Central Processing Unit for Vehicle unit. All operations of the In-Vehicle Units are to be controlled by the microcontroller. Microcontroller needs instructions to operate the whole System. These instructions are provided to microcontroller by writing the software into microcontroller’s flash memory. It reads the software instruction by instruction and performs the action as required by instruction.

9. TRACKING SERVER:

Tracking server maintains all information received from all Vehicle units installed in different vehicles into a central database. This database is accessible from internet to authorized users through a web interface. Authorized users can track their vehicle and view all previous information stored in database. Tracking server has a GSM/GPRS modem attached to it that receives SMS from Vehicle units and sends those messages to the server through serial port. Tracking server saves this information into database.

10.MANAGING DATABASE AND INTERFACE DESIGN:

Tracking Server maintains all information in a database. To display this information to users front end software is required that can display all information to the user. The system is being installed the Vehicle unit in his vehicle and also the administrator of the system who is managing Vehicle Tracking System. There may be a number of vehicles installed with In-Vehicle units therefore server must be able to manage and distinguish information sent by all In-Vehicle units. For this purpose information must be available to server about all vehicles that are installed with In-Vehicle units. Whenever In-Vehicle unit is installed, information about that vehicle is stored in the database. Web interface must also support this functionality. Since web interface will be accessible over the internet therefore access must be restricted to authorized users only. Therefore information about all users of the system must be stored in database.

11.DATA PARSING (GETTING DATA IN OUR OWN REQUIRED FORMAT):

The GPS device give the output in the simple text format, that contains time, position, and velocity data and other required data in the fixed width fields (not delimited) defined in the following table:

FIELD DESCRIPTION	WIDTH	NOTES
Sentence start	1	always '@'
Year	2	Last 2 digits of UTC year
Month	2	UTC month,"01"...”12"
Day	2	UTC month,"01"...”12"
Hour	2	UTC hour, "00"...”23"
Minute	2	UTC minute, "00"...”59"
Second	2	UTC second, "00"...”59"
Latitude hemisphere	1	'N' or 'S'
Latitude position	7	WGS84 ddmmmmm, with an implied, decimal after the 4th digit
Longitude hemisphere	1	‘E' or 'W'
Longitude position	7	WGS84 dddmmmmm with an implied, decimal after the 5th digit
Altitude sign	1	'+' or '-'
Altitude	5	Height above or below mean sea level in meters

Sentence end

The initial data captured by the GPS device is shown in the figure 1.5.

```
@040703112755S2933200E03017304g017+01149E0000N0000U0033
@040703112756S2933200E03017304g017+01149E0000N0000U0033
@040703112757S2933200E03017304g017+01149E0000N0000U0033
@040703112758S2933200E03017304g018+01149E0000N0000U0030
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@040703112801S2933200E03017304g019+01149E0000N0000U0026
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@040703112809S2933201E03017304g021+01149E0000N0000U0021
@040703112810S2933201E03017304g021+01149E0000N0000U0021
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Figure 1.5: GPS data captured by the data logger.

The data we are getting at initial phase is very complex and difficult to understand, so by using data parsing technique, the initial data is simplified and arranged according to pre-set format by which one can get data in whatever format he/she wants.

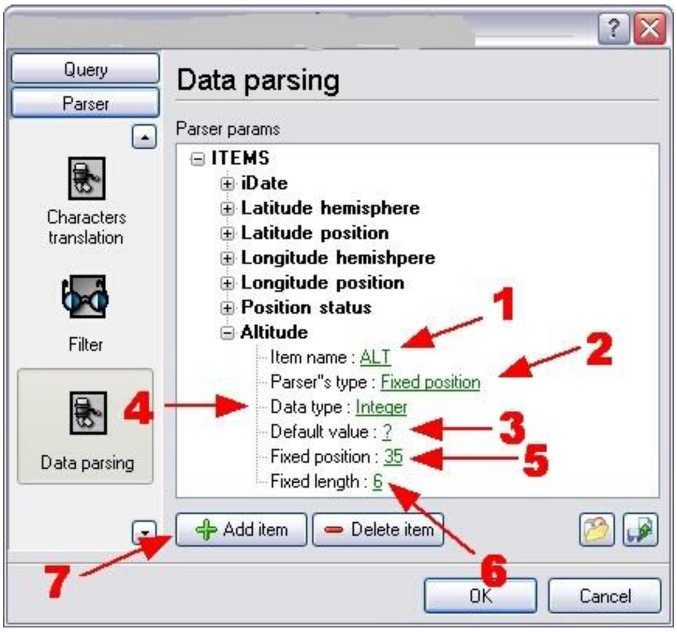

Figure 1.6: Data Parsing

12.CONCLUSION:

Using and implementation of this embed GPS system is very easy. By using this system the vehicle tracking will be completed with the help of data mining. The number of passengers inside the bus is found keeping infrared sensors in the footsteps. The seats available in bus will be found by number of passengers inside the bus and the information about the location, speed count, seat availability is informed to the passengers using SMS as every component of Smart city is connected centrally in Cloud database. The advantages of the system is that all the people will get traffic information easily, we can easily track the vehicle location as well as activity of driver. Implementation of this system will help to reduce the corruption and traffic problems in huge population country like India.

This system is quite hard to implement on all the buses especially in India as the condition of buses in India is not so good but it is not impossible. Proper system architecture long with well infrastructure can bust up systems easily. We can implement it on the buses which provide good facility and which are in good condition for example: low floor buses of Delhi, Shivneri buses, Shivashahi buses, Red Buses and many more. After that we can try to implement it on all the buses and help to provide this system to all.

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A CRITICAL ANALYSIS OF BUSINESS SEGMENTS AND ITS IMPACT ON RETURN ON LONG TERM FUNDS

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ABSTRACT:

Return on long term funds is considered as one of the most important factor for evaluation of any company for investment purpose. In this paper researchers focused on establishment of relationship between business segment diversification and profitability with respect to return on long term funds. The researchers carried out analysis of selected National Stock Exchange (NSE) listed companies in India for hypothesis testing. It has been concluded that there exists significant relation between the two factors and multi segment approach is beneficial to companies to generate profitability with respect to return on long term funds. There was significant anticipation of return on long term funds on segment diversification.

Keywords: Return on long term funds, Investment, Profitability, Business segment, Nifty.

INTRODUCTION:

The return is calculated as the annual percentage return based on the yields of all the underlying securities in the portfolio, but is weighted to account for each security's market value and maturity. The return is presented net of estimated fees and the maximum offering price, but does not account for delays in income distributions from the fund. The estimated long-term return may be the metric that should look at if planning on investing for the duration of the trust.

Return on long term funds ratio can be calculated by dividing operating profit by long term funds of the company where long term funds refer to the total investments made in a company for the long term.

Formula for return on long term funds can be given as,

Return on Long Term Funds % = EBIT/Long Term Funds X 100

This ratio is very useful in providing information regarding performance of investments made for long duration of time.

NEED FOR THE STUDY:

After performing in depth analysis of available literature, it was found that most of research in diversification strategy was performed in developed economies like USA, Japan and some European countries. Many researchers focused on impact of diversification on firm value. Very few researchers focused on impact of diversification on profitability of company. Majority of research work on profitability given emphasis on ROA and ROS figures and very few attempts were performed to analyze profitability in terms of ROCE, ROE, EPS, PBIT and return on long term funds.

REVIEW OF LITERATURE:

(Lecraw, 1983) analyzed 200 largest non-financial firms in Canada in the year 1975 to study cause and effect of segment diversification. These companies categorised into 4 classes namely Single Business (SB), Vertically Integrated Business (VIB), Related Business (RB) and Unrelated Business (UB) to have better insight into the subject. Firms adapted to one of the above diversification strategy as per their strategic goal. It was found that certain factors like characteristics of firm and characteristics of base industry are major deciding factors of type of diversification. Diversification strategy should be as per strengths and weaknesses analysis of the firm and selection of wrong diversification strategy leads to loss of value for firm. It was further found that there was increase in ROE of the firm compared to the industry in which it operates, if it follows the related diversification strategy. Optimum capital structure, relative market share are other major supporting parameters for maximum ROE along with appropriate diversification strategy.

(Pandya & Rao, 1998) performed empirical analysis of diversification strategy and performance of company and found that diversified companies perform better in terms of risk and return as compared to non-diversified companies. Researchers classified companies into three categories wiz. high performing class of companies, average performing class of companies and low performing class of companies. They found that in former class diversified companies show better financial performance while in latter two classes non-diversified firms are performing better financially. It was also found that there is reduction of risk in non-diversifying companies if they go for diversification but it is at the cost of profitability. Even though financial performance of company goes downside due to diversification, risk also decreases. Return on equity, return on assets and market return are the financial performance indicators used to evaluate the returns generated by company on its equity capital, assets and shares. Diversification is helpful for managers and employees of the company as it reduces volatility and risk of the firm but at the same time it may not be beneficial to investors as it reduces returns of the firm.

(Jara-Bertin, López-Iturriaga, & Espinosa, 2015) analyzed 83 non-financial Chilean companies to study diversification strategy over the period 2005-2013 listed on Santiago Stock Exchange. They studied business diversification and ownership diversification as two forms of corporate diversification strategy and analyzed its impact on market value of selected companies. Variables such as excess value for sales and assets multiples, market to book value, entropy of sales and assets, inverse Herfindahl index of sales and assets, number of segments, related subsidiaries, invested capital, ownership diversification, excess of voting rights, cash flow rights, investment ratio, debt, EBIT margin, financial crisis time period, economic growth, proportion of diversified companies and sales were measured. Researchers observed concentrated ownership structure with low legal protection of investors in Chilean economy which very much affects decision making process. Use of ownership structure to extract private benefits by largest shareholders results in inefficient use of resources resulting in loss in value of firm. They observed there is effect of ownership structure on diversification discount of Chilean companies which represents emerging market economy.

RESEARCH DESIGN:

Sampling frame and design:

Researchers used purposive sampling technique to select companies from National Stock Exchange of India (NSE). Researchers selected the companies for analysis which were listed throughout 2007 to 2012 with CNX Nifty. Total 38 companies were selected for the study.

Sources of data:

Secondary data used for this study. The secondary data was collected from print media like books, research journals, magazines, research articles and research papers available online and offline, annual reports of companies and other sources.

Statement of the problem:

Researchers are concerned with comparison of single segment approach verses multi-segment approach with respect to return on long term funds parameter for selected CNX Nifty companies for the selected period. Profitability analysis of single segment firms against multi-segment firms can provide critical information in selection of most suitable business approach.

Objectives:

- To study return on long term funds of selected NSE listed companies with respect to their diversification status i.e. companies with diversification and companies with no diversification.
- To study correlation of segment diversification with return on long term funds.

Limitations of the study:

- The study is limited to data collected from financial statements of selected companies only for the period 2007 to 2012.
- The findings of the study solely based on information provided by published data.

DATA ANALYSIS AND INTERPRETATIONS:

Table 1: Correlations-Segment Diversification and Return on Long Term Funds%

		Segment Diversification
Return on Long Term Funds %	Pearson Correlation	.208
	Sig. (2-tailed)	.004
	N	190

To find out the correlation between Segment Diversification and Return on Long Term Funds Ratio, researchers used 5 years financial data of 38 select NIFTY companies and Segment Diversification of the same. Correlation coefficient (r) between Segment Diversification and Return on Long Term Funds Ratio is .208, indicating positive relationship. As Pearson's r is positive, it indicates that if one variable increases in value, the second variable also increases in value and represents positive correlation. *P*-value for this correlation coefficient is .004. As $p < .05$, the relationship between Segment Diversification and Return on Long Term Funds Ratio is statistically significant. Thus, it can be concluded that when segment diversification increases, Return on Return on Long Term Funds Ratio also increases.

H_3: There will be significant prediction of Return on Long Term Funds by Segment Diversification.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.208[a]	.043	.038	24.69443

a. Predictors: (Constant), Segment Diversification

The above table provides the R and R^2 values. The R value represents the simple correlation and is 0.208 (the "**R**" Column), which indicates a moderate degree of correlation.The R^2 value (the "**R Square**" column) indicates how much of the total variation in the dependent variable, Return on Net Worth, can be explained by the independent variable, Segment Diversification. In this case, 4.3% can be explained, which is low.

Table 3: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5189.192	1	5189.192	8.509	.004[a]
	Residual	114645.186	188	609.815		
	Total	119834.379	189			

a. Predictors: (Constant), Segment Diversification

b. Dependent Variable: Return on Long Term Funds %

The ANOVA table indicates that the regression predicts the dependent variable significantly. P-value indicates the statistical significance of the regression model. Here, $P < 0.05$, and indicates that the regression model statistically significantly predicts the outcome variable i.e. it is a good fit for the data.

The table 'Coefficients' provides the details of the results. The Zero-order column under Correlations lists the Pearson r values of the dependent variable with each of the predictors. The Partial column under Correlations lists the partial correlations for each predictor as it was evaluated for its weighting in the model. The Part column under Correlations lists the semi partial correlations for each predictor once the model is finalized; squaring these values informs us of the percentage of variance each predictor uniquely explains.

Table 4: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.777	3.246		7.018	.000
	Segment Diversification	2.206	.756	.208	2.917	.004

a. Dependent Variable: Return on Long Term Funds %

The prediction model was statistically significant, F (1,189) = 8.509, and $p < 0.05$ and accounted for approximately 20.8% of the variance 'Return on Long Term Funds' ($R^2 = .043$ and Adjusted $R^2 = .038$). At $\alpha = 0.05$ level of significance; there exist enough evidence to conclude that there will be significant prediction of Return on Long Term Funds by Segment Diversification and thus researcher fails to accept null hypothesis.

From the above output, the regression equation is:

Return on Long Term Funds = 22.777 + 2.206Segment Diversification

FINDINGS:

Return on Long Term Funds Ratios of diversified firms are greater than non-diversified firms for all 5 selected financial years from 2007-08 to 2011-12. The difference in percent, for all 5 financial years, is minimum 5% of mean on Return on Long Term Funds Ratios.

CONCLUSION:

Segment reporting is used as a source of information pertaining to extent of diversification companies adopting and accounting standard boards at national and international level has always insisted to report such segment wise information to stakeholders through statutory reports. This study was carried out to find out relationship between diversification statuses and company profitability in Indian context by studying major Indian capital market index CNX Nifty. It was found that there is certain impact of diversification strategy on overall profitability of company.

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STUDY ON IMPACT OF DIVERSIFICATION ON RETURN ON CAPITAL EMPLOYED WITH RESPECT TO SELECTED CNX NIFTY COMPANIES

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Abstract:

The prime objective of the study was to compare diversification status of selected companies with return on capital employed. Accounting Standard 17 (AS17) mandate companies listed in India to disclose their business segment information in annual financial reports under the head segment reporting. This Accounting Standard provides information about diversification status of the company. Researcher compared performance of CNX Nifty companies with respect to their diversification status. Companies with only one business segment were compared with multi-segment companies using profitability ratios return on capital employed. There is paucity of research in the area of business segment profitability. Hence it is necessary to study impact of diversification on return on capital employed. There is enough evidence to conclude that there will be significant prediction of Return on Capital Employed by Segment Diversification.

Keywords: Diversification, Business segment, Return on Capital Employed, Accounting Standard 17(AS 17), Segment Profitability.

I. Introduction:

The objective of segment reporting is to precisely identify and analyze business opportunities as well as risks.Accounting standards 17, 'Segment Reporting', issued by the council of the Institute of Chartered Accountants of India (ICAI). Segment reporting helps to improve profitability and also aids in managing risk by making available disaggregated segment data for detailed analysis of the firm. Globalization & intense competition made stakeholders more aware about detailed analysis of reports of companies. Many companies are also diversifying their business into various segments. A consolidated financial statement does not provide classified information of performance of various segments of companies; it results in hiding the information of performance of individual segment. Due to incomplete information of performance of segments, stakeholders find it difficult to take vital decisions.

Return on capital employed (ROCE) is very important tool to measure profitability. ROCE is calculated by dividing operating profit by capital employed by the company for given period. It is the indicator of efficiency of company, using its capital to generate profit.ROCE takes into consideration long term financing of the company and hence useful in measuring longevity of the company.Net operating profit is often denoted by EBIT (Earnings before interest and tax). EBIT is derived by adding back interest and tax into net income.

II. Need for the study:

Diversification strategy is one of the most important areas of study in globalised economy. Various stakeholders such as investors, creditors, etc. are interested in major factors contributing in long term success of an enterprise and diversification status is such a major area of study. Establishment of relationship between diversification status with respect to number of business segments and profitability of company will be helpful for stakeholders in efficient economic decisions.

III. Review of Literature:

(Berger &Ofek, 1995) studied effect of diversification on firm value by analyzing 3659 firms for the period of 1986 to 1991 classifying single segment and multi-segment firms. They found that there is value loss for companies which opted for diversification. It was stated that the loss in value happened due to diversification is subsidized by tax benefit to some extent. EBIT and ROA were used are profit measurement tools to calculate profit or loss resulted due to diversification into various segments. Over-investment and subsidization of poorly performing segments are two major causes of value reduction due to multi-segment approach. There was a little benefit of increased debt capacity and tax shield due to diversification strategy. Value loss amounts to 13-15% of value of firm which is too high compared to little tax benefit arising out of diversification.

(OyekunleOyewobi, OlukemiWindapo, &Cattell, 2013) investigated data of large construction companies listed in South Africa for the period 2006 to 2010. Return on capital employed, return on assets and profit percent are used as indicator of measurement of profitability of selected companies while capital structure of firm, technology, firm size and age are used as control variables. Longitudinal data model was developed by researchers to establish relationship between return on assets, size and age of the firm, capital structure, technical capability with product and geographical diversification. Product diversification and geographical diversification strategies were analysed for selected period and it was found that older companies diversify more aggressively than newer companies in construction sector. Researchers concluded that for companies in construction sector in South Africa, diversification improves performance

(Gitau, J., 2015) studied current business model of British International School group and suggested suitable diversification strategy for future growth. Primary data was collected through open ended questionnaire method and response was collected from the management and intern teams of the firm. Secondary data related to research was collected through company database and available literature. It was suggested that company should restructure its organisation and improve core competencies before opting for any diversification. It was need of hour for the company to initially focus on its core business activity rather than going for diversification in other business activities to lay platform for future growth through diversification. Return on total assets (ROTA), profit margin (PM), return on equity (ROE) and return on capital employed (ROCE)were used as financial performance indicators.

IV. Research Design

Sampling frame and design:

As the present study is based on CNX NIFTY companies over the period 2007-2012, all the listed companies for the given period becomes the part of the population. Purposive sampling technique used to select the companies out of given population. Researcher has only selected the companies for analysis which were listed throughout 2007 to 2012 with CNX NIFTY. Thus sample size counts to 38 companies

Sources of data:

Researcher used secondary data for this study. The secondary data was collected from Print media like books, magazines, research articles and research papers on Google Scholar, Annual Reports and such other sources.

Statement of the problem:

Companies have different objectives and strategies. One of the grand strategies is diversification. There are various types of diversification like related, unrelated, vertical, horizontal, etc.If financial management of company segments is not done properly then it will lead to reduction of financial efficiency of the company. This study will help to compare business segment diversification and company profitability with respect to selected companies.

Objectives:

1)To study profitability ratios (ROCE) of selected companies with respect to their diversification status i.e. companies with diversification and companies with no diversification.

2)To study correlation of segment diversification with ROCE.

Limitations of the study:

1)The study is limited to data collected from financial statements of selected companies only for the period 2007-08 to 2011-12.

2)The findings of the study solely based on information provided by published data.

V. Data Analysis and Interpretations:

Table 1: Correlations - Segment Diversification and Return on Capital Margin %

		Segment Diversification
Return on Capital Margin %	Pearson Correlation	.252
	Sig. (2-tailed)	.000
	N	190

To find out the correlation between Segment Diversification and Return on Capital Margin Ratio, researcher has used 5 years financial data of 38 select NIFTY companies and Segment Diversification of the same. Correlation coefficient (r) between Segment Diversification and Return on Capital Margin Ratio is .252, indicating positive relationship. As Pearson's r is positive, it indicates that if one variable increases in value, the second variable also increases in value and represents positive correlation. *P*-value for this correlation coefficient is .000. As $p < .05$, the relationship between Segment Diversification and Net Profit Margin Ratio is statistically significant. Thus, it can be concluded that when segment diversification increases, Return on Capital Margin Ratio also increases.

H_1: There will be significant prediction of Return on Capital Employed by Segment Diversification.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.252[a]	.064	.059	15.66653

a. Predictors: (Constant), Segment Diversification

The table labeled 'Model Summary' provides the R and R^2 values. The R value represents the simple correlation and is 0.252 (the "**R**" Column), which indicates a moderate degree of correlation.The R^2 value (the "**R Square**" column) indicates how much of the total variation in the dependent variable, Return on Capital Employed, can be explained by the independent variable, Segment Diversification. In this case, 6.4% can be explained, which is low.

Table 3: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3141.525	1	3141.525	12.800	.000[a]
	Residual	46142.732	188	245.440		
	Total	49284.256	189			

a. Predictors: (Constant), Segment Diversification

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3141.525	1	3141.525	12.800	.000[a]
	Residual	46142.732	188	245.440		
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a. Predictors: (Constant), Segment Diversification

b. Dependent Variable: Return on Capital Margin %

The ANOVA table indicates that the regression predicts the dependent variable significantly. P-value indicates the statistical significance of the regression model. Here, $P < 0.05$, and indicates thatthe regression model statistically significantly predicts the outcome variable i.e. it is a good fit for the data.

The table 'Coefficients' provides the details of the results. The Zero-order column under Correlations lists the Pearson r values of the dependent variable with each of the predictors. The Partial column under Correlations lists the partial correlations for each predictor as it was evaluated for its weighting in the model. The Part column under Correlations lists the semi partial correlations for each predictor once the model is finalized; squaring these values informs us of the percentage of variance each predictor uniquely explains.

Table 4: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.330	2.059		7.445	.000
	Segment Diversification	1.716	.480	.252	3.578	.000

a. Dependent Variable: Return on Capital Margin %

The prediction model was statistically significant, $F\ (1,189) = 12.800$, and $p < 0.05$ and accounted for approximately 25% of the variance 'Return on Capital Employed' ($R^2 = .064$ and Adjusted $R^2 = .059$). At $\alpha = 0.05$ level of significance; there exist enough evidence to conclude that there will be significant prediction of Return on Capital Employed by Segment Diversification and thus researcher fails to accept null hypothesis.

From the above output, the regression equation is:

Return on Capital Employed = 15.330 + 1.1716 Segment Diversification

VI. Findings:

The Return on Capital Margin Ratio was noticed as 18.78% and 22.87% for non-diversified and diversified companies respectively. Thus it can be concluded that non-diversified companies effectively generates profits from capital employed than diversified institutions. The relationship between Segment Diversification and Net Profit Margin Ratio is statistically significant. Thus, it can be concluded that when segment diversification increases, Return on Capital Margin Ratio also increases.

VII. Conclusion:

Diversification is one of the grand strategies of growth for business undertakings worldwide. India is not exception to this and acceptance of liberalization reforms highlighted need of proper strategic planning to survive in highly competitive, globalised and dynamic business environment. Companies are considering diversification strategy as important strategy to adapt changes in business economy. The purpose of the study was to compare diversification status of companies with profitability. The researcher compared performance of selected CNX Nifty companies with diversification status. It was found that there significant prediction of Return on Capital Employed by Segment Diversification.

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Keywords: Return on long term funds, Investment, Profitability, Business segment, Nifty.

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The return is calculated as the annual percentage return based on the yields of all the underlying securities in the portfolio, but is weighted to account for each security's market value and maturity. The return is presented net of estimated fees and the maximum offering price, but does not account for delays in income distributions from the fund. The estimated long-term return may be the metric that should look at if planning on investing for the duration of the trust.

Return on long term funds ratio can be calculated by dividing operating profit by long term funds of the company where long term funds refer to the total investments made in a company for the long term.

Formula for return on long term funds can be given as,

Return on Long Term Funds % = EBIT/Long Term Funds X 100

This ratio is very useful in providing information regarding performance of investments made for long duration of time.

NEED FOR THE STUDY:

After performing in depth analysis of available literature, it was found that most of research in diversification strategy was performed in developed economies like USA, Japan and some European countries. Many researchers focused on impact of diversification on firm value. Very few researchers focused on impact of diversification on profitability of company. Majority of research work on profitability given emphasis on ROA and ROS figures and very few attempts were performed to analyze profitability in terms of ROCE, ROE, EPS, PBIT and return on long term funds.

REVIEW OF LITERATURE:

(Lecraw, 1983) analyzed 200 largest non-financial firms in Canada in the year 1975 to study cause and effect of segment diversification. These companies categorised into 4 classes namely Single Business (SB), Vertically Integrated Business (VIB), Related Business (RB) and Unrelated Business (UB) to have better insight into the subject. Firms adapted to one of the above diversification strategy as per their strategic goal. It was found that certain factors like characteristics of firm and characteristics of base industry are major deciding factors of type of diversification. Diversification strategy should be as per strengths and weaknesses analysis of the firm and selection of wrong diversification strategy leads to loss of value for firm. It was further found that there was increase in ROE of the firm compared to the industry in which it operates, if it follows the related diversification strategy. Optimum capital structure, relative market share are other major supporting parameters for maximum ROE along with appropriate diversification strategy.

(Pandya & Rao, 1998) performed empirical analysis of diversification strategy and performance of company and found that diversified companies perform better in terms of risk and return as compared to non-diversified companies. Researchers classified companies into three categories wiz. high performing class of companies, average performing class of companies and low performing class of companies. They found that in former class diversified companies show better financial performance while in latter two classes non-diversified firms are performing better financially. It was also found that there is reduction of risk in non-diversifying companies if they go for diversification but it is at the cost of profitability. Even though financial performance of company goes downside due to diversification, risk also decreases. Return on equity, return on assets and market return are the financial performance indicators used to evaluate the returns generated by company on its equity capital, assets and shares. Diversification is helpful for managers and employees of the company as it reduces volatility and risk of the firm but at the same time it may not be beneficial to investors as it reduces returns of the firm.

(Jara-Bertin, López-Iturriaga, & Espinosa, 2015) analyzed 83 non-financial Chilean companies to study diversification strategy over the period 2005-2013 listed on Santiago Stock Exchange. They studied business diversification and ownership diversification as two forms of corporate diversification strategy and analyzed its impact on market value of selected companies. Variables such as excess value for sales and assets multiples, market to book value, entropy of sales and assets, inverse Herfindahl index of sales and assets, number of segments, related subsidiaries, invested capital, ownership diversification, excess of voting rights, cash flow rights, investment ratio, debt, EBIT margin, financial crisis time period, economic growth, proportion of diversified companies and sales were measured. Researchers observed concentrated ownership structure with low legal protection of investors in Chilean economy which very much affects decision making process. Use of ownership structure to extract private benefits by largest shareholders results in inefficient use of resources resulting in loss in value of firm. They observed there is effect of ownership structure on diversification discount of Chilean companies which represents emerging market economy.

RESEARCH DESIGN:

Sampling frame and design:

Researchers used purposive sampling technique to select companies from National Stock Exchange of India (NSE). Researchers selected the companies for analysis which were listed throughout 2007 to 2012 with CNX Nifty. Total 38 companies were selected for the study.

Sources of data:

Secondary data used for this study. The secondary data was collected from print media like books, research journals, magazines, research articles and research papers available online and offline, annual reports of companies and other sources.

Statement of the problem:

Researchers are concerned with comparison of single segment approach verses multi-segment approach with respect to return on long term funds parameter for selected CNX Nifty companies for the selected period. Profitability analysis of single segment firms against multi-segment firms can provide critical information in selection of most suitable business approach.

Objectives:

- To study return on long term funds of selected NSE listed companies with respect to their diversification status i.e. companies with diversification and companies with no diversification.
- To study correlation of segment diversification with return on long term funds.

Limitations of the study:

- The study is limited to data collected from financial statements of selected companies only for the period 2007 to 2012.
- The findings of the study solely based on information provided by published data.

DATA ANALYSIS AND INTERPRETATIONS:

Table 1: Correlations-Segment Diversification and Return on Long Term Funds%

		Segment Diversification
Return on Long Term Funds %	Pearson Correlation	.208
	Sig. (2-tailed)	.004
	N	190

To find out the correlation between Segment Diversification and Return on Long Term Funds Ratio, researchers used 5 years financial data of 38 select NIFTY companies and Segment Diversification of the same. Correlation coefficient (r) between Segment Diversification and Return on Long Term Funds Ratio is .208, indicating positive relationship. As Pearson's r is positive, it indicates that if one variable increases in value, the second variable also increases in value and represents positive correlation. *P*-value for this correlation coefficient is .004. As $p < .05$, the relationship between Segment Diversification and Return on Long Term Funds Ratio is statistically significant. Thus, it can be concluded that when segment diversification increases, Return on Return on Long Term Funds Ratio also increases.

H_3: There will be significant prediction of Return on Long Term Funds by Segment Diversification.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.208[a]	.043	.038	24.69443

a. Predictors: (Constant), Segment Diversification

The above table provides the R and R^2 values. The R value represents the simple correlation and is 0.208 (the "**R**" Column), which indicates a moderate degree of correlation.The R^2 value (the "**R Square**" column) indicates how much of the total variation in the dependent variable, Return on Net Worth, can be explained by the independent variable, Segment Diversification. In this case, 4.3% can be explained, which is low.

Table 3: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5189.192	1	5189.192	8.509	.004[a]
	Residual	114645.186	188	609.815		
	Total	119834.379	189			

a. Predictors: (Constant), Segment Diversification

b. Dependent Variable: Return on Long Term Funds %

The ANOVA table indicates that the regression predicts the dependent variable significantly. P-value indicates the statistical significance of the regression model. Here, $P < 0.05$, and indicates that the regression model statistically significantly predicts the outcome variable i.e. it is a good fit for the data.

The table 'Coefficients' provides the details of the results. The Zero-order column under Correlations lists the Pearson r values of the dependent variable with each of the predictors. The Partial column under Correlations lists the partial correlations for each predictor as it was evaluated for its weighting in the model. The Part column under Correlations lists the semi partial correlations for each predictor once the model is finalized; squaring these values informs us of the percentage of variance each predictor uniquely explains.

Table 4: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.777	3.246		7.018	.000
	Segment Diversification	2.206	.756	.208	2.917	.004

a. Dependent Variable: Return on Long Term Funds %

The prediction model was statistically significant, F (1,189) = 8.509, and $p < 0.05$ and accounted for approximately 20.8% of the variance 'Return on Long Term Funds' ($R^2 = .043$ and Adjusted $R^2 = .038$). At $\alpha = 0.05$ level of significance; there exist enough evidence to conclude that there will be significant prediction of Return on Long Term Funds by Segment Diversification and thus researcher fails to accept null hypothesis.

From the above output, the regression equation is:

Return on Long Term Funds = 22.777 + 2.206Segment Diversification

FINDINGS:

Return on Long Term Funds Ratios of diversified firms are greater than non-diversified firms for all 5 selected financial years from 2007-08 to 2011-12. The difference in percent, for all 5 financial years, is minimum 5% of mean on Return on Long Term Funds Ratios.

CONCLUSION:

Segment reporting is used as a source of information pertaining to extent of diversification companies adopting and accounting standard boards at national and international level has always insisted to report such segment wise information to stakeholders through statutory reports. This study was carried out to find out relationship between diversification statuses and company profitability in Indian context by studying major Indian capital market index CNX Nifty. It was found that there is certain impact of diversification strategy on overall profitability of company.

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THE ANALYTICAL STUDY OF CAPITAL STRUCTURE WITH REFERENCE TO SELECTED AUTOMOBILE COMPANIES

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ABSTRACT

This research paper covered the study of selected three automobile companies' capital structures, value of share and relationship between cost of capital, capital structure and value of share for the period 2011 to 2016.It is an attempt to find out proportion of debt and equity in selected companies capital structure. Graphical presentation is used for proportion of debt and equity in total capital structure. The correlation tools is used for analyzing relationship between value of share and total capital. This paper concluded that there is negative correlation between value of share and capital.

KEYWORDS: Capital structure, Share value, Automobile sector, relation between share value and capital.

1. Introduction
The capital structure is an arrangement of both long term as well as short-term financing. It contains equity share capital, commercial papers, debentures and other long term financing sources. Ideal capital structure is the proper combination of debt and equity in such way that would maximize companies' wealth in the market. The capital structure decision is puzzling task to every corporate entity because if the company has proper acquisition of capital from different sources then it would always better to minimize financial cost and increase wealth of share.

Every business has certain limitation to acquire the capital but whatever they have option from them they must select suitable alternatives. In this capital structure choice finance manager must know future circumstances of selected source for making the future plan. If company decides to issue debentures for expansion of business and fulfill the requirement of shortage capital then company should examine expectation of existing shareholders, it should not increase over expectation of shareholders from company and the same time it should also not increase financial cost by reducing tax benefits; henceforth this capital structure decision is sensitive issue in every corporate business model.

The different stake holders which are associated with company such as investors, suppliers they also keep focused on companies decision for getting more return from investment and this is a comes under capitalization to company.

This research paper structure is as follows:
In chapter first included introduction of covered area of research. Chapter two is prominent which covers existing research study. Chapter three includes objectives of study. Chapter three is the empirical part of the study in this data is described and analyzed and last chapter that is five provides conclusion of this entire study.

2. Literature Review
(Modigliani & Miller, June 1958) M-M were the first to introduce a prescribed model on evaluation of capital structure. In their pivotal papers (1958, 1963),they presented that the value of a firm is independent of its capital structure but only under the presumptions of there are perfect capital markets, no taxes, no risk of uncertainty,100 % dividend-payout ratio and uninterrupted cost of debt. If the corporate taxes are considered into account, the value of a firm increases with debt-equity ratio as result of interest payments being tax exempted. This model has been at the focus of the financial research till date. Over the periods this model has been criticized, supported and extended.

(Bhat, 1980) investigated the relationship between the financial leverage to profitability, growth, firm size, debt service coverage ratio, dividend payout ratio and income of the selected engineering industry by correlation and regression analysis. This study used data for selected engineering industry during the period 1973 to 1978.Size, growth rate and degree of operating leverage were not found significantly related to financial leverage but business risk, earning rate, debt service ratio and dividend payout ratio were found negatively related to financial leverage. They also found that operating leverage has positive but insignificant relationship with leverage. They concluded that institutional characteristics do matter in determinants of financial leverage.

(Harris & Raviv, June 1990) This study elucidated that capital structure theory depended on firms' debt effect on investors' information and on their capacity to management holds. They highlighted a firm quality which derived from vale of liquidation, default costs and investor beliefs. They concluded that ideal capital structure acquired through a trade-off amongst higher incurred cost of investigation and liquidation decisions

(Harris & Raviv, March 1991) this paper analyzed relationship between firms' leverage to investment opportunities, bankruptcy risk, firm's size, uniqueness, research and development, advertising expenditure, non-debt tax shields, and asset tangibility. It is concluded that there is positively relationship between leverage to firm's size, non-debt tax shields, asset tangibility, and investment opportunities but it is adversely correlated to bankruptcy risk, firm's uniqueness, research and development, and advertising expenditure.

(Myers S. C., Capital Structure, 2001) This paper concluded that the theories were not capable to decide the amount of debt and equity in total capital structure but certain theories were useful under several condition such as tradeoff theory states that debt gets additional tax advantage in total capital structure. The pecking order theory defined that if firm has shortage cash flow then firm should borrow the funds rather than issuing equity to meet the capital expenditure. The free cash flow theory explained that high debt amount in capital structure increase value even this occur the threat of financial agony and firm's exceeds operating cash flow will generates profitable investment opportunities. The free cash flow theory is specially framed for developed firms that are liable to excess invest.

3. Objectives of the study
1. To find out the impact of capital structure on value of share.

2. To find out the relationship between capital structure and value of share.

3. To study the proportion of debt and equity in capital structure.

4. Data collection and analysis

Required financial data collected from consolidated annual report of selected BSE listed automobile sector companies of the five financial years. The share value is calculated on the basis of average opening of financial year and closing of financial year.

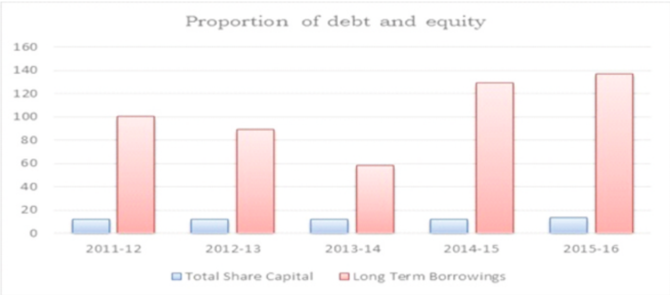
Company 1: Autoline Industries

Table no.1

(Rs. in Cr.)

Particulars/Financial Year	2015-16	2014-15	2013-14	2012-13	2011-12
Total Share Capital	13.23	12.34	12.29	12.25	12.20
Long Term Borrowings	137.13	128.88	58.65	88.99	100.48
Total Capital	150.36	141.22	70.94	101.24	112.68
Finance Costs	27.44	32.37	33.87	37.48	30.58
Equity Share Dividend	0	0	0	1.22	4.88
Share Value	78.4	101.925	98.875	199.825	222.9

Autoline Industries:



Graph no. 1

The above graph indicates that proportion of capital structure which raised through debt and equity.

The indications of graph is Autoline Industries has more portion of debt than equity in total capital amount; it shows high leverage firm.

The following table represent that there is negative correlation between total capital and share value of Autoline Industries. The value Pearson's co-efficient of correlation *r = -0.28288279.*

Table no.2

	Total Capital	Share Value
Total Capital	1	
Share Value	-0.28288279	1

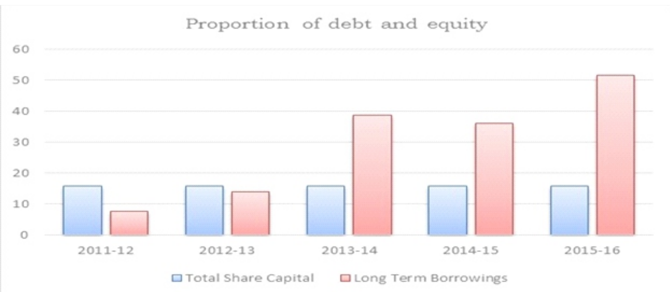
Company 2. Automotive Stampings and Assemblies

Table no.3

(Rs. in Cr.)

Particulars/Financial Year	2015-16	2014-15	2013-14	2012-13	2011-12
Total Share Capital	15.86	15.86	15.86	15.86	15.86
Long Term Borrowings	51.59	36.02	38.62	13.93	7.68
Total Capital	67.45	51.88	54.48	29.79	23.54
Finance Costs	9.33	8.24	6.64	4.74	5.46
Equity Share Dividend	0	0	0	0	2.38
Share Value	56.85	55.975	52.175	63.975	93.2

Automotive Stampings and Assemblies



Graph no. 2

The above graph indicates that position of capital structure which raised through debt and equity.

Over the year amount of debt has been increasing.

The following table represent that there is negative correlation between total capital and share value of Automotive Stampings and Assemblies .The value Pearson's co-efficient of correlation *r = -0.786405836.*

Table no.4

	Total Capital	Share Value
Total Capital	1	
Share Value	-0.786405836	1

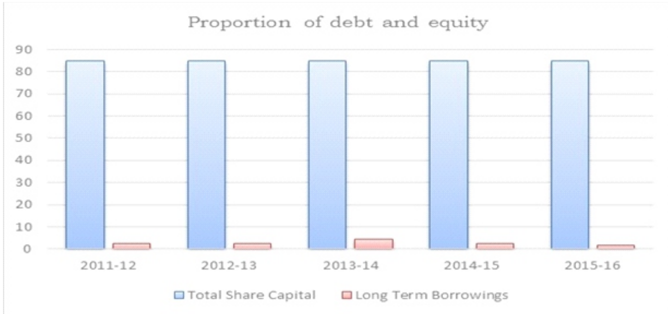
Company 3. Exide Industries

Table no.5

(Rs. in Cr.)

Particulars/Financial Year	2015-16	2014-15	2013-14	2012-13	2011-12
Total Share Capital	85.00	85.00	85.00	85.00	85.00
Long Term Borrowings	1.9	2.62	4.30	2.38	2.58
Total Capital	86.9	87.62	89.3	87.38	87.58
Finance Costs	1.65	3.21	7.61	9.06	14.91
Equity Share Dividend	204	187	153	136	127.5
Share Value	159.825	149.35	124.55	136.775	143.075

Exide Industries



Graph no.3

The above graph shows that the amount of share capital is constant since last five years but there slightly variation in amount of debt.

The following table represent that there is negative correlation between total capital and share value of Exide Industries. The value Pearson's co-efficient of correlation *r = -0.85960047.*

Table no.6

	Total Capital	Share Value
Total Capital	1	
Share Value	-0.85960047	1

5. Conclusion

Empirically it has been found that total capital has a negative and significant impact on value on share. It has also been found that selected companies capital structure varies according to requirement of capital. The Autoline Industries issued more debt securities for raising the long term capital. Hence, it is concluded that this company has high leverage. The second company is Automotive Stampings and Assemblies which have been increasing more amount of debt over the last five financial years and selected third company's Exide Industries the amount of capital is same for the last five years. Therefore, it is also concluded that in automobile sectors the portion of equity is high in total capital.

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Original Research Paper Management

THE STUDY ON REVIEW OF CAPITAL STRUCTURE

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ABSTRACT *The capital structure is major decision in every firm. If this decision is appropriate than its better to firm otherwise affects negatively on entire firms financial activities. In this papers researcher has covered secondary study thorough different secondary data. This paper mainly focuses on existing study which is related with capital structure decisions. This study is also help to know the different factors affecting on capital structure decisions and features of optimal capital structure*

KEYWORDS : capital structure, optimal capital structure

1. Introduction
The assets of a company can be funding either by raising the owners fund or the creditor's fund. The owners fund rises by issuing ordinary shares or by retaining the earnings, the creditors' fund increase by borrowing. The financial structure of an enterprise is shown under the liabilities plus equity of the balance sheet. Usually, short-term borrowings are expelled from the list of methods of financing the firm's capital payments, and therefore, the long term funds are said to form the capital structure of the enterprise. The capital structure is used to signify the proportionate association between debt and equity .Equity includes paid-up share capital, share premium and reserves and surplus.

The capital structure choice is an important managerial decision. It influences the shareholders returns and risk accordingly; the market value of share may be affected by the capital Structure decision. The company will have to plan its capital structure primarily at the time of its endorsement.

2. OBJECTIVES OF STUDY
·To study the capital structure management.
·To know the features of optimal equity capital structure.
·To identify affecting factors on capital structure decision.

3. CONCEPT OF CAPITAL STRUCTURE
Capital structure signifies association between dissimilar types of long term capital, i.e., long term debts, shareholders equity etc. The assortment of suitable capital structure is a extremely critical choice and depends on a amount of factors such as the nature of a business; the risk concerned necessities of the administration. The share capital is often supplemented by debentures capital and other long term borrowed capital. The combine of firm's enduring long term financing represents by debt, equity.
Definition of Capital Structure
"Capital Structure is the makeup of a firm's capitalization i.e. it represents the mix of different source of long term funds in the total capitalization of company"
- C.W.Gerstenberg.
Capital structure shows that percentage of the firm's capital is in equity and what percentage of firm's capital is in debt.

I. An optimal capital structure should have the following features
1. Profitability:
The most profitable capital structure is one that to reduce cost of earning per share.

2. Flexibility:
Capital structure should be like that can raise capital as when needed. Because requirement of capital is depends on company's expansion policy, future strategies etc. hence the capital structure should be flexible which can raise the capital according to company's need.

3. Conservation:
If company does not have proper management on acquired funds then it's arise the issue of more incurring cost on raised funds; there for company should have proper management of capital structure that is better to company's wealth increasing.

4. Solvency:
The appropriate portion of equity and debt in total capital it's better to solvency of company. If company incurred more cost on capital that would increase the company's liability and that is directly affect on company's solvency.

5. Control:
The capital structure should be in the control of company. If Combination of Equity and Debt by company then it's better to increase the wealth of company.

I. Factors affecting the capital structure:
1. Leverage:
This is the fundamental and vital factor, which influence the capital structure. It considers the fixed cost financing such as debt, equity and preference share capital. It is closely related to the overall cost of capital.

2. Cost of Capital
Cost of capital the major component for deciding the capital structure of a firm.usually long- term finance such as equity and debt considers of fixed cost while enrollment. If the cost of capital increases, value of the firm will also decrease. Therefore the firm has to take cautious steps to control the cost of capital.

3. Nature of the business
The Business nature is also affects the choices of long term capital. If business engages long term operations then such business needs equity than debt so it will reduce the cost of capital.

4. Size of the company:
It also affects the capital structure of a firm. If the firm is to large scale, such firm can raise funds from internal sources. But if the firm is small

size, they will prefer to raise funds from external source and it will arise more cost of capital amount.

5. Legal requirements:
Legal requirements are also affecting capital decision because if company does not able to complete legal obligation then it will affects on capital structure decision.

4. LITERATURE REVIEW

·Franco Modigliani and Merton Miller (hereafter called M -M) (1958,1963)

Franco Modigliani and Merton Miller (hereafter called M -M) presented the first formal model on valuation of capital structure. In their papers (1958,1963), they explained that under the hypothesis of perfect capital markets, equal risk class, no taxes,100 per cent dividend-payout ratio and stable cost of debt, the value of a firm is autonomous of its capital structure. When corporate taxes are considered, the value of a firm raises with debt-equity (D/E) ratio because of interest payments being tax exempted.

- Solomon (1963)

Solomon (1963) disagreed that the cost of debt does not always remain stable. If the leverage level beats the accepted level, the probability of default in interest payments increases thus raising the cost of debt.

- Kalish (III) and Gilbert (1973)

Kalish and Gilbert studied the impact of volume and organizational form of the commercial bank on its efficiency. Cost and output of the banks were composed for this purpose. They used 898 commercial banks that look part in that. Banks categorized in different forms like unit banks, branch banks and holding company subsidiaries on the basis of their organizational form and the amount of assets they hold. The minimum normal cost al which bank of the equal size and organizational form can operate is called as technical efficiency of the bank while the more normal cost of the bank over minimum normal cost indicates the operational inefficiency of the bank.

- Miller (1977)

The miller was challenged in trade-off theory. He challenged that insolvency and organization costs are too small to compensate the tax advantage of debt. But if personal taxes are considered, this advantage is totally compensate by the disadvantage of personal tax rate. Thus, in equilibrium, the value of a firm is self-determining of its capital structure, even when the market is imperfect.

- Venkatesan (1983)

In this paper researcher examined the determinants of financial leverage through analyzing the relationship between seven different variables and the financial structure of the firm's. The variables are considered industry categorization, size, operating leverage, debt coverage, cash flow coverage, business risk, and growth rate. In summation, only debt coverage ratio was found to be the significant variable extensively affecting the financial structure of the firms.

- Singal and Mittal (1993)

This paper concluded that asset composition, business risk, growth rate, earning rate, industry –class, debt services capacity and corporate size are decides of shareholders wealth maximization.

- Hutchinson Robert W (1995)

This paper suggested that the objective of an owner is control the firm, the different dependent variable are affecting decision of capital structure and it's ultimately affect of cost of capital.

- Raj S Dhankar and Ajit S Boora (1996)

The capital structure influenced the cost of capital, net profit, earning per share, and dividend payout ratio and liquidation position of the firm. The Indian company does not use any standard structure to determine cost of capital. Only the cost of capital does not decide the capital structure. Cost of debt in India is relatively high as judge against to that in the developed countries.

- La Porta, et al. (2000)

This paper studied that legal allegations gives sturdy shield to shareholders allows them to force companies to eject cash. The proposition is that efficient monitoring by shareholders in UK.

- Sanjay Rajagopal (2004)

The paper found that the fixed asset ratio, firm size, profitability, market-to-book ratio, non-debt tax shields, and earnings volatility significant role in financial leverage. This study suggested that independent variables are significant variation in leverage ratios in a developed economy such as the US and an emerging market such as India.

- Boodho (2009)

This paper takes a short evaluation of literature and facts on the association between capital structure and ownership structure. This study also covers significant determinants of capital structure of the listed companies.

5. CONCLUSION:

Capital is basic requirements of firm therefore firm should obtain proper capital source to long term finance. If company has better control on capital structure decision then it will reduce the cost of capital and ultimately that will affect company's wealth in the market.But the decision of capital structure is not that much is to firm because again there are different of factors which are affecting on capital structure decision such as Size of business, Leverage, Legal obligation etc.It's tough to firm to maintain optimal capital structure in the firm but once company controls capital structure decision in proper way then that will gives better out put to the firm by reducing cost of capital.

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Review of Capital Structure with reference to selected BSE Listed Companies

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ABSTRACT

Indian corporates employ a substantial amount of debt in their capital structure in terms of the debt-equity ratio as well as total debt to total assets ratio. Nonetheless, foreign-controlled companies in India use less debt than domestic companies. The dependence of the Indian corporate sector on debt as a source of finance has over the year inclined particularly since the mid-nineties. This paper covered the study of different factors that are affecting capital structure decisions. The review of the literature found that almost ten factors are affecting capital structure decisions, but it is difficult to find out the influence efficiency of them. Therefore, in this paper, researchers tried to find the same through the different statistical tests.

KEYWORDS: Debt-equity ratio, Factors, Bombay Stock Exchange Capital Structure.

1. INTRODUCTION

This research is descriptive and analytical research because in descriptive research it contains components of both qualitative and quantitative research. Descriptive research defines the situation as it is. There is no control of the researcher on the selected variables. In this research, data is not manipulated as such. The researcher has defined, explained, analysed and validated different variables. Henceforth, this research is the combination of a descriptive and analytical type of research.

For this study, primary data is not required and used. Secondary data is obtained from various reports, research articles, books, previous research works conducted, Journals, websites, Prowess database package of Centre for Monitoring Indian Economy (CMIE), 'Handbook of statistics on Indian economy', 'Science direct through the Jaykar Library of Savitribai Phule Pune University' and other published reports, etc. Researchers identified total 139 automobile units were located in Pune and registered under the Bombay Stock Exchange (BSE). Based on convenience sampling researchers were selected total 93 companies. The researchers used statistical data analysis. Used the descriptive statistics, selected the input range and then tabs like labels/summary statistics/confidence level.

After this study, the researcher found different facts such as the variables considered for this research are values quoted by the companies in the financial statements. They are picked up so as to measure the impact of them jointly and severally on the capital structure and vice versa. However, all of them are found to be statistically significantly different from each other. As they are assumed to have some relationship with each other theoretically, it is surprising to note that it is not the case.

2. RESEARCH GAP

After the critical analysis of selected literature, it has found that many of the researcher and the authors have focused their research studies in order to evaluate the factors affecting decisions regarding capital structure like working capital, reserves and funds, net worth, asset capital, tangible asset and sales figures of the company. Very few authors and researchers have diversified their studies towards the analysis of financial statements and their impact on capital structure decisions for companies. Some of the researchers also have considered non-economical and non-financial parameters like managerial strategies, micro and macro-economic factors showing impact on the capital structure decision. It has been observed out of analysed literature that; even though there is a huge significant dependency and relation between stock market performance of the company and capital structure decisions, very negligible research has been conducted to systematically analyse the dependency of capital structure decision on the stock market performance of the company. Except one or two attempts made in order to establish the relation between Earning per share and capital structure decision, no other research body has targeted this area of financial research. So, based on the critical analysis of available literature about selected topic it has been found that it will be very significant to further elaborate the present research body conducted on this topic and hence this has been considered as required field where significant research can be conducted.

2.1. Statement of the research problem

Indian corporates employ a substantial amount of debt in their "Capital structure" in terms of the 'debt-equity ratio' as well as total debt to total assets ratio. Nonetheless, foreign-controlled companies in India use less debt than domestic companies. The dependence of the Indian corporate sector on debt as a source of finance has over the year inclined particularly since the mid-nineties. The corporate enterprises in India seem to prefer long-term borrowings over short-term borrowing. Over the years they seem to have substituted short-term debt for long-term debt.

As a result of debt-dominated "Capital structure", the Indian corporate are exposed to a very high degree of total risk as reflected in high degree of operating leverage and financial leverage and consequently are subject to a high cost of financial distress which includes a broad spectrum of problem ranging from relatively minor liquidity shortages to extreme cases of bankruptcy.

Companies raise funds through various sources, i.e. debt and equity while taking these crucial decision companies have to take into consideration various factors that get affected by "Capital structure" decision and one of the vital factors is the value of shares, hence this problem is taken for study.

3. OBJECTIVES, HYPOTHESIS AND SIGNIFICANCE OF RESEARCH

3.1. Objectives

- To study factors influencing "Capital structure".
- To study the relationship between important factors influencing "Capital structure" with the value of share.

3.2. Hypothesis

The different variables related to "Capital structure" are not having an equal impact on the "Capital structure" of the automobile companies.

3.3. Significance

"Capital structure" which mentions the mix of long term sources of finance such as "equity capital, debentures, term loans and assets" is called to be optimum when collective "cost of capital" is at minimum level. However, in practice, the determination of optimum "Capital structure" is a very difficult task. In designing the "Capital structure" of company, numerous factors are to be taken into account. Lastly, it is assumed that the decision-maker which plays a crucial role in planning of the "Capital structure".

Proper planning is required for designing the "Capital Structure". To determine the "Optimum Capital Structure" that is again huge challenge to firm. If company does not have proper or planned "Capital Structure" then it's dangerous to companies' future growth such a situation will arise financial crunch in future. Unplanned capital Structure Company may be successful in business but that is not sustainable to long run and also such firm is unable to use its financial resources properly. The objective of the current research is to study the various factors that should be considered in mind while formulating the "Capital structure". This study will helpfull for Indian companies as well as stakeholders such as suppliers, Lender, large scale companies, etc. to come out from problem of "Capital structure" decisions.

4. METHODS

The quantitative methodology was employed in this research in order to obtain data so as to address the research objectives. A qualitative study generally attempts to test the theory, in an attempt to increase the predictive understanding of phenomena and quantitative studies generally attempt to understand phenomena through the meanings that people assign to them. In this, study quantitative approach has been used to satisfy the stated objectives. The research model developed for this study was tested using quantitative method by analyzing data through different statistical tools. The purpose of the study is mainly descriptive and analytical. It is descriptive because descriptive data was collected through financial statements. It is also analytical since it tried to analyse the different factors affecting value of share. In this research the process followed is as under:

- Defining problem statement for research.
- Review of Literature and other studies and theories.
- Methods adopted for data and sample selection & research methodology.
- Interpretation of analysed information and data.
- Presentation of Conclusions Statement.

5. RESULTS AND DISCUSSION

Table 1: Descriptive stats of pooled data

	Mean	Median	Standard Deviation	Kurtosis	Skewness	Count	Confidence Level (95.0%)
Sales	320.51	144.91	542.09	15.47	3.59	93	111.64
Profit after tax	11.76	2.6	36.32	36.38	5.11	93	7.48
Total capital	20.02	8.5	37.07	14.27	3.59	93	7.63
Reserves and funds	87.51	18.23	208.7	31.2	4.99	93	42.98
Net worth	105.72	31.9	216.58	28.45	4.72	93	44.6
Tangible net worth	101.81	27.9	212.85	30.7	4.93	93	43.84
Total term liabilities	64.08	18.55	154.61	41.41	5.81	93	31.84
Net working capital	15.22	1.16	83.6	38.44	5.46	93	17.22
Market Capitalisation	334.65	0	1416.77	28.28	5.26	93	291.78
Beta	0.18	0	0.36	0.78	1.62	93	0.07

In all, 93 companies' data has been pooled together for 10 variables considered for data analysis. Each variable has been explained below:

- **Sales:** The mean sales value is Rs.320.51 crores, with a median at Rs.144.91 crores. The data is positively skewed and platykurtic.
- **Profit after Tax:** The Mean Profit after Tax value is Rs.11.76 crores, with a median at Rs.2.60 crores. The data is positively skewed and platykurtic.
- **Total Capital:** The Mean Total Capital value is Rs.20.02 crores, with a median at Rs.8.50 crores. The data is positively skewed and platykurtic.
- **Reserves:** The Mean Reserves value is Rs.87.51 crores, with a median at Rs.18.23 crores. The data is positively skewed and platykurtic.
- **Net Worth:** The Mean Net Worth value is Rs.105.72 crores, with a median at Rs.31.90 crores. The data is positively skewed and platykurtic.
- **Tangible Net Worth:** The Mean Tangible Net Worth value is Rs.101.81 crores, with a median at Rs.27.90 crores. The data is positively skewed and platykurtic.
- **Total Term Liabilities:** The Mean Total Term Liabilities value is Rs.64.08 crores, with a median at Rs.18.55 crores. The data is positively skewed and platykurtic.
- **Net Working Capital:** The Mean Net Working Capital value is Rs.15.52 crores, with a median at Rs.1.16 crores. The data is positively skewed and platykurtic.
- **Market Capitalisation:** The Mean Market Capitalization value is Rs.334.65 crores, with a median at Rs.0.00 crores. The data is positively skewed and platykurtic.
- **Beta:** The Mean Beta value is Rs.0.18, with a median at Rs.0.00. The data is positively skewed and platykurtic.

5.1. Hypothesis testing

Hypothesis: The different variables related to "Capital structure" are not having an equal impact on the "Capital structure" of the automobile companies.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distributions of SALES, PAT, TCAP, RESERVES, NW, TNW, TTL, NWC, MCAP and BETA are the same.	Related-Samples Friedman's Two-Way Analysis of Variance by Ranks	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

As the Null Hypothesis is rejected, the alternative hypothesis is proved.

6. CONCLUSION

As the Null Hypothesis is rejected, the alternative hypothesis is proved which means various considered variables such as sales, profit after tax, total capital reserves, etc. are impacting "Capital structure" but it was not having equal impact on "Capital structure" of the automobiles companies.

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