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IMPACT OF INFORMATION SYSTEMS SUCCESS DIMENSIONS ON SYSTEMS EFFECTIVENESS: A CASE OF SUNPLUS ACCOUNTING PACKAGE WITHIN THE ZIMBABWE UNION CONFERENCE OF THE SEVENTH-DAY ADVENTIST CHURCH

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ABSTRACT

Information systems' stock has risen with technological advancement. They do not come cheaply and huge amounts of resources are committed toward successful implementation of a system reckoned to bring value to an organisation. It is worthy taking time out to establish the verity of the returns on this investment. This gives an insight into the areas that may need to be re-considered with regards to the implemented system, while also providing a guide for future implementations. The D&M information systems success model's dimensions adopted in this study provide a standard with which a systems' effectiveness can be assessed. The results of this study indicate that the SunPlus Accounting package is delivering satisfactorily across the 5 dimensions of information quality, system usefulness, system usage, overall satisfaction and service quality. However, the implementation process needs to be revised if users are to benefit from it. The users overall satisfaction is affected to a greater extent by information quality usage, usefulness and service quality perception than by the implementation process or usefulness. As such, for the organisation to realise more from the users, it should pay more attention to these key dimensions.

KEYWORDS

information systems, systems success dimensions, systems effectiveness, D&M information systems success model.

INTRODUCTION

An Accounting Information Systems (AIS) is supposed to provide the primary data for decision-making by administrators. It maintains and produces the data used by an organization to plan, evaluate, and diagnose the dynamics of operations and financial circumstances (Anthony *et al.*, 2004). Being a specialized information system, it can be very expensive to purchase and maintain.

STATEMENT OF THE PROBLEM

The General Conference of the Seventh Day Adventist Church (SDA) has invested huge sums in the purchase of the licenses for Sun Plus Accounting Systems, customization and its subsequent implementation to fit the requirements of its entities as well as the requisite hardware in order to achieve the organization's financial management objectives. Presently, there has not been a post-implementations review audit, in-house or otherwise, that has been conducted to determine whether SunPlus is really meeting its intended objectives within the Zambezi Union Conference (ZUC) constituency. There is an undetermined return to this investment in a seemingly not-so-primary mission, to warrant its continuance. Therefore, this study seeks to evaluate the effectiveness of the SunPlus Accounting System within the Zimbabwe Union Conference.

OBJECTIVES OF THE STUDY

1. To audit the implementation of the Sun Plus Accounting System in terms of sequence deliverance, content coverage and environment.
2. To audit the extent to which the implementation of SunPlus Accounting System has been effective in terms of the dimension of information quality; system usefulness; system usage characteristics; overall satisfaction, and service quality.
3. To ascertain the extent to which each of the D&M Information Systems success dimensions explain the overall user system satisfaction.

METHODOLOGY

The study made use of stratified sampling technique. Respondents were selected based on the offices and roles they hold and play for the purpose of assessing the system's effectiveness. All Chief Executive Officers of the ZUC institutions, Executive Secretaries, Chief Financial Officers, Financial Officers were co-opted into the population, while one Audit Financial Officer was picked from each of the entities that have this designation or equivalent. All accountants, accounting clerks and information technology support personnel were selected from each of the entities that have these positions filled. Non-probability purposive sampling technique was adopted, in which the selection of the sample was based on the judgment about some appropriate characteristics required of the sample members. A total of 707 employees from the above mentioned categories were taken as sample size and questionnaires were administered to the sample.

SCOPE OF THE STUDY

The scope of the study is limited to the case study of the Zimbabwe Union Conference (ZUC) of the Seventh Day Adventist Church. The ZUC is constituted by three Regional Conferences, that is, the East Zimbabwe Conference (EZC), the Central Zimbabwe Conference (CZC) and the West Zimbabwe Conference (WZC).

BACK DROP

An offshoot of the Millerite movement in the United States during the middle part of the 19th century and formally established in 1863, the Seventh-day Adventist (SDA) church has extensively grown to an estimated worldwide membership of 17.2 million as of June 2011 (General Conference-Secretariat, 2012). It has a missionary presence in over 200 countries and territories and is ethnically and culturally diverse (General Conference-Office of Archives Statistics, 2009). The church operates about 10,000 schools, 168 hospitals and publishing houses worldwide, as well as a humanitarian arm known as ADRA (Adventist Development and Relief Agency). Zimbabwe Union Conference (ZUC) is a 3rd administrative level organization within the SDA church falling within the Southern Africa Indian Ocean Division (SID) of the General Conference (GC). It administers the national territory of Zimbabwe, which consists of three local conferences, a university, two dental practices, orthodontic centre, a book centre, a humanitarian agency and an orphanage. The local conferences, in and of themselves, are responsible for 75 primary and 38 secondary schools, 11 clinics, and 3,890 congregations (ZUC, 2012).

Administrative reports are regularly received from lower organizations to keep higher organizations abreast of the actual performances within their territory. One such report is the financial report that ought to provide an accurate picture of the accounting and treasury functions of entities that then serves as a reference resource for decision-making. ZUC operates many different entities, bringing to fore the challenge to balance the uniform application of standards and procedures that apply to every entity to allow for meaningful comparison among similar entities and among different time periods. To this end, the church has drafted and adopted an Accounting Manual, internally referred to as the Seventh-day Adventist Accounting Manual (SDAAM, 2011). Comparability is key to performance assessment of sub organizations across time periods and industry line. Realizing this fact, the General Conference (GC), after the false starts of previous experiments with off the shelf accounting packages and attempts at internally customizing source codes, teamed up with Information Systems for the development of an accounting package especially tailor-made for the church and its entities code-named SunPlus. 403.03. Selection of Software to encourage uniformity and comparability, the denomination has modified a software application (known as SunPlus) to implement this account structure, and has made that software available to all denominational entities. Although organizations can choose to obtain other accounting software, the GC recommends the use of SunPlus (SDAAM, 2011).

Financial Reports are one by-product of an accounting system. A good accounting system, by the church standards: will enable the Chief Financial Officers to produce these reports efficiently, without additional editing and reorganizing of the underlying data, and in a format that will be understandable to the average well-informed reader. In addition, the reports should comply with generally accepted accounting principles (GAAP) and conform to the standards of uniformity required for statistical comparison with the reports of other denominational organizations (SDAAM, 2011). SunSystems 3.6 is one package that the church widely deployed as a standard to its entities. It was DOS-based, with the typical black prompt. It required extensive adaptations and had no maintenance contract from the source code seller. It could not handle large volumes of data and had some compatibility issues. To a non-computer versant user, integration with other office programs was not so seamless, requiring some tinkering and tricks. The 'not-so-user-friendly' interface did not help its acceptability too. Thus, in the 4th quarter of 2002, the World Church began the rollout of SunPlus to its entities. It was hoped that this would see an improvement in the quality of financial reports, reduce the workload of treasury staff, enhance comparability and reduce the time needed for report generation. As of November 2012, ZUC officially has 20 entities that use SunPlus as their Accounting package (ZUC – Mid-Year Report, 2012).

ANALYSIS OF THE STUDY**TABLE 1: CORRELATIONS**

		Implementation Process	Information Quality	System Usefulness	System Usage	Overall Satisfaction	Service Quality	User Capability
Implementation Process	Pearson Correlation	1	-.009	.107	-.029	-.084	.136	.116
	Sig. (2-tailed)		.904	.166	.712	.280	.078	.135
	N	168	168	168	168	168	168	168
Information Quality	Pearson Correlation	-.009	1	.780**	.700**	.770**	.569**	.408**
	Sig. (2-tailed)	.904		.000	.000	.000	.000	.000
	N	168	168	168	168	168	168	168
System Usefulness	Pearson Correlation	.107	.780**	1	.626**	.666**	.526**	.450**
	Sig. (2-tailed)	.166	.000		.000	.000	.000	.000
	N	168	168	168	168	168	168	168
System Usage	Pearson Correlation	-.029	.700**	.626**	1	.766**	.666**	.501**
	Sig. (2-tailed)	.712	.000	.000		.000	.000	.000
	N	168	168	168	168	168	168	168
Overall Satisfaction	Pearson Correlation	-.084	.770**	.666**	.766**	1	.664**	.289**
	Sig. (2-tailed)	.280	.000	.000	.000		.000	.000
	N	168	168	168	168	168	168	168
Service Quality	Pearson Correlation	.136	.569**	.526**	.666**	.664**	1	.453**
	Sig. (2-tailed)	.078	.000	.000	.000	.000		.000
	N	168	168	168	168	168	168	168
User Capability	Pearson Correlation	.116	.408**	.450**	.501**	.289**	.453**	1
	Sig. (2-tailed)	.135	.000	.000	.000	.000	.000	
	N	168	168	168	168	168	168	168

** . Correlation is significant at the 0.01 level (2-tailed).

Overall, the matrix in table 1 above reflects the consistency of the relationships among Information Quality, System Usefulness, System Usage, Overall Satisfaction, Service Quality and User Capability, that is, the D&M Information Systems success dimensions adopted for the purposes of this study. There was, however, no consistent relationship between the other Information Systems dimensions with Implementation Process with correlation coefficient values close to 0 and p-values greater than 0.05. A system's ability to produce clear, accurate, sufficient and timeous information enables a user to do more as they will spend less time hunting for meaning and sense from the output. A correlation coefficient of 0.780 reflects that those with a higher rating for Information Quality tend to rate the system's usefulness highly too. A user is more concerned with getting a system to accept his input, process it and give an output. All the complexities involved in the processing are not important. The more complicated a system is the more likely it is difficult to learn, and the harder it is to get it to do what one wants done. The quality of information may be affected by the errors committed or omitted during data entry due to a system not being easy to use or learn. The correlation coefficient of 0.700 affirms the relationship between Systems Usage and Information Quality that is reflected from the users' perception of SunPlus. A system's ease of use may enhance a users' efficiency in that less effort will be required to get a desired result. It may also be possible for more work to be done by a user if a system is easy to learn. This in turn may reduce expenses in the form of overtime or per diem allowances paid as the need for extra time is voided. This may explain the significant correlation coefficient of 0.626, indicative of the relationship between the two dimensions of System Usefulness and System Usage.

The relationship between Information Quality and Overall Satisfaction is significantly strong, with a coefficient correlation of 0.770. An entity's information processing requirements would include the clarity, accuracy, format and timeous elements, which elements are elements of Information Quality. Degree of satisfaction will therefore be consistently related to the changes in the levels of these qualities. A user will be satisfied if the system is available, with minimal to

no access disruptions. In the case of a systems failure, a user would expect the support team to be able to solve the problem as soon as possible so that tasks may be completed on time. Entities using SunPlus are audited by General Conference Auditing Services once a year. The team normally visits and expects to finish their assignment in set time. A user would expect the support team to understand their circumstance and come to their aid quickly, without system failures derailing their schedules. A correlation coefficient of 0.766 does reflect the consistent relationship between the two dimensions. In the same vein, system support availability, competence and reliability ensures that the system is available for use and is able to do what it should. This relates it to the System Usage dimension (0.626) and System Usefulness (0.666). Moderate relationship is evident between the dimensions of System Usefulness and Service Quality, as well as between Information Quality and Service Quality. The ratings for the two are 0.526 and 0.569 respectively.

TABLE 2: THE MODEL SUMMARY

Model	R	R Square	Cum. Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
Information Quality	.770	.593	.591	.48065	.593	242.350	1	166	.000
System Usage	.833	.694	.690	.41827	.101	54.212	1	165	.000
Service Quality	.846	.715	.710	.40471	.021	12.241	1	164	.001
User Capability	.862	.744	.737	.38526	.028	17.972	1	163	.000
Implementation Process	.866	.750	.742	.38156	.006	4.179	1	162	.043
System Usefulness	.870	.756	.747	.37796	.006	4.097	1	161	.045

As shown in Table 2 above the model summary indicates that all the dimensions' contributions are significant, (p -value < 0.05). The model reflects that the Information Quality dimension singularly explains 59.1% of the variability in Overall Satisfaction. It is the key dimension that predicts the Overall Satisfaction level as it applies to Sun Plus. The addition of the System Usage dimension to the model resulted in an additional 10.1% of the variation in Overall Satisfaction with SunPlus being explained. Addition of the Service Quality dimension increased the account for variance by 2.1% while the addition of User Capability dimension increased the explanation of variation in Overall Satisfaction by 2.8% variation to 74.2%. The other 2 dimensions of implementation and usefulness increased the variance explanation by a 0.6% each, bringing the Model total explanation level to 74.7%.

DEPENDENT VARIABLE: ENHANCED OVERALL SATISFACTION

TABLE 3: REGRESSION ANALYSIS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	.058	.240		0.239	.811
Information Quality	.448	.091	.344	4.917	.000
System Usage	.388	.067	.369	5.766	.000
Service Quality	.221	.047	.257	4.679	.000
User Capability	-.191	.044	-.201	-4.312	.000
Implementation Process	-.057	.024	-.096	-2.363	.019
System Usefulness	.137	.068	.132	2.024	.045

a. Dependent Variable: Overall Satisfaction

From table 3 above, holding all other dimensions constant, for the Model that has all the dimensions included, a positive change by a one unit rating of Information Quality will increase the overall satisfaction by a rating of 0.448 units. This implies that users rate the dimension of Information Quality very highly. Bearing in mind that SunPlus is an Accounting Information System, this is to be expected as the elements of timeliness, accuracy, format and relevance are highly expected of such systems. It also confirms earlier studies that suggest the existence of an association between the Information Quality and Overall Satisfaction Dimensions (Scheepers *et al.*, 2006). The second placed dimension is the System Usage characteristics whose positive unitary change would increase the overall satisfaction rating by 0.388 if all other dimensions are held constant. SunPlus is used for all the Financial and Treasury functions of the church's entities. As such, its functionality has been built around the "needs" of the entities. The users' expectations were thought out and built in, such that the user actually has no need for another system beside SunPlus. Variables like interface, ease of use and extensibility ensure the user can do more and achieve more. This is in tandem with other earlier works on the relationship (Coombs *et al.*, 2001; Pietter, 2008). This ranked lower than System Quality probably because an Accounting Information System is primarily information focused, and other factors come second. A unitary positive change in Service Quality would produce a 0.221 shift in the Overall Satisfaction, holding all other dimensions constant. Whilst, studies by Chiu (2007), and Marble (2003) found this relationship insignificant for Accounting Information Systems in Korean firms, Pietter (2008) supports these findings. Another qualitative study found that higher quality training and friendly Information Systems support staff led to more positive attitudes about the system (Coombs *et al.*, 2001). Systems support is closely associated with individual performance, and Service Quality ensures that an individual who strikes at productivity and effectiveness is enabled and enhanced by system availability and dependable support. The User Capability seems to have a negating influence on the variation in Overall Satisfaction, also referred to as suppressor variable. A unit increase in User Capability, with other dimensions held constant, decreases overall satisfaction by 0.191. The more a person knows, the more he expects of and from a system. So with increasing capability come more expectations and demands from the system. In the end, there will be some functionality not built in, but which has now turned into a need. This may explain this inverse effect that exists between these two dimensions. The Implementation Process Dimension, just like the User Capability Dimension also has an inverse effect on the overall system. An increase by 1 rating unit will decrease the Overall Satisfaction by 0.057 with all other dimensions held constant. While there have been very few studies on this relationship, it appears that this finding goes against the grain (Joos D *et al.*, 2006, van der Meijden, 2003). A probable explanation could be that SunPlus orientation programs are usually conducted over a short duration, and users are taken away from their usual surroundings. Trainings are usually done at the Union Offices, rather than at the entities, and in large batches too. Users, who missed the last implementation and training, will have to get their training in-house from "secondary" sources. This could also explain the large deviations that may stem from responses from those who received training from the implementation team and those who received it from secondary in-house users. Their satisfaction with the system therefore stems from other factors like limited expectation or acceptance of the product offer from the system. System Usefulness, with all other dimensions held constant will increase the overall satisfaction by 0.137 for each unitary increase in its rating. Something is useful if it provides future benefits or when it is capable of being used advantageously. The study shows that SunPlus users are not greatly swayed by the perceived usefulness of the system. It suggests that the other dimensions are being highly considered over the elements of increase in productivity, efficiency and resource utility.

FINDINGS AND SUGGESTIONS

The results of this study indicate that the SunPlus Accounting package is delivering satisfactorily across the 5 dimensions of Information Quality, System Usefulness, System Usage, Overall Satisfaction and Service Quality. However, the implementation process needs to be revised if users are to benefit from it. The users overall satisfaction is affected to a greater extent by information quality usage, usefulness and service quality perception than by the implementation process or usefulness.

Suggestion 1: Dependent variable and independent variables are significantly related to each other.

Suggestion 2: The D&M information systems success model's dimensions adopted in this study provide a standard with which a systems' effectiveness can be assessed.

Suggestion 3: For Overall System Satisfaction – the system implementation process is very important. If users are to fully benefit from the system, the implementation process for Sun Plus Accounting System will need to be revised, especially the orientation scope and duration. This will prepare the user for the effective application of the system and improve overall satisfaction with the system.

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CAPACITY BUILDING THROUGH INFORMATION TECHNOLOGY INITIATIVE IN ENVIRONMENTAL CONCERN OF UTTARAKHAND ENVIRONMENT PROTECTION AND POLLUTION CONTROL BOARD (UEPPCB)

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ABSTRACT

Uttarakhand, a newly formed state of Union of India has raised several issues of environmental concern due to rapid increase in population and caused industrial development. The environment includes water, Air, Land and inters relationship which exists among and between water, air and land and human beings, other living creatures, plants, micro-organism and properties. In amendment to the Indian constitution makes provisions for protecting and improving the environment. The state policy in which enjoins the state to make endeavour for protection and improvement of the environment, safe guarding for the forest and wild life of the country. Yet another amendment which stipulates that, it shall be the duty of every citizen of India to protect and improve the natural environment including forest, lakes, rivers and wild life and to have compassion for leaving creative. After the Stockholm conference on human environment in June 1972 it was considered appropriate it have uniform laws all over the country for broad environmental problem endangering the health and safety of people as well as flora and fauna. To ensure the sustained compliance of such laws is a great challenge. The present paper discusses the capacity building of Uttarakhand Environment Protection & Pollution Control Board (UEPPCB) by implementing Online Consent Management System to ensure transparent and efficient and monitoring of environmental laws and waste management rules enforcement.

KEYWORDS

E-Governance in Environment Management, Environmental benefits of e-governance, online consent management, Offline consent Management, eXtended Green Node (XGN).

INTRODUCTION

Uttarakhand Environment Protection and Pollution Control Board is an autonomous regulatory body under the EP Act – 1986. It is mandatory to implement specific provision of the acts and the rules made thereof. In exercise of its power the board under the acts has certain roles and functions to perform.

Among the various, the regulatory and monitoring of the industries, is an important role and function of the Board. This involves scrutinizing a large numbers of applications received from the industry desirous for seeking permission from the board for establishing and operating an industrial unit within the geographical boundary of the state. It is mandatory that the decision for consenting or rejecting be taken within a stipulated period of time. This decision making requires time bound coordinated inputs from different levels of officials. Under various constraints the response time in taking the decision would normally spill over the mandatory time schedule. It was felt that primarily this is responsible to refrain the whole system in effectively regulating and monitoring the expected eco-friendly development. This led to explore the possibilities of developing system facilitation for the governance of environmental concerns. This paper illustrates a unique comparison between the traditional mechanism of processing the application of industries and IT-enabled processing. This paper has shown useful conclusion highlighting environment benefits of e-governance.

METHODOLOGY

The mechanism involved in processing the application has been illustrated in this section.

- **TYPE OF CONSENTS:** The industry approached the UEPPCB broadly for three types of consents:-
 - NoC : To establish the unit.
 - COP : To operate the unit.
 - COR : Renewal to continue the operations.
 NoC and COP are then sub-categorized for Expansion and Modernization as
 - NoC-Exp : To establish the Expansion/Modernization.
 - COP-Exp : To start the operation of expansion/modernization.
- **FILING OF APPLICATIONS FOR CONSENT:** On the basis of consent type form should be obtained from board or downloaded from board's website and duly filled application form should be submitted to the Board.
- **SCRUTINY:** Scrutiny is done as per the statutory norms laid down in the respective acts/notifications. Criteria are based on:-
 - Location of industry.
 - Site suitability
 - Project Cost.
 - Manufacturing Process.
 - Product and Raw material used.
 - Water and Air pollution control measures and its adequacy.
 - Air and water quality through various parameters.
- **DECISION MAKING:** It involves the physical inspection of the site, where primary data provided in application form is monitored/inspected and supplemented by secondary data generated through analysis report of the parameters of drawn samples. The final decision on grant/reject is arrived at through a number of steps including the evaluation of project report/compliance of the issued consents etc.
- **MONITORING PLAN:** Monitoring should be done as per the schedule provided based on the colour categorization (Schedule V):

Red Category (17)	:	every 90 days.
Red Category (54)	:	every 120 days.
Orange category	:	every 180 days.

Green Category

: once in a year.

Monitoring enables the Board to review the quality of pollutants (emissions and effluent) generated by the unit.

DEVELOPMENT OF ALGORITHM**• CONSENT MANAGEMENT****TRADITIONAL (OFFLINE) SYSTEM**

- Industry has to collect the consent application form from Board's office or download from Board's website. There are three types of form for seeking consent:-
 - NOC Form: For those units who want's to establish a new unit or expansion/modernization/change of product mix in the existing unit.
 - Form I (Air) and Form I (Water) form: For those units who wants to start operations for newly established unit or for expansion/modernization/change of product mix in unit and also for continuing the operations of the unit.
- Along with the duly filled application form, the supporting documents as annexed and demand draft of the prescribed fee be submitted to the Board's office in three sets. The bunch of documents may vary from 300-1800 pages depends on type of project/unit. Requires 5-10 days to file the application at Regional Office and the process is completely physical/human interaction based.
- Then in an indexed file as per the type of consent, the submitted documents are put up to the Regional officer (RO). The case is then referred to the technical staff at RO for scrutiny and inspection. The process is time taking as depends on number of application in current movement and number of tables/desks for movement. Completely human interaction based and some errors results in dumping of file, which may be due to scarcity of time, multitasking nature of job profile of the staff.
- Technical staff then scrutinizes application, in case if some additional information is required then query is raised to the applicant, else inspection of the unit is planned to verify the information provided by the applicant and to check whether unit/applicant has implemented proper measures for emission and effluents.
- For NoC/CTE, during inspection the site suitability; adequacy of water pollution control measures and air pollution control measures are verified. Whereas, for CCA's (COP/COR) along with above samples are drawn as per requirement. Along with samples, the compliance of earlier issued consent is also inspected.
- Inspection Report along with analysis report is put up to the decision making authority through Regional Officer (as per the delegation of power). If all the parameters of analysis report are under the permissible limits and all parameters of inspection report are complying with the norms laid in the acts, consent with conditions is issued to the applicant.

IT ENABLED (ONLINE) SYSTEM

- Uttarakhand - the Adobe of the gods, the home of Himalayas and truly a paradise on earth, allures everyone from everywhere. The fresh air, the pure water, the chilling snow, the adverting mountains, the scenic beauty, the small villages, the simpler people and a tougher life-style is what that distinguishes Uttarakhand from rest of the world.
- In this context Board had an important role in facilitating and nurturing the eco-friendly industrial development to harmonize the natural ethnicity and economic growth of the state. A key initiative has been taken up by the board to bring SMART governance (i.e. Self-Monitoring, Analysis, and Reporting Technology) by implementing IT enabled consent management system through the Ganga-XGN (Developed by the NIC, Gujarat).
- Virtual office on the web has been introduced through the Online Consent Management System named Ganga-XGN.
- Industry/Applicant has to register on the website to get username and password.
- Applicant has to update the Industry master data viz. Industry profile, Product and Raw material, Air/Water/Hazardous waste related information.
- Duly filled up application form's (which can be collected from Regional Office or download application form from Board's website) scanned copy and supporting documents in PDF format are then uploaded and by clicking a button online application is submitted to the Board.
- Application will be accepted only when all the required documents are uploaded. Once the application is accepted, a SMS will be sent to the applicant to for entering the fee details.
- Time for processing the application will be calculated after the physical acceptance of the demand draft along with system generated Forwarding Letter and FORM-D/I/1.
- Online processing sheets will be generated based on the logics provided for the consent and indicates type of consent and its status along with date wise chronology of the steps taken.
- When final consent will be granted applicant be informed through a SMS and after appropriate formalities consent order will be sent to industry/applicant.
- The system was adopted in UEPPCB on July 06, 20009. It was made mandatory to submit the application through this system from the date.
- By December 31, 2009 400 applications were accepted through this system and on 230 applications decision was taken.

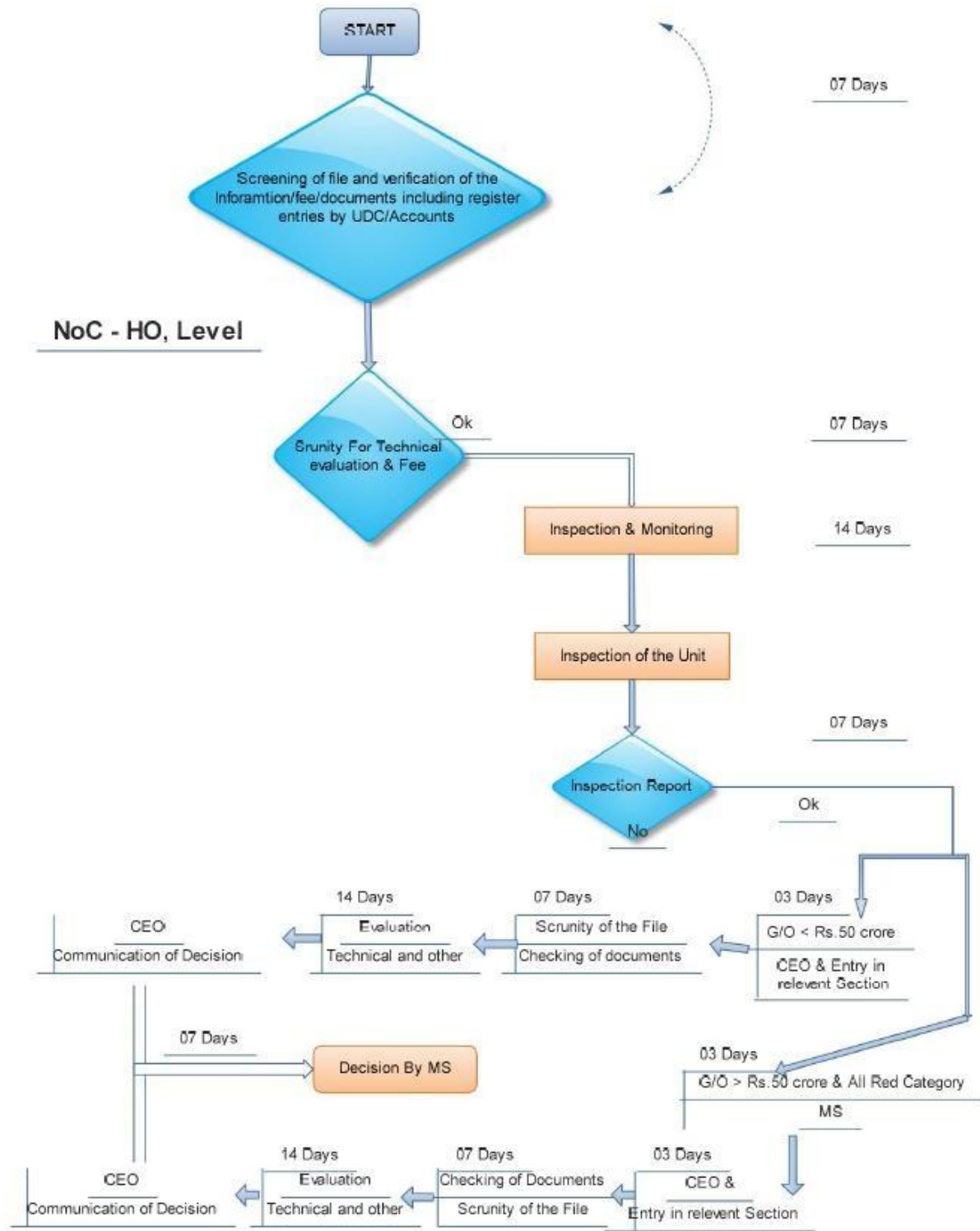


Figure 1:- Procedure for NoC Decision Making at Head Office



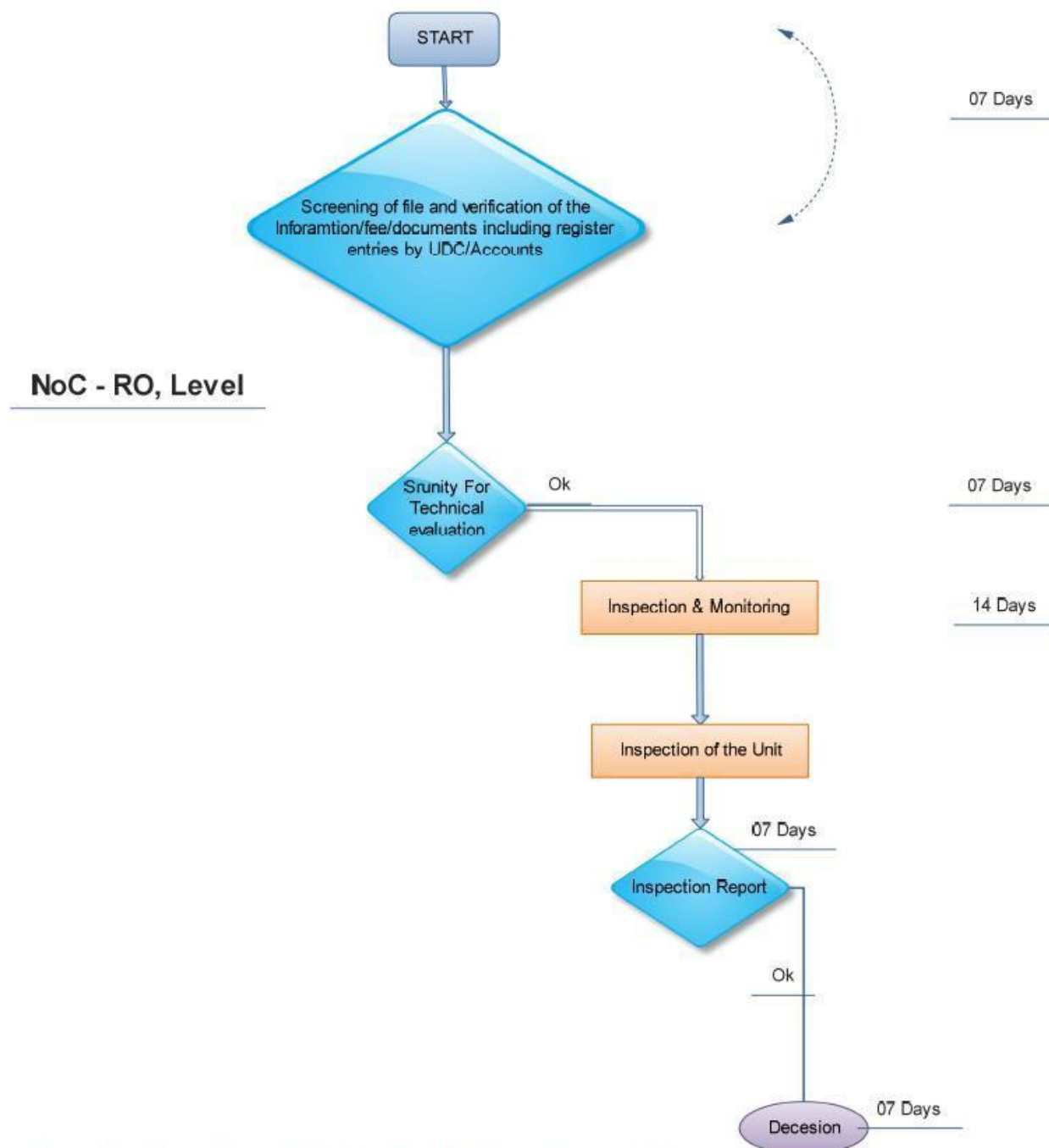


Figure 3:- Procedure for NoC Decision Making at Regional Office

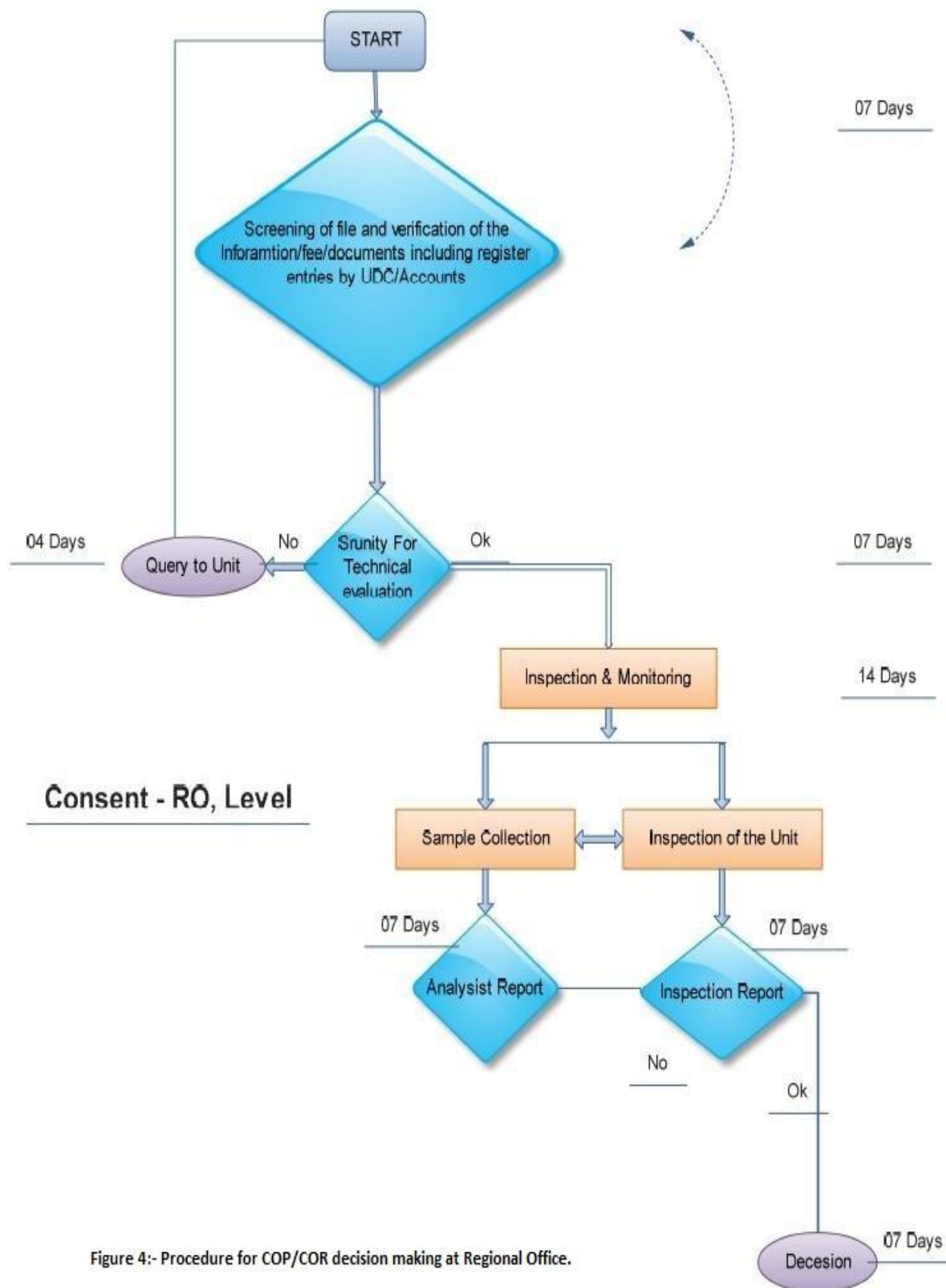


Figure 4:- Procedure for COP/COR decision making at Regional Office.

COMPARISON BETWEEN OFFLINE AND ONLINE SYSTEM

Sr.No	Particulars	Off-Line System	On-Line system
1	Total Applications for submission	3000	3000
2	No. pages per application for submission	300 – 1800 (in triplet) 70% are Of 300 and 30% 1800 pages.	0
3	Average Number of pages with Application	450	0
4	Average Number of pages for Office use	30	15
5	Total consumed pages*	1440000	30000
6	Total Trees fell down Per Annum [#]	173	4
7	Released CO2 in Air (<i>in Pounds per year</i>)	2544	59
*	Total consumed pages = (3+4) X 1		
#	1 tree = 8333 Nos of Sheets (A4 Sheets)	8333	

CONCLUSION

- Standardization for transparent and efficient disposal of consents.
- Applicants along with the Board officials are the custodian of the file. Human interaction has been reduced.
- A Transparent e-Movement from all levels. Loss of information/documents, miss-managed file management will be reduced to zero.
- Strengthening the Monitoring role of the Board.
- Monitoring of Technical Parameters related to Air/Water/Hazardous Pollution.
- Reviews of previous inspection and Samples.
- Timely Alerts for Renewals/Expiry of Consents / NoC & Payment Dues.
- It is in alignment with RTI act..
- Future scope: Since Online Consent Management System's database at Board contains primary data related to the Industry viz. location, products, quantity and quality of effluents and emissions etc. which needs to be integrated with GIS based remote sensing database so as to provide dynamic and time related properties/parameters. It will help in analysing the environmental parameters and its local as well as neighbour impacts on environment.

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5. <http://www.recycling-revolution.com/recycling-facts.html>

STRESS MANAGEMENT IN PRESENT SCENARIO: A CHALLENGING TASK

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ABSTRACT

The national institute of occupational safety and health (NIOSH-USA) defines stress as "the harmful physical and emotional responses that occur when the requirements of the job does not match with the capabilities, resources of the workers". In industrialized countries, there have been quite dramatic changes in the conditions at work, during the last decade, caused by economic, social and technical development. As organizations contend with tougher business environments around the world, these demands trickle down to employees in the form of longer hours, tighter deadlines, and so on, making stress a universal issue. Stress was identified as the number one health risk factor in nearly all surveyed countries so that stress management is becoming a major issue in both corporate and social agenda. Employers are not understating this risk, as stress materially affects employee attitudes towards their work and the organization in general. As a consequence, the people today at work are exposed to high quantitative and qualitative demands as well as hard competition caused by global economy. Stress Management is a challenging task in Present scenario because different cultures have different values and motivators. This is why, as an employer, have to spend too much time on learning about new team members, their culture, and what will motivate them to perform effectively. A successful strategy for preventing stress within the workplace will ensure that the job fits the person, rather than trying to make people fit jobs that they are not well suited to. The focus of the paper is to study the work stress their causes and effects and also find out the coping strategies that employers are focusing for preventing work stress.

KEYWORDS

stress management, HRM.

INTRODUCTION

Modern life is full of hassles, deadlines, frustrations, and demands. For many people, stress is so commonplace that it has become a way of life. According to **stoner and wankel** "Stress is the tension and pressure that result when an individual views a situation as presenting a demand that threatens to exceed his capabilities and resources." Job stress is mainly a product of the working condition or situation therefore this is to be considered as a big issue. So it is a growing organizational problem that deserves attention of the top management. Although today occupational stress and stress management have assumed enormous importance in organizations, stress-like phenomena have long been of concern in the world of work. The very first academic research into what could nowadays be considered stress-like symptoms can be traced back to the early 1900s and studies into the effects of fatigue. 'Stress' first started to appear as a subject of psychological research after the Second World War. Since then, research in the area has burgeoned, and stress has moved from being the focus of academic research to assume a vast importance in our understanding and interpretation of everyday life. Inevitably, this has included the part of our lives that we spend in work. In fact, use of the term stress goes much further than merely expressing an emotion or feeling. When an individual talks about stress, we hear them not only expressing a feeling or experience, but often describing a cause and effect relationship, or attributing cause for the way they feel. For workers everywhere, the troubled economy may feel like an emotional roller coaster. "Layoffs" and "budget cuts" have become bywords in the workplace, and the result is increased fear, uncertainty, and higher levels of stress. Increasing competition in the global market has compelled Indian organizations to deal with stress management issues on a priority basis.

SOURCES OF STRESS

Work-related stress is a growing problem around the world that affects not only the health and well-being of employees, but also the productivity of organizations. Work-related stress arises where work demands of various types and combinations exceed the person's capacity and capability to cope. Research findings show that the most stressful type of work is that which values excessive demands and pressures that are not matched to workers' knowledge and abilities, where there is little opportunity to exercise any choice or control, and where there is little support from others. Causes of stress - known as stressors - are in two categories: external stressors and internal stressors.

External Stressors

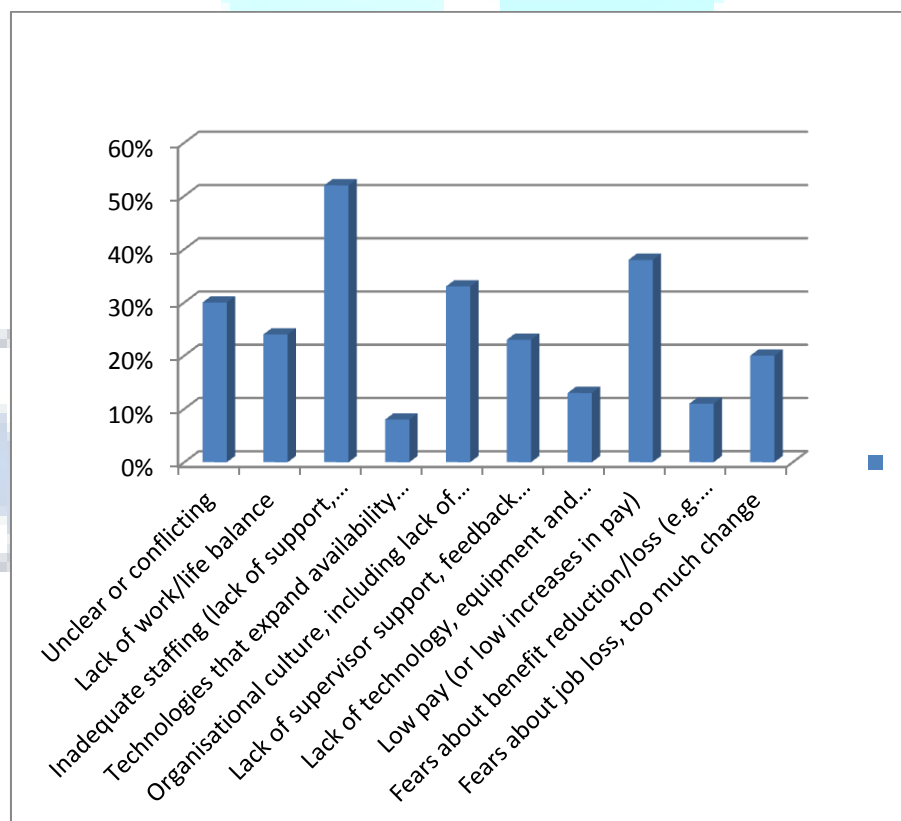
Internal stressors

MAJOR LIFE CHANGES Marriage, death, birth, any disease.	THOUGHTS mind, opinion, pessimism
FINANCIAL PROBLEM Inadequate pay or benefits, family crisis	ATTITUDE Rigid, aggressive, Lower tolerance
WORK ENVIRONMENT Noise, light, equipment ,recourses	CHRONIC WORRY Heart disease, sugar, Accident, memory loss
RELATIONSHIP DIFFICULTIES Change management, coworkers, staff, customer	COGNITIVE DIFFICULTIES reduced ability to concentrate or make decisions
JOB CHALLENGES AND EXPECTATIONS Competition, deadline, demands, recognition, reward, long work hours	AMOUNT OF REST AND SLEEP Insomnia, leisure time, lunch breaks etc
BALANCING CARRIER AND FAMILY work interfering with home/personal life, unsocial hours, excessive travel time	PERFECTIONISM Fear of failure, presentation, public speaking
INTERPERSONAL CONFLICT lack of support from others, poor relationships with colleagues	NUTRITIONAL STATUS Gastrointestinal upsets, such as diarrhea or constipation
TECHNOLOGY demands of learning new skills, software, new ways of working.	PRESENCE OF ILLNESS Any injury, infection
CONTROL Lack of control over assignment, job, performance.	DISINTEREST Job profile, boring work, lack of resources, repetitive work
ORGANIZATIONAL DECISION Introduction strategies, implementation, training, promotion, transfer, bonus.	

TOP CAUSES OF WORK-RELATED STRESS IN U.S. - TOWERS WATSON SURVEY

Towers Watson Global Benefits Attitudes Survey highlights that the main sources of stress for employees in U.S. are tied to the work experience — specifically, inadequate staffing, low pay increases and conflicting job expectations.

Unclear or conflicting	30%
Lack of work/life balance	24%
Inadequate staffing (lack of support, uneven workload or performance in group)	52%
Technologies that expand availability during nonworking hours (e.g., mobiles, notebooks)	8%
Organisational culture, including lack of teamwork, tendency to avoid accountability and assign blame to others	33%
Lack of supervisor support, feedback and not living up to their word	23%
Lack of technology, equipment and tools to do the job	13%
Low pay (or low increases in pay)	38%
Fears about benefit reduction/loss (e.g. lower value or loss of health care coverage, reduction in retirement benefits)	11%
Fears about job loss, too much change	20%

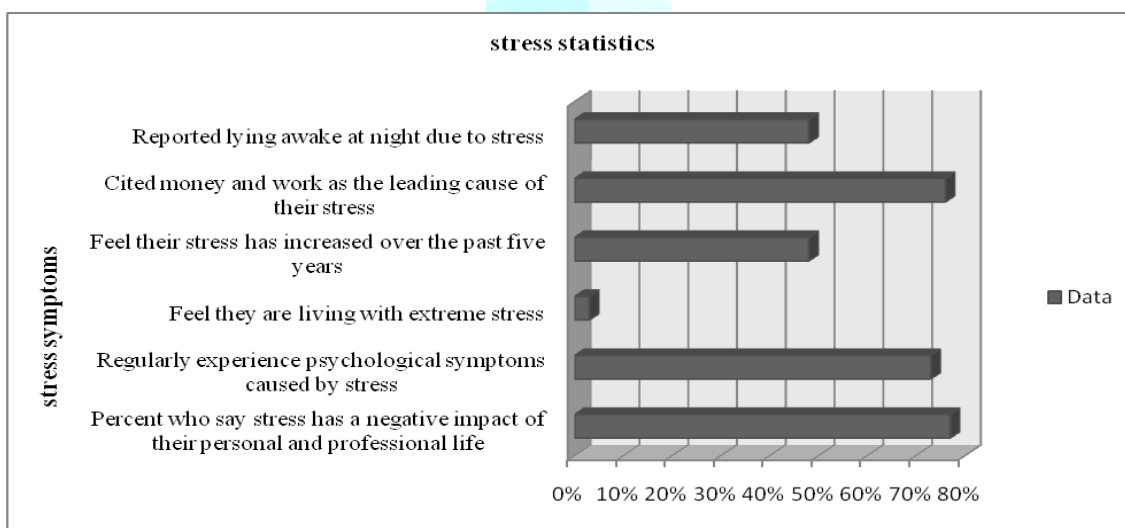


Source : 2013 Global Benefit Attitudes Survey, completed by 22,347 workers globally (7,094 in Asia Pacific) at companies with 1,000 or more employees.

TOP CAUSES OF STRESS IN THE U.S.-AMERICAN PSYCHOLOGICAL ASSOCIATION

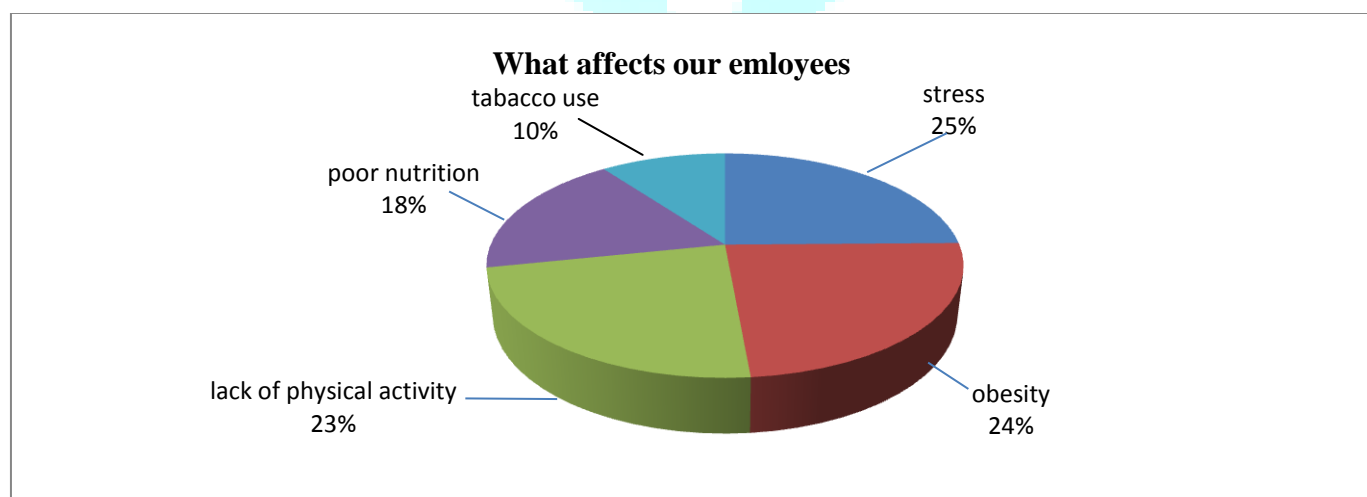
Causes	Factors
Job Pressure	Co-Worker tension, Bosses Work Overload
Money	Loss of Job, Reduced Retirement, Medical Expenses
Health	Health Crises, Terminal or Chronic Illness
Relationship	Divorce, Death of spouses, Arguments with friends, Loneliness
Poor Nutrition	Inadequate Nutrition, Caffeine, Processed Foods, Refined Sugars
Media Overload	Television, Radio, Internet, E-Mail, Social Networking
Sleep Deprivation	Inability to release adrenaline and other stress hormones

U.S. Stress Statistics	Data
Percent who say stress has a negative impact of their personal and professional life	77%
Regularly experience psychological symptoms caused by stress	73%
Feel they are living with extreme stress	3%
Feel their stress has increased over the past five years	48%
Cited money and work as the leading cause of their stress	76%
Reported lying awake at night due to stress	48%



Source:- American Psychological Association, American Institute of Stress, NY Dated: 7.8.14

Since stress is the leading lifestyle risk factor across most countries in Asia like India, U.S., Canada, and Europe. Majority of India's young IT workforce, are suffering from lifestyle disorders due to unhealthy eating habits and hectic work schedules, nearly 85% of employees in private sectors survey reveals that 42% identified themselves are afflicted to lifestyle disease, followed by 38% suffering from chronic disease and remaining 15% have an acute ailment in the private sector than the government employees ranging below 8%, according to a recent survey conducted by ASSOCHAM on the occasion of 'World Health day'. About 52 per cent of corporate employees are afflicted by lifestyle diseases linked to bad eating habits. "Unless there is a change in lifestyle and diet style, young corporate executives will be sitting ducks for a range of diseases," says Dr N. Salgunan, (cardiovascular and thoracic surgeon in Chennai) who does surgery on at least one young victim of corporate life style a day. The study further pointed out that Mumbai ranked first, while Delhi ranked second and Ahmadabad ranks third -afflicted to high levels of stress in private sector.



The Economic Times "85% of employees in private sectors afflicted to life-style, chronic diseases: ASSOCHAM Survey" Vishal Dutta, ET Bureau Apr 5, 2013.

The lifestyle risk issues identified as top concerns in around the world. The top lifestyle risk factors as listed by employers in all developing countries like India U.S. Singapore Asia Pacific and china, stress led this list, followed by a lack of physical activity, obesity, tobacco use and other common issues that are exacerbated by long working hours and an increasingly sedentary working lifestyle.

TOP LIFESTYLE RISK FACTORS

	Stress	Lack of Physical Activity	Obesity	Tobacco Use	Presenteeism	Poor Nutrition	Substance Abuse
India	1	2	3	4	5	6	7
United States	1	3	2	5	6	4	7
Singapore	1	2	4	6	3	5	7
Asia Pacific	1	2	3	4	5	6	7
China	2	1	4	3	6	7	5

Source: - 2013/2014 Staying@Work Survey Report

EFFECTS OF STRESS

The effects of stress differ from individual to individual. Stress can affect how you feel, think, behave and how your body works. Many factors influence the individual and his/ her interpretation of 'threat', response to threat and recuperation after a threatening experience. Usually, the effects of stress can be categorized as follows:

- Mental (how the mind works)
- Behavioral (the things we do)
- Physical (how the body works)
- Cognitive (the way we think and concentrate).

Different personality styles, gender difference, age, context, family history, emotional state, understanding of self and general social awareness will all influence each person's stress levels. Stress which is constant and does not abate, but gets worse over time can lead to mental and physical health problems and illnesses. This is why it is in everyone's interest to prevent stress occurring and reduce its effects when it does occur.

IMPACT OF STRESS IN VARIOUS DIMENSIONS

Affective	Cognitive	physical	Behavioral	Motivational
Anxiety	Helpless/powerless	Aches and pains	Eating more or less	Indifference
Tension	Hostility	Nausea, dizziness	Isolating yourself from others	Low morale
Apathy	Projection	Diarrhea or constipation	Sleeping too much or too little	Resistance to go to work
Irritability	Distrust in peers/(emanagers	Loss of sex drive	Using alcohol, cigarettes, or drugs to relax	Loss of interest in others
Depression	Difficulties in decision making	Frequent colds	Nervous habits (e.g nail biting, pacing)	Dampening of work initiative
Anger	Suspicion	Chest pain, rapid heartbeat	Procrastinating or neglecting responsibilities	Loss of work motivation
Over sensitive	Not feeling appreciated	Impairment of immune system	Hyperactivity	Loss of enthusiasm, zeal, encouragement
Dissatisfaction	Memory problems	Changes in hormone levels	Declined productivity	Disappointment, Boredom
Memory loss	Cynicism about the work role	Accidents	Increased sick leave	Disillusionment
Negativity	Cognitive impairments	Suicide	Poor time management	Demoralization

Source: Adapted from "Introduction to Work and Organizational Psychology: A European Perspective" by Nik Chmiel, 2000 (p 156).

STRESS MANAGEMENT TECHNIQUES

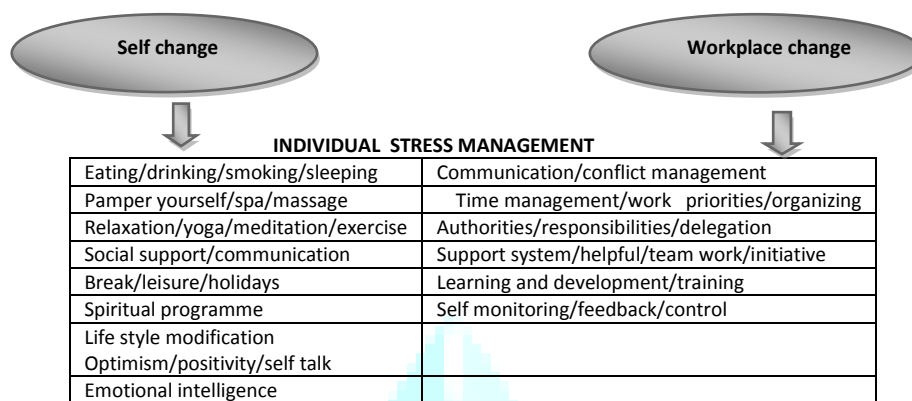
Since job and workplace stress increase in times of economic crisis, it's important to learn new and better ways of coping with the pressure. Globalization and the successful application of sophisticated process technologies will make the human element even more important to operations competitiveness than before. Policies and practices which benefit employee health can improve productivity. The perception that levels of stress are low is associated with low staff turnover, low levels of absenteeism and low rates of illness and injury. Organizations that are perceived to be healthy tend to have clear policies and active methods of dealing with people which includes:

- Physical consideration in job design
- Clear goals for employees in line with organizational goals;
- Respect for the dignity of each employee;
- Employee input into decision making and career progression
- Regular feedback and recognition of performance
- Consistent and fair management action

Many practical stress management techniques like life style programme, spiritual programme and counseling are available, some for use by health professionals, self-help and others, which may help an individual reduce their levels of stress, provide positive feelings of control over one's life and promote general well-being. Evaluating the effectiveness of various stress management techniques can be difficult, as limited research currently exists. Consequently, the amount and quality of evidence for the various techniques varies widely.

INDIVIDUAL STRESS MANAGEMENT

There is little you can do to prevent stress, but there are many things you can do to manage stress more effectively, such as learning how to relax, taking regular exercise and adopting good time-management techniques. Individual approaches include some new techniques like life style modification, Emotional intelligence, spiritual programme, health or counseling.



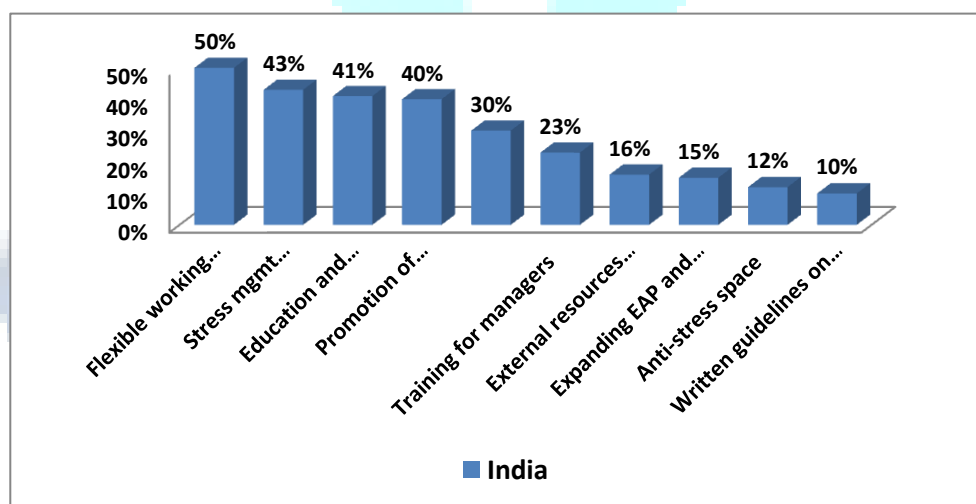
Life style modification plays an important role as in long term dietary modifications. It is important to have a healthy and active lifestyle to ensure healthy and disease free life as well as Emotional intelligence is about communicating with others in ways that draw people to you, overcome differences, repair wounded feelings, and defuse tension and stress.

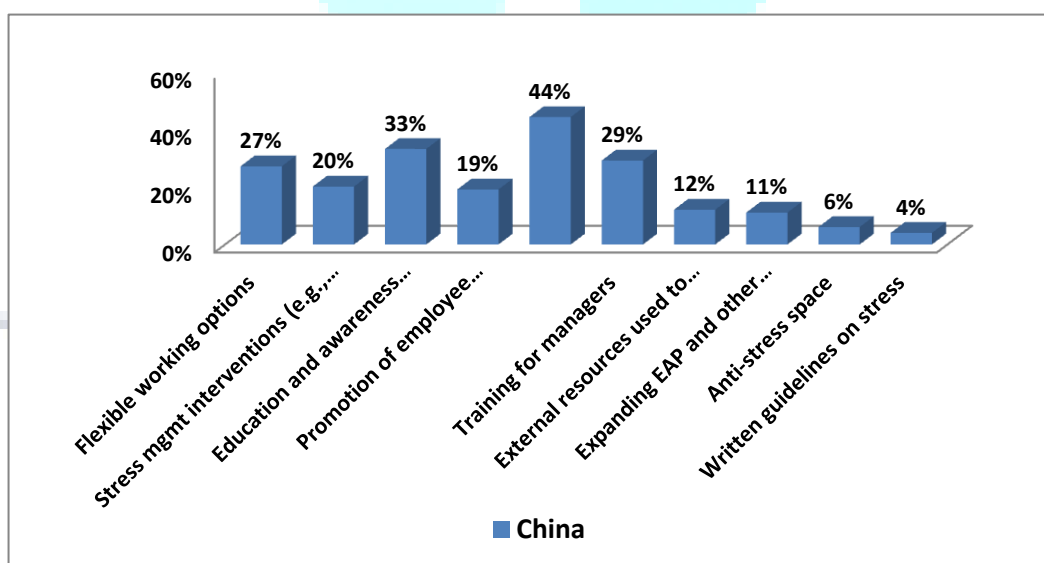
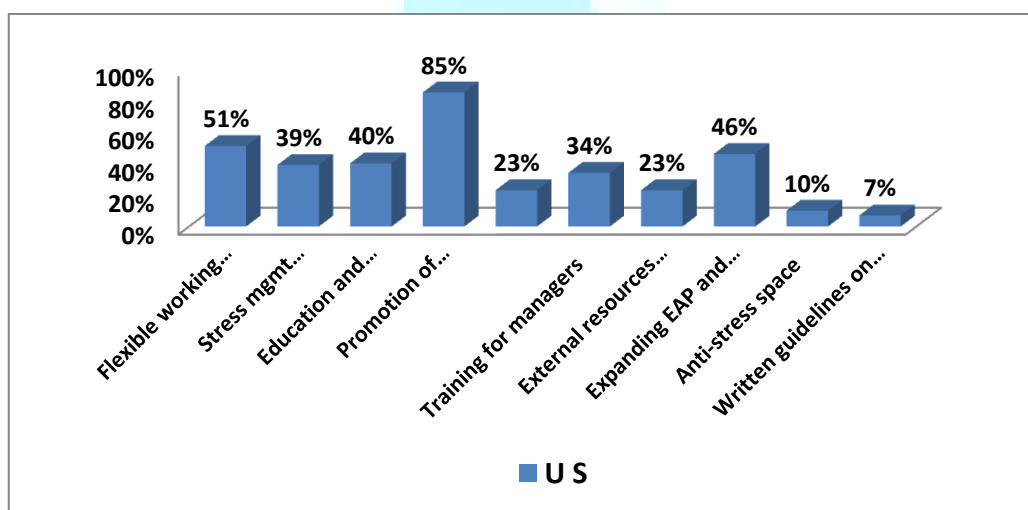
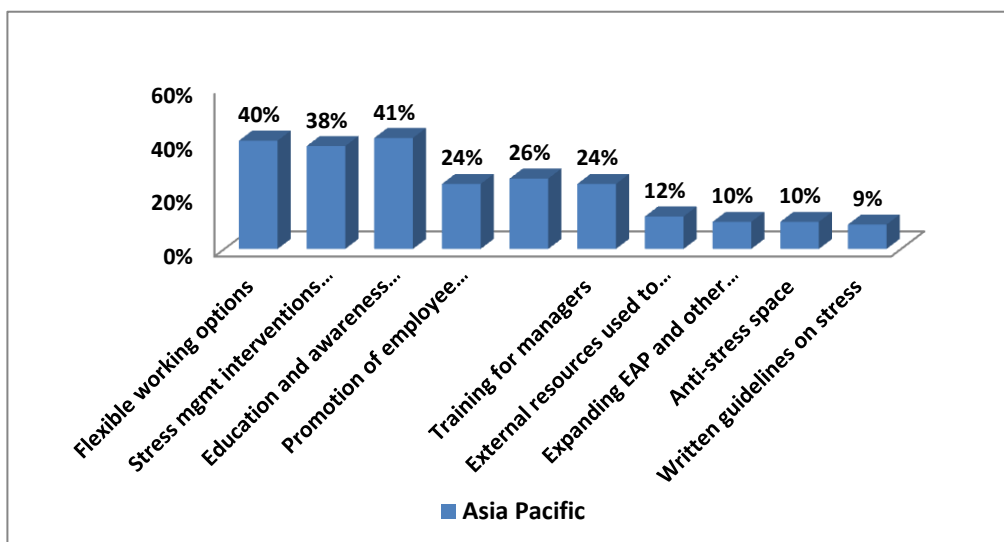
ORGANIZATIONAL STRESS MANAGEMENT

Stress is the number one lifestyle risk factor, ranking above physical inactivity and obesity, according to the inaugural Asia Pacific edition of the Staying@Work survey conducted by global professional services company Towers Watson. The prevention and management of workplace stress requires organizational level interventions, because it is the organization that creates the stress. Expectations concerning the time required to complete tasks form the basis for calculating capacity requirements and are a key input to labor planning activities. While Indian employers lead their regional counterparts in developing strategies to manage work-related stress, as a top priority of their health and productivity programs. This signals a vast scope for improvement in strategic initiatives aimed at tackling stress among Indian employees. However, it should also be noted that many employers continue to take no action — 14% of Asia Pacific employers said that they have implemented none of the programs suggested in our survey (this includes 22% of employers in China, 16% in Singapore, and 10% in India). Only 5% of employers in the United States said the same. Almost one in every three Indian employers has instituted stress or resilience management programs in 2013 and an almost equal number plan to follow suit in 2014. With stress being ranked as the #1 lifestyle risk factor in India, this number is likely to grow.

TOP 10 STEPS TAKEN BY EMPLOYERS TO MANAGE STRESS

	India	Asia Pacific	U S	China
Flexible working options	50%	40%	51%	27%
Stress mgmt interventions (e.g., workshops, yoga, tai chi)	43%	38%	39%	20%
Education and awareness campaigns	41%	41%	40%	33%
Promotion of employee assistance program (EAP)	40%	24%	85%	19%
Specialized training for employees	30%	26%	23%	44%
Training for managers	23%	24%	34%	29%
External resources used to design and deliver program(s)	16%	12%	23%	12%
Expanding EAP and other services to dependents	15%	10%	46%	11%
Anti-stress space	12%	10%	10%	6%
Written guidelines on stress	10%	9%	7%	4%





(Source: Towers Watson Staying@Work Asia-Pacific survey report)

The report reveals offering flexible working hours most common among Indian employers to manage employees' stress the growing recognition among employers that the workplace experience can both contribute to and reduce employee stress. In Asia Pacific more focus is giving by the employers is Education and awareness campaigns, flexible working options etc. As a testimony an increasing number of employers are planning lifestyle change programs that are not as prevalent as of now. In U.S. promotion of employees main technique that employers mostly uses and in china most of employers providing specialized training to their employees for stress prevention.

ADDITIONALLY, THERE ARE A NUMBER OF ORGANIZATIONAL CHANGES THAT MANAGERS AND EMPLOYERS CAN MAKE TO REDUCE WORKPLACE STRESS. THESE INCLUDE

IMPROVE COMMUNICATION

- Share information with employees to reduce uncertainty about their jobs and futures.
- Clearly define employees' roles and responsibilities.
- Make communication friendly and efficient, not mean-spirited or petty.

CONSULT YOUR EMPLOYEES

- Give workers opportunities to participate in decisions that affect their jobs.
- Consult employees about scheduling and work rules.
- Be sure the workload is suitable to employees' abilities and resources; avoid unrealistic deadlines.
- Show that individual workers are valued.
- Offer rewards and incentives.
- Praise good work performance, both verbally and officially, through schemes such as Employee of the Month.
- Provide opportunities for career development.
- Promote an "entrepreneurial" work climate that gives employees more control over their work.

CULTIVATE A FRIENDLY SOCIAL CLIMATE

- Provide opportunities for social interaction among employees.
- Establish a zero-tolerance policy for harassment.
- Make management actions consistent with organizational values.

GOOD EMPLOYMENT PRACTICE INCLUDES ASSESSING THE RISK OF STRESS AMONGST EMPLOYEES. THIS INVOLVES:

- looking for pressures at work which could cause high and long lasting levels of stress
- deciding who might be harmed by these
- deciding whether you are doing enough to prevent that harm.

Success in managing and preventing stress will depend on the culture in the organization. Stress should be seen as helpful information to guide action, not as weakness in individuals. A culture of openness and understanding, rather than of blame and criticism, is essential. Building this type of culture requires active leadership and role models from the top of the organization, the development and implementation of a stress policy throughout the organization, and systems to identify problems early and to review and improve the strategies developed to address them. The policy and its implementation should be negotiated with the relevant trade unions and health and safety committees.

STRESS MANAGEMENT AS KEY ISSUE

People in India are more likely to be motivated by knowing that what they are doing is contributing to organization's overall goals. Also, empower them to share their opinions and feedback, and remember that religion and family can play an important role in Indian culture. Managing work-related stress successfully is one of the most challenging employee well-being issues currently facing employers. Majority of workers in every industrial sector claim to be stressed. No matter what job you do, the likelihood is that it stresses you. Of course, different people handle stress differently and so one individual may perform poorly under stress while another views it as driving them on to work even better. Stress can still be a difficult issue to discuss openly. It is important to try to build a culture that supports openness in identifying and acknowledging stress. However, there are many sources of stress that the individual is likely to perceive as outside his or her power to change, such as the structure, management style or culture of the organization. It is important to note that stress management approaches that concentrate on changing the individual without changing the sources of stress are of limited effectiveness, and may be counterproductive by masking these sources. For example, breathing deeply and thinking positively about a situation causing stress may make for a temporary feeling of well being, but will allow a damaging situation to continue, causing persistent stress and, probably, stress to others.

Most importantly, this approach remains focused on the problems, and on generating and implementing realistic and achievable solutions with distinct objectives against which the impact of the intervention can be evaluated and monitored on an ongoing basis. It is this understanding, and remaining focused on specific a problem that is essential. Because stress has become such a big issue in itself, and such a confused issue in terms of definition, the concept can get in the way of looking at what is actually going on in organizations and at what is, for want of a better term, good stress management practice. The primary aim of the individual approach should be to develop people's skills and confidence to change their situation, not to help them adapt to and accept a stressful situation. Occupational stress has become an everyday feature of working life. It is referred to constantly in the media and, as general understanding of the concept has grown, is used frequently to describe the way we feel about the jobs that we do. Inevitably, evidence of stress in the workplace has grown; both anecdotally and in research terms, stress is a big issue. It becomes the vital role of the management to take care of the employees health rather providing only the monetary benefits, which is not so in practice of the fullest.

CAN STRESS MANAGEMENT MAKE AN IMPACT? - HR CHALLENGE

Stress management is becoming a challenging task for HR persons now a day because many sources of stress in organizations cannot be changed. These might include situations like a prolonged recessionary period, new competitors, or an unanticipated crisis. Employers generally have little control over these kinds of stressors, and they can create extended periods of high-stress situations like irritability, mood changes and short temper which sometimes lead to extreme measures like heart attack, suicide. Suicide is a multifaceted problem and hence suicide prevention programs should also be multidimensional. Collaboration, coordination, cooperation and commitment are needed to develop and implement a national plan, which is cost-effective, appropriate and relevant to the needs of the community. Although there's no quick-fix cure for stress, and no single method will work for everyone. Employer responsibility (and liability) for their employees' psychological well-being is becoming ever more clearly defined, but what is it exactly that they are trying to manage?

Companies are going global due to which the workforce diversity is increasing. Managing these people with different religious, cultural, moral background is a challenging task for the HR Managers in 21st Century. Indian employers lead their regional counterparts in developing strategies to manage work-related stress; as a top priority of their health and productivity programs. This signals a vast scope for improvement in strategic initiatives aimed at tackling stress among Indian employees. The organizations engaged in stress management for at least a year and in some cases a significant length of time. When asked whether they had been able to see any concrete outcomes from their engagement with stress management and the Management Standards, many found it difficult to pinpoint concrete impacts. This was often due in part to incomplete data collection. Further, in some cases, recorded absence due to stress had actually increased because of previous under-reporting. In terms of less tangible impacts, many organizations pointed to a greater awareness of, and confidence in, stress management. Many had also reviewed stress policies and stress training, both for line managers and for the overall workforce. All of these issues were key to changing the culture of an organization in a positive way.

CONCLUSION

Stress management cannot be successfully completed over the short term – it requires engagement and sustained commitment. However, there is no alternative but to engage seriously with the issue of stress if organizations want to improve staff well-being and remain competitive. A wide variety of training courses may help in developing active coping techniques—for example, assertiveness, communications skills, time management, problem solving, and effective management. Organization must begin to manage people at work differently, treating them with respect and valuing their contribution. If we enhance the

psychological well being and health of the employees, in the coming future the organization would make more revenue as well as employee retention. Research continues to show that our satisfaction with various aspects of work, especially workplace relations and communication at work, is very much related to how work makes us feel, and this is even more so than how much we get paid or what we believe our career prospects to be. Latest studies revealed that main reasons for intense psychological stress among working parents can be their jobs and it has nothing to do with the demand of time and energy from other people.

According to some researchers at the university of Iowa, Employees who holds jobs viewed by the society as aggressive, weak or impersonal are likely to be more stressed out than parents whose jobs are seen in a light similar to parenting good, strong and caring. Professional profiles that create more psychological pressure or unrelaxed state include-Salesperson, receptionist, attorney, police officer, politician. Those that align better in terms of those that align better in terms of societal perception, with parenting include physician, nursery teacher, and professor, principal.

Mark Walker a doctoral student in sociology at university of Iowa said that many working parents experience, but could not quite put a finger on and identifies the issue as a social problem rather than an individual one, or even worse – an imaginary problem. Though the result of the study might appear gloomy, researchers say the bright side is identifying this new layer of stress could be the first step in helping harried parents find relief. It could help shape policy and work place changes designed to reduce the psychological strain of juggling the roles parent and worker. Walker says that if employers are aware that working parents in a given occupation are more at risk of experiencing psychological strain, they could potentially provide more targeted mental health resources for those in “at risk” occupation.

With stress being ranked as #1 lifestyle risk factor in India, this number is likely to grow," the report said. Some organizations even employ counselors to deal with stress related problems of employees. Activities like picnics, outdoor sports, stress management seminars and lectures are also undertaken by organizations to reduce stress levels among their staff. The best suggestion for employers is to find the specific triggers that impact employee wellness, engagement and in turn productivity, and take action to reduce this as to the type and size of problems that exist in their workforce. It is important for employers to recognize work-related stress as a significant health and safety issue.

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CORPORATE SIZE AND CAPITAL STRUCTURE: AN EMPIRICAL ANALYSIS OF INDIAN PAPER INDUSTRY

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ABSTRACT

It is assumed that size plays a major role in raising debt and equity. Hence, it was hypothesized that there is a direct relationship between the capital structure of companies and its size. The size of a company was measured in terms of the size of total assets and fixed assets. It is found that the value of fixed assets increased steadily throughout the study period. It is also noticed that the year wise debt-equity ratio is consistent, whereas the value of both fixed assets and total assets have recorded a fluctuating trend over the years. The year wise overall debt-equity ratio is moderate i.e. it is not too high and not too low and the consistent increase in the size of both fixed assets and total assets also exhibits the effectiveness of the financial planning and soundness of the financial position of the selected large scale companies in Indian paper industry. The result of regression model of debt equity with fixed assets and total assets has proved a negative relationship between capital structure and size of the majority of the selected companies in Indian paper industry during the study period.

KEYWORDS

Corporate Capital Structure, Corporate Size, Capital Structure Theories, Indian Paper Industry and Optimum Capital Structure.

INTRODUCTION

Financial management of any corporate sector revolves around three major decisions, viz., financial decisions, investment decisions and dividend decisions. Financial decisions are concerned with the sources of finance, i.e. from where finances should be raised. There are basically two sources of finance i.e. short-term and long-term. The capital structure of a company is determined by the long-term sources of finance. Pandey (2005, p.5) stated that the term capital structure is used to represent the proportionate relationship between debt and equity. A business enterprise generally procures its permanent capital in the form of long-term debt, preference shares, ordinary shares and reserves and surpluses. These are individual components, which when taken together, would constitute a company's capital structure. Thus the aim of capital structure management is the profit maximization or wealth maximization ensuring minimum cost of capital and maximum rate of return to the common shareholders. Chakraborty (1981, p.111) stated that a judicious mix of debt and equity securities would maximize the value of equity. The financial manager of corporate has to plan an optimum capital structure for the company in such a way that it gives the maximum benefits and thus maximizes the wealth of shareholders.

Having determined its investment policy, a company should plan the sources of finance and their mix. Companies which do not formally plan their capital structures are likely to have uneconomical and imbalanced capital structures and could face unforgivable difficulties in raising capital on favourable terms in the long-run. Also inappropriate mix of sources of finance can render the operations of the companies inflexible. The composition of capital structure is governed by a number of factors and no uniform standard can be prescribed for all the enterprises. Sectors of industry or trade to which a particular enterprise belongs can, however, provide a broad pattern of composition. For instance, a public utility concern, such as an electricity supply company can absorb a greater proportion of borrowed funds than an enterprise in a more competitive sector of industry due to more stability in earnings in the case of former than the latter. Within these broad parameters, each enterprise will have to plan its own capital structure keeping in view both its short-term requirements and long-term expansion programmes.

OPTIMUM CAPITAL STRUCTURE

An optimum or sound capital structure can properly be defined as that combination of debt and equity which achieves the goal of maximizing the company's market value. Hence, the optimum capital structure is concerned with two important factors at one time; the maximization of shareholder's wealth as well as minimization of cost of capital. In the wake of given objectives of maximization of shareholder's wealth, the requirement for an optimal capital structure cannot, therefore, be over-emphasized in the financial decision-making process, every company should try to design its own capital structure. But determination of an optimum capital structure is not an easy task. It should be clearly understood that determining the precise proportion of debt that will maximize price per share is almost impractical. It is possible, however, to ascertain the approximate share of debt to be used in the capital structure in tune with the objective of maximization of shareholder's wealth. It may be mentioned that there are certain common and conflicting considerations involved in deciding the methods of financing assets. Different companies falling under a particular industry may have much in common regarding their financial plan. But they still may exhibit different earning trends, accounting methods and practice, general future conditions and predictions about the economy and the capital market. Moreover, the management's capability to adjust the mix of debt and equity in conformity with these conditions is restricted by the availability of the various types of funds that are sought. Hence, these factors largely govern which pattern of capital structure is deemed desirable and which form of financing is chosen in a given situation.

THEORIES OF CAPITAL STRUCTURE

There are three major capital structure theories namely Trade-off Theory [Krus, Litzenberger, R., (1973)], Pecking-Order Theory [Myers and Majluf (1984)] and Agency Cost Theory [Jensen and Meckling (1976)]. Considerable amount of work on the theory of capital structure since Modigliani and Miller's provocative irrelevance propositions has resulted in what Myers (1977) has called the 'static trade off' theory of capital structure. According to this theory, a firm's optimal debt ratio is viewed as determined by a trade off of the costs and benefits of borrowing, holding the firm's assets and investment plans constant. The various costs considered in the literature are bankruptcy costs (Scott, 1977), agency costs (Jensen and Meckling, 1976) and loss of non-debt tax shields (DeAngelo and Masulis, 1980). These costs become especially relevant in a situation of financial distress and have often been subsumed under costs of financial distresses. As against these costs the major benefit of debt financing is the tax shield of interest expense. The tax-based theory hypothesizes that the firms choose their debt equity ratio by trading off the benefits from tax reduction on interest payments against the costs of financial distress due to accumulating more debt.

The signalling theory is based on asymmetric information problems. The firms where individuals who supply capital do not run the firms themselves, there exists two types of asymmetric information problems. The first problem arises when there is adverse selection. The controlling managers may possess some information that is unknown to outside investors. In such cases the financing method can serve as a signal to outside investors. Facing information asymmetry

between inside and outside investors, firms end up having a financial hierarchy. First they try to use their retained earnings, and then move to debt when their internal funds run out. Equity is issued only when firms have no more debt capacity. This process is termed as 'Pecking Order Theory'.

The agency cost theory is based on another problem due to information asymmetry that is the principal-agent conflict. The conflict arises when there is moral hazard inside the firm, which is called the agency costs of equity. Managers may pursue their own interests which may conflict with shareholders' benefits. This agency problem can be solved by increasing management ownership because high management ownership aligns the interests of management and shareholders. Other possibilities include monitoring of management by large shareholders and the use of debt financing to discipline managers (Stulz, 1990). However, debt financing creates other agency costs. Jensen and Meckling (1976) argue that managers on behalf of the existing shareholders are likely to appropriate wealth from their debt-holders by conducting asset-substitution behaviour. That is, they may invest in risky projects because if the project is unsuccessful, the costs will be shared. But, if it is successful, the existing shareholders will capture the gain. On the other hand Myers (1977) argues that firms with heavy debt may have to pass up their value-increasing projects merely because they cannot afford to pay their current debt. Therefore, in choosing their debt equity level, firms should trade off between the agency costs of debt and the agency cost of equity.

RESEARCH METHODOLOGY

STATEMENT OF THE PROBLEM

Size of a firm plays an important role in the financing decisions of the management. Larger companies have more access to capital market and can raise funds from a variety of sources in comparison to small concerns. The size of a concern can be measured in many ways, i.e. by capital employed, paid-up capital, total assets, fixed assets, etc. For the study of capital structure, normally fixed assets and total assets are taken as the measures of size. Thus, an attempt has been made in this study to find the relationship between the size of the firm and the capital structure. Based on the above facts, the researcher has probed the following questions.

1. Is there any systematic relationship between size and capital structure of the selected large scale companies in Indian Paper Industry?

SELECTION OF SAMPLE

Keeping in view of the scope of the study, it is decided to include all the large scale paper companies under Indian paper industry working before or from the year 1996-97 to 2009-2010. There are 21 large scale paper companies operated in India. But, owing to several constraints such as the non-availability of financial statements or the non-working of a company in a particular year and merger and acquisition etc., it is compelled to restrict the number of sample companies to ten. The Capitaline and CMIE database publish key financial data of Indian corporate sector systematically. Hence, Capitaline and CMIE databases proved to be complimentary to finalize the sample for the study. The exhaustive list of paper industry in India from Capitaline was cross checked with CMIE database to sort out companies to fit in as the sample for the study. The comprehensive list of companies prepared from the database was modified by sorting out the firms using the following criteria.

- (i) Those were not in operation for a year during the period of study.
- (ii) Those were in operation but non-availability of data for the whole study period.
- (iii) Those that were merged with another company during the period of study.
- (iv) Those that had below 50,000 MT installed capacity.

The list of large paper companies selected included in the present study along with the year of incorporation, ownership pattern and its market share is presented in Table 1. It is evident from Table 1 that sample companies represent 60.37 percentage of market share in the Indian paper industry. Thus, the findings based on the occurrence of such representative sample may be presumed to be true representative of paper industry in the country.

PERIOD OF STUDY

The period 1997-98 to 2009-10 is selected for this study of Indian paper industry. This 13 years period is chosen in order to have a fairly, reasonably reliable and up-to-date financial data would be available.

SOURCES OF DATA

The data required for the study have been obtained from secondary sources. The study is mainly based on secondary data. The major sources of data analysed and interpreted in this study related to all those companies selected is collected from "PROWESS" database, which is the most reliable and the empowered corporate database of Centre for Monitoring Indian Economy (CMIE). Besides Prowess database, relevant secondary data have also been collected from BSE Official Directory, CMIE publications, published annual reports of the companies, annual survey of industries, business news papers, Reports on Currency and Finance, Centre for Industrial and Economic Research (CIER's) Industrial Data Book, publications of the Indian Pulp and Paper Technical Association (IPPTA), Libraries of various research institutions, through internet and from official websites of the selected companies. Various journals and periodicals on finance and industry have also been reviewed.

ANALYSIS OF THE EMPIRICAL RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND SIZE

Capital structure is the composition of debt and equity securities with which the company's assets are financed. It is assumed that the size plays a major role in raising debt and equity. A company which is small in size has to face more problems in raising finance by either of the source than a concern which is bigger in size. Size of a firm plays an important role in the financing decisions of the management. Larger companies have more access to capital market and can raise funds from a variety of sources in comparison to small concerns. The size of a concern can be measured in many ways, i.e. by capital employed, paid-up capital, total assets, fixed assets etc. The measuring variable to be selected precisely depends upon the nature of problem on hand. For the study of capital structure, normally fixed assets and total assets are taken as measures of the size. However, in this study, size of a company can be measured in terms of the size of its total assets. For further analysis, fixed assets have also been taken separately as a determinant measure of size of firms. Chudson (1945), Gorden (1962), Gupta (1969), Bhat (1980), Nazeer (1991), Bharti (1995), Karamjeet Singh (2006), Debatrata Datta (2009) and Bidyut Jyoti Bhattacharjee (2010) took fixed assets and total assets as the measure of size for analyzing the capital structure of companies.

Fixed assets are those assets, which remain with the business for more than one year. They represent the earning base of the company. They are acquired for the purpose of using them in the conduct of business operations and not for reselling to earn profit. These assets are not readily convertible into cash in the normal course of business operations. Fixed assets may be either tangible or intangible. The financing of total assets of a business concern is done by owners' equity (also known as internal equity) as well as outside debts (known as external equities). How much amount of funds owners have provided and how much outsiders have provided in the acquisition of total assets is a very significant factor affecting the solvency position of a concern. Thus, this part covers the relationship between capital structure and size of the companies.

Table 2 presents the debt equity ratio, fixed assets and total assets of selected companies during the study period. The debt equity ratio of all the selected large scale paper companies exhibits the highest ratio of 1.60 in the year 1997-98 and it is the lowest in the year 2005-06 (0.93). It is also clear that the ratio of debt is more than one as compared to the equity during the entire 13 years span except in the year 2005-06, which indicates that all the selected companies are enjoying the benefit of cheaper source of finance except in the year 2005-06. Further, it can be seen that the debt equity ratio is reducing from the years 1997-98 to 2005-06, thereafter, the debt equity ratio starts increasing. This upward trend is visible only in the year 2006-07 and then this ratio shows the downward trend up to 2008-09, again in the year 2009-10 it shows increasing trend. The size of the fixed assets represents the earning capacity of the business concern. The table shows that the value of fixed assets increases steadily throughout the study period. The position of fixed assets represents the solvency position of the companies. From the table, it is clear that the amount of total assets has increased from Rs. 585.68 crores in the year 1997-98 to Rs.1299.01 crores in the year 2009-10, which indicates that the solvency position of all the selected companies are good. It is also noticed from Table 2 that the CV value of debt equity ratio is consistent, whereas, it has registered a fluctuating trend in the case of both fixed assets and total assets. The CAGR of fixed assets and total assets have recorded a positive growth during the study period. Thus, it is concluded that the debt equity ratio is moderate i.e. it is not too high and not too low, which is favourable

for the companies and the consistent increase in the size of both fixed assets and total assets also exhibits the effectiveness of the financial planning and soundness of the financial position of the selected large scale companies in Indian paper industry.

MODEL-I

For the purpose of studying the impact of capital structure on the size of the firms during the reference period, simple regression technique has been used. Debt equity ratio was taken as dependent variable and fixed assets as independent variable. The regression model fitted to test the debt equity with fixed assets is as follows.

$$D/E = \alpha + \beta (FA) + e$$

Where,

D/E	-	Debt equity ratio,
α, β	-	Parameters to be estimated (intercept and co-efficient respectively)
FA	-	Fixed assets and
e	-	Error term.

Table 3 presents the regression analysis of the debt equity with the size of fixed assets of the selected companies during the study period. It is evident from the table that the maximum level of co-efficient of determination (R^2) in the Indian paper industry is 0.46. But in case of the sector average, the value of R^2 is 0.61. The co-efficient of determination (R^2) has registered the highest value of 0.77 in Andhra Pradesh Paper Mill Limited and it is the lowest in Hindustan Newsprint Limited (0.29). This suggests that 75 per cent changes in debt equity of Andhra Pradesh Paper Mill Limited are explained by the size fixed assets. It is inferred from the F-Test that the selected model is good because of the positive and significant relationship between debt equity and fixed assets of selected large scale companies in Indian paper industry.

The beta co-efficient of fixed assets shows a positive impact on debt equity of the Indian paper industry, but it is negative (-0.01) in the large scale sector of the paper industry during the study period. However, it is statistically significant in explaining the relationship between capital structure and the size of the firms. The regression co-efficient of fixed asset is positive in six out of ten companies. Further, though the beta co-efficient is negative in the remaining four companies, but statistically significant in all the selected companies at five per cent level of significance. This proves that beyond a certain level of debt equity ratio the relationship between capital structure and size of the firms may be negative. The analysis of 't' test also shows that, the relationship between capital structure and size of all the selected companies are statistically significant during the study period. Thus, the empirical result of regression analysis of debt equity with size of majority of companies depicts positive relationship. The result of this study are consistent with the results of Nazeer (1991), Bharti (1995), Ramesh K. Singla (1996), Ramkumar et al., (1996), Sudhansu (2005), Karamjeet Singh (2006), Seetanah et al., (2007), Debatrata Datta (2009) and Bidyut Jyoti Bhattacharjee (2010) found a positive relationship between capital structure and size of the firms.

MODEL-II

Table 4 explores the regression analysis of the debt equity with total assets of the selected large scale companies in Indian paper industry during the study period.

The linear regression model fitted to test debt equity with fixed assets is as follows.

$$D/E = \alpha + \beta (TA) + e$$

Where,

D/E	-	Debt equity ratio,
α, β	-	Parameters to be estimated (intercept and co-efficient respectively)
TA	-	Total assets and
e	-	Error term.

Table 4 exhibits the extent to which the changes in debt equity ratio are explained by the changes in size of total assets. In case of industry, the co-efficient of determination (R^2) is 0.39; which explains 39 per cent changes in debt equity ratio by one per cent change in the size of total assets. But in the sector average (0.47) one per cent change in total assets influence 47 per cent changes in debt equity ratio. The co-efficient of determination (R^2) has registered the highest value of 0.79 in Andhra Pradesh Paper Mills Limited followed by Hindustan Paper Corporation Limited (0.52), West Coast Paper Mills Limited (0.47), Ballarpur Industries Limited (0.33), JK Papers Limited (0.33), Hindustan Newsprint Limited (0.31), Tamil Nadu Newsprint and Papers Limited (0.28), Seshasayee Paper and Boards Limited (0.24) and it was the lowest in Rama Newsprint and Papers Limited (0.19) during the study period. This suggests that 19 per cent to 79 per cent changes in debt equity are explained by the variation in the size of total assets of the selected companies in Indian paper industry during the study period.

The beta co-efficient of total assets of Indian paper industry explains a negative relationship between the capital structure and size of the firms, however, it exhibits a positive relationship with the large scale sector of the Indian paper industry during the study period. The regression analysis also reveals that the beta co-efficient of total assets is positive in four out of ten companies, but statistically significant in all the selected companies. These results are against the results of Nazeer (1991), Bharti (1995), Sudhansu (2005) and Karamjeet Sing (2006) who found a positive relationship between debt equity and the size of firms. Thus, it is concluded that the empirical analysis of regression model of debt equity with total assets depicts a significant relationship between capital structure and size of total assets of the selected companies during the study period.

CONCLUSION

For the purpose of studying the impact of size of the firms on the capital structure during the reference period, simple regression technique has been used by taking debt equity ratio as dependent variable and fixed assets as independent variable. The regression analysis showed a positive relationship between the size of the fixed assets and debt equity of the whole Indian paper industry, but in case of large scale sector, it was negative (-0.01) during the study period. The relationship between fixed assets and capital structure is negative (six out of ten companies) but statistically significant in all the selected companies at five per cent level of significance. This shows that majority of the selected companies proved a negative relationship between size of the firms and capital structure, because a very low or high debt proportion in the capital structure is the cause for the negative relationship between capital structure and size of firms. The regression analysis reveals that the total asset of Indian paper industry explains a negative relationship between the capital structure and size of the firms, however, it exhibits a positive relationship with the large scale sector of the Indian paper industry during the study period. The analysis also reveals that the beta co-efficient of total assets were positive in four out of ten companies, but statistically significant in all the selected companies. Thus, the result of regression model of debt equity with fixed assets and total assets has proved a negative relationship between capital structure and size of the majority of the selected companies in Indian paper industry during the study period.

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ANNEXURE

TABLE 1: SELECTED PAPER COMPANIES FOR THE STUDY

S. No	Name of the Company	Year of incorporation.	Ownership	Market Share
1.	Andhra Pradesh Paper Mills Limited	1964	Bangur L.N.,	2.84
2.	Ballarpur Industries Limited	1945	Avantha group	9.26
3.	Hindustan Paper Corporation Limited	1983	Govt. of India	4.49
4.	Hindustan Newsprint Limited	1970	Govt. of India	10.49
5.	JK Paper Mills Limited	1960	Singhania Harishanker	4.51
6.	Mysore Paper Mills Limited	1936	State Govt. of Karnataka	8.73
7.	Rama Newsprint and Papers Limited	1991	Bangur group	9.71
8.	Seshasayee Paper and Boards Limited	1960	Ervin group	2.63
9.	Tamil Nadu Newsprint and Papers Ltd.	1979	State Govt. of Tamil Nadu	4.50
10.	West Coast Paper Mills Limited	1955	Bangur group	3.11
Total Market Share				60.37

Source: Prowess database

TABLE 2: ANALYSIS OF DEBT EQUITY WITH FIXED ASSETS AND TOTAL ASSETS

Year	Debt - equity ratio	Fixed assets (Rs. in crores)	Total assets (Rs. in crores)
1997-98	1.60	302.09	585.68
1998-99	1.50	313.07	592.89
1999-00	1.50	346.28	610.92
2000-01	1.45	358.41	639.63
2001-02	1.34	401.12	698.15
2002-03	1.39	481.69	829.83
2003-04	1.28	494.65	887.69
2004-05	1.05	537.26	906.84
2005-06	0.93	554.38	948.63
2006-07	1.18	601.52	999.83
2007-08	1.17	676.74	1155.71
2008-09	1.14	768.20	1296.37
2009-10	1.27	774.39	1299.01
MEAN	1.29	508.45	880.86
CV	0.15	0.32	0.29
CAGR	-1.91	8.16	6.86

Source: computed from annual reports of respective units.

TABLE 3: DEBT EQUITY WITH FIXED ASSETS - SIMPLE LINEAR REGRESSION ($D/E = \alpha + \beta (FA)$)

Companies	Constant(α)	Co-efficient of FA (β)	R ²	Adj.R ²	F	P	DW
AP	0.51	0.001 (6.06*)	0.77	0.75	36.72*	0.00	1.33
BAL	2.09	-0.001 (2.26**)	0.32	0.25	5.09**	0.05	2.21
HP	4.31	-0.01 (3.86*)	0.58	0.54	14.88*	0.00	0.33
HNP	-0.68	0.007 (2.12**)	0.29	0.23	4.51**	0.06	0.91
JK	3.05	-0.001 (2.38**)	0.34	0.28	5.65*	0.04	0.95
MP	3.61	-0.014 (1.82**)	0.23	0.16	3.31**	0.10	0.58
RN	-3.12	0.002 (2.78*)	0.41	0.36	7.73*	0.02	0.52
SP	0.93	0.002 (2.26**)	0.32	0.26	5.1*	0.05	1.50
TNPL	1.39	0.001 (2.01**)	0.27	0.20	4.03**	0.07	1.79
WC	0.95	0.001 (3.34*)	0.50	0.46	11.17*	0.01	1.65
SECTOR	1.76	-0.01 (3.56*)	0.61	0.49	12.70*	0.00	0.88
INDUSTRY	2.11	2.56E-07 (2.78*)	0.46	0.36	7.74*	0.02	1.94

* - Significant at 0.01 level; ** - Significant at 0.05 level;
 Figures within parentheses indicate 't' values;
 DW- Durbin Watson Statistics

Source: Computed

TABLE 4: DEBT EQUITY WITH TOTAL ASSETS - SIMPLE LINEAR REGRESSION ($D/E = \alpha + \beta (TA)$)

Companies	Constant(α)	Co-efficient of TA (β)	R ²	Adj.R ²	F	P	DW
AP	0.41	0.001 (6.34*)	0.79	0.77	40.24*	0.00	1.39
BAL	2.44	-0.012 (2.35*)	0.33	0.27	5.52*	0.04	2.12
HP	5.22	-0.006 (3.47*)	0.52	0.48	12.01*	0.01	0.42
HNP	2.02	0.011 (2.2**)	0.31	0.24	4.84*	0.50	1.60
JK	-3.05	-0.002 (2.34**)	0.33	0.27	5.47*	0.04	0.93
MP	0.99	0.007 (2.19**)	0.30	0.24	4.79*	0.50	1.85
RN	4.85	-0.001 (1.63**)	0.19	0.12	2.65**	0.13	0.47
SP	1.01	0.001 (1.85**)	0.24	0.17	3.40**	0.09	0.98
TNPL	1.69	-0.001 (2.06**)	0.28	0.21	4.23**	0.06	1.59
WC	0.90	-0.001 (3.11*)	0.47	0.42	9.70*	0.01	1.59
SECTOR	1.75	0.02 (3.107*)	0.47	0.42	9.65*	0.01	0.80
INDUSTRY	2.22	-7.00E+08 (2.19**)	0.39	0.24	4.81*	0.50	1.97

* - Significant at 0.01 level; ** - Significant at 0.05 level;
 Figures within parentheses indicate 't' values
 DW- Durbin Watson Statistics

Source: Computed.

APPLICATION OF KNOWLEDGE MANAGEMENT PRACTICES IN SMALL ENTERPRISES

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ABSTRACT

The study is conducted on application of knowledge management practices in small enterprises and concludes that even small manufacturing enterprises, in order to enhance the level of productivity, makes the employees understand the concepts involved in Knowledge Management practices and encourage them to practise the implementation of such knowledge management applications within their organisations towards maintaining a productive and quality business environment for its long-run sustenance.

KEYWORDS

knowledge management, small enterprises.

INTRODUCTION

In order to serve the customers better, the present-day organisations concentrate on understanding, adapting and managing changes for improving the quality of the products produced, improving the operational efficiency and adopt a fast-track method for delivering their products to markets. For this purpose the organisations capture and utilise the relevant *knowledge* and this indeed calls for a new style of management, generally identified as

KNOWLEDGE MANAGEMENT

Many organisations adopt Knowledge Management and therefore it becomes imperative to know the nature, importance, need, implementations, benefits and its limitations.

Understanding of *true knowledge* towards different firms and people is essential in this present complex business environment. This understanding is essential because it helps to identify the distinction between *data management*, *information management* and *knowledge management*. This type of understanding also helps to observe the relationship between knowledge management and organisational learning and explain the process used to convert data and information into knowledge, describe the knowledge flow and categorise various types and components of knowledge.

REVIEW OF LITERATURE

ARUN O GUPTA, Senior Director Business Technology, Pfizer Ltd describes "KM as a practice that addresses the need for information that is required for making effective decisions". **SATISH JOSHI**, Senior VP, PATNI Computer Systems Limited says, "KM is a set of processes and tools which give us the ability to leverage and combine the collective abilities of our knowledge workers." **SUNIL KAPOOR**, Head IT, Fortis Healthcare says, "KM is nothing but having customised information tailored to the needs of each user". **M D AGARWAL**, GM IS Refinery Systems, BPCL defines knowledge management as "A practice that encompasses end-to-end processes owned by a department can go a long way toward boosting productivity." According to the **AMERICAN PRODUCTIVITY & QUALITY CENTRE**, "KM refers to the strategies and processes of identifying, capturing, and leveraging knowledge to enhance competitiveness". According to **YOGESH MALHOTA** of www.brint.com, "KM refers to the critical issues of organizational adaptation, survival and competence against discontinuous environmental change. Essentially, it embodies organizational processes that seek synergistic combination of data and information processing capacity of information technologies, and the creative and innovative capacity of human According to **GARTNER GROUP**, KM is a discipline that promotes an integrated approach to identifying, managing and sharing all of an enterprise's information assets. These information assets may include databases, documents, policies and procedures, as well as previously unarticulated expertise and experience resident in individual workers. **GARTNER** defines Knowledge management as an integrated and collaborative approach to the Creation, Capture, Organization, Access and Use of Information Assets.

NEED FOR THE STUDY

E-Commerce and internet in the present-day business scenario facilitates rapid in-flow of information into organisations causing internal and external pressures disturbing their effective operations. The internet provides information about the enterprises' competitors to their customers, though they are in the different parts of the world yet they are only a mouse click away. Further, the employees' turnover rate is high because the employees of the organisation keep moving from one to another because of the information available to them through internet about job—vacancies. While employees relocate from one organisation to another they take with them, the critical knowledge of the company operations, which they learnt when they were in their previous employment.

The contemporary organisations are forced to adopt change management to match with the increasing pace of information technology's implementations of e-Commerce, automated inventory procurement and enterprise resource planning systems (ERP). Changes in government legislations and its regulatory framework make the business enterprises to identify new threats and opportunities ahead of them.

Customers of business organisations, because of their sophisticated life style practices, demand for new products and services, which forces the organisations to develop a new level of customer-oriented personalised interaction.

With such challenges ahead, it becomes imperative for the present-times business houses to filter information from relevant data, develop efficient management methods to accept such information filtered and convert the information into organisational knowledge and from that knowledge generate value-added information.

STATEMENT OF THE RESEARCH PROBLEM

The study of *knowledge management* is a significant issue of research under *functional management* field of study. Many research contributions in this area show that *knowledge management* establish and maintain a productive and quality environment in an organisation. These contributions observed that adoption of knowledge management practices facilitates better work performance, generates more business, boosts the image of the company, makes office and shop floor operations easier and safer, ensures employee-discipline, contribute to employee morale and productivity. These contributions also reveal that application of knowledge management practices provide for better quality awareness, more efficient way of using resources, low cost of production, better preventive maintenance and high employee-involvement. Hence, it is an empirical challenge to observe whether *knowledge management practices* improve the quality of performance. A large number of literature-review reveals the fact that knowledge management applications are adopted in many areas within the business organisations to establish and maintain a well-organised workplace resulting in a safer, more efficient and more productive operation leading to the following research questions

- Whether knowledge management practices can be adopted in various work areas within an organisation

- How such practices are used within the organisation
 - Whether such knowledge management applications are significant in its value-adding mission
- In order to find a solution, the researcher conducted a study in a small enterprise situated nearby Chennai covered under the SM&ME Act 2008.

OBJECTIVES THE STUDY

The study has the following objectives

- To identify the areas where Knowledge Management is applied in the small enterprise
- To study how such Knowledge Management practices used in the small enterprise
- To understand the overall significance of Knowledge Management applications

METHODOLOGY

Research design

The research design is the blue print of a research and concerned with turning a research question into testing project. This study uses an empirical research design and involves both analytical and descriptive type of methodology. The study mainly depends on primary data.

Study area

TIRUVALLUR district is an administrative district in the South Indian state of TAMIL NADU. The town of TIRUVALLUR is the district headquarters. The district has a mixture of urban and rural characteristics. The Eastern part of TIRUVALLUR district is dominated by urban characteristics while the Southern and Northern part of the district has influence of Andhra culture due to its position. As of 2011, the district had a population of 3,728,104 with a sex ratio of 987 females for every 1,000 males. The district has been divided into three revenue divisions viz, TIRUVALLUR, TIRUTTANI AND PONNERI. There are three taluks under TIRUVALLUR division, two taluks under TIRUTTANI divisions and four taluks under PONNERI division. There are 46 firkas and 820 revenue villages. Likewise, there are 14 blocks, 12 Municipalities and 13 town panchayats, which implement rural development activities. There are 178 Large and 21 Medium Scale Enterprises, 27319 Micro, and Small Enterprises engaged in the manufacturing of various products like Leather/Textiles/Chemical/Engineering. Some of the economic activities undertaken by the rural artisans are manufacturing of jute, coconut shell products, and palm leaf based products, paper cups, leather, rexin works etc.

Sampling size and design

The research study uses survey method to collect primary data. The survey method employs well-formulated questionnaire and applies multi-range sampling method for generating data. The study adopts a systematic method of selecting samples. The researcher distributed 120 questionnaires to the employees of a medium enterprise (the name of the company not mentioned in the article for the purposes of maintaining confidentiality) situated 40 kilometres away from Chennai in THIRUVALLUR district. It is an engineering company involving high technology dealing with the production of automotive parts. Out of 120 questionnaires, the researcher collected back 106 questionnaires. Out of these 106 questionnaires, 100 questionnaires were usable, rejecting the rest of them.

Questionnaire design

The research study involved questionnaires as the instrument to collect primary data and divided into two parts. The respondents shared their opinions pertaining to knowledge management applications. The first part of the questionnaire includes demographic profile with optional questions. The second part of the questionnaire uses optional questions relating to the various areas where knowledge management practices apply in the selected enterprise of the study

Scaling technique in questionnaire

The questionnaire uses both optional type statements and statements in LIKERT 5-iespoint scale. The response from the employees of the selected engineering company, rated in 5-point scale, as: 5- Strongly Agree 4 – Agree 3 – Neutral 2 – Disagree 1 – Strongly disagree

Framework of the Analysis

The following are the statistical tools used in the study:

1. **Percentage analyses** to ascertain the nature of responses of the employees about the application of *Knowledge Management practices* in the various areas of operations within the business organisation.
2. **One-way ANOVA** test to test the dependence of variables

RESULTS AND DISCUSSION

The researcher distributed the questionnaires to the employees of the organisation of the sample unit and collected the filled-in questionnaires from the respondents for analyses and interpretation. The summary of the results is analysed using:

- **Percentage analysis** of the variables in the questionnaire
- **One-way ANOVA** test exhibits the influence of *age of the employees* and *experience of the employees* on various Knowledge Management practices
- **Independent sample t-Test** exhibit the influence of gender of the employees on various knowledge Management applications

FINDINGS

The study identified the following areas where knowledge management applications used within the small enterprise:

- In framing policies and strategies
- In practising leadership styles
- In training & mentoring
- In knowledge capture and acquisition
- In communication within the organisation

Thirty percent of the optimistic employees of the study unit strongly agree that their organisation applies knowledge management techniques in framing policies and strategies.

All the employees of the sample study unit strongly agree that their superiors use knowledge management applications in their style of leadership.

All the employees of the study unit (optimistic, mechanical and demanding employees) strongly agree that the organisation seeks external sources for obtaining external knowledge and share it amongst the employees within the organisation

Thirty-one percent of the optimistic employees and thirty-eight percent of the mechanical employees strongly agree that the organisation captures and uses knowledge obtained from other industrial sources such as industrial associations, competitors, clients and suppliers.

All the employees of the study unit strongly agree that the organisation regularly updates the databases of good work practices and prepare written documentation such as training manuals, articles for publications etc. thereby providing for organisational memory.

Thirty-eight percent of the mechanical employees of the sample study unit strongly agree that the organisation facilitates collaborative work by project teams that are physically separated encouraging virtual teams.

Age, gender and experience of the employees of the sample study unit do not influence the knowledge management practices within the enterprise.

All the employees of the sample study unit agree that the enterprise provides formal training related to knowledge management practices, while sixty-three percent of the employees of the sample study disagree that organisation provides informal training related to knowledge management practices.

Thirty-nine percent of the employees of the sample unit agree that the enterprise uses formal mentoring practices including apprenticeship.

SUGGESTIONS

All the employees of the country, nation-wide need to understand the significance, influence and effectiveness of *Knowledge Management practices* application within their organisations towards a better operational performance for enhancing the productivity and work efficiency.

LIMITATIONS OF THE STUDY

Considering the time and cost factor the study is limited only to Chennai region. The study domain confines only to manufacturing companies and therefore the findings through analyses need not be the same for other industrial organisations. The study is only with reference to **ONE** selected manufacturing company nearby Chennai and does not include all the manufacturing companies located in Chennai. The study is limited only to 100 responses from the employees of manufacturing company in Chennai and hence the views of these respondents need not be the views of the employees of the entire manufacturing companies of the country. The researcher circulated questionnaires only to respondents who know to read and write. Thus the study confines its circulation of questionnaires only to literate group and ignores illiterate group who do not know to read and write.

CONCLUSION

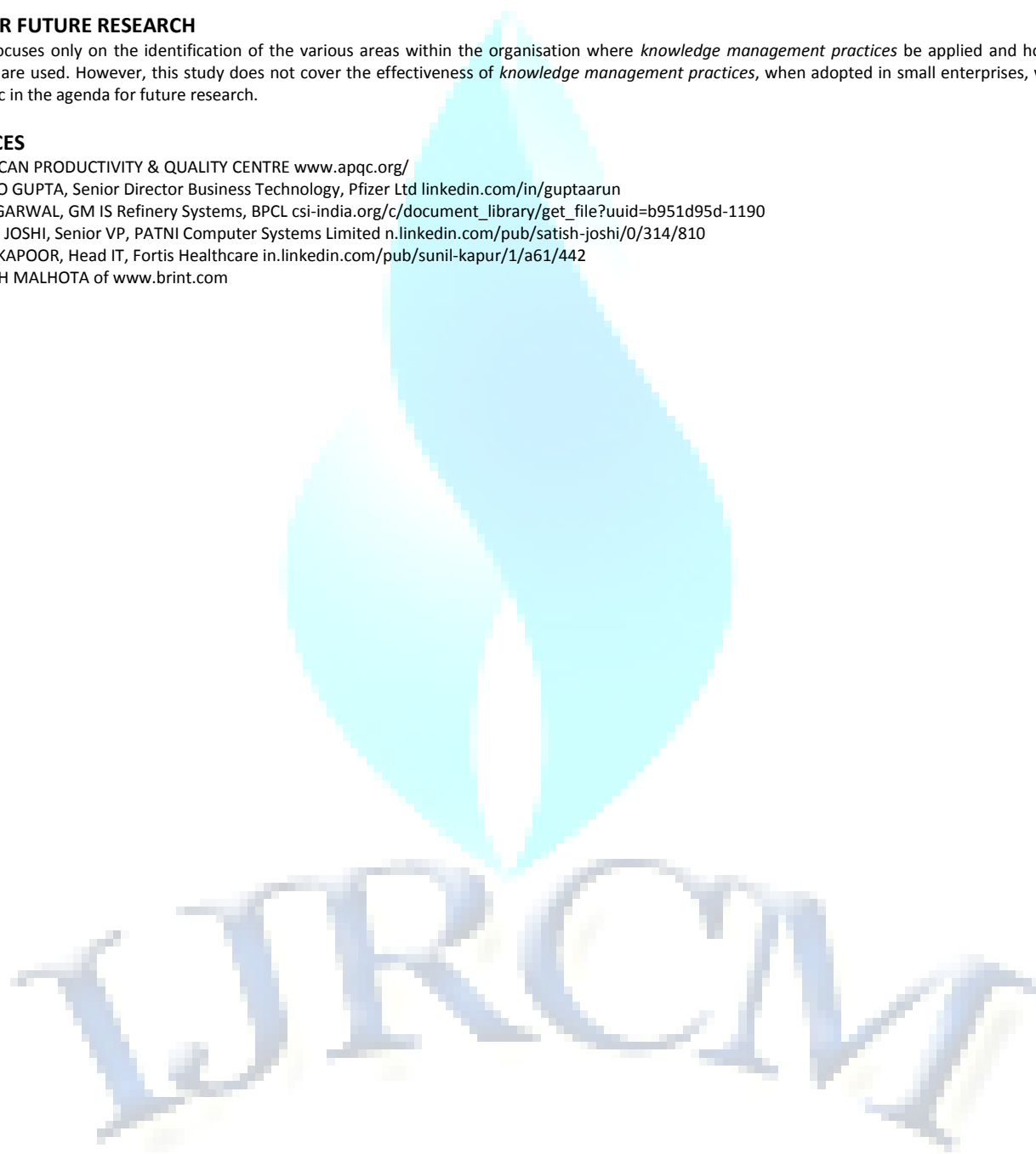
The study concludes that even small manufacturing enterprises, in order to enhance the level of productivity, makes the employees understand the concepts involved in *Knowledge Management practices* and encourage them to practise the implementation of such knowledge management applications within their organisations towards maintaining a productive and quality business environment for its long-run sustenance.

SCOPE FOR FUTURE RESEARCH

This study focuses only on the identification of the various areas within the organisation where *knowledge management practices* be applied and how such applications are used. However, this study does not cover the effectiveness of *knowledge management practices*, when adopted in small enterprises, which is left as a topic in the agenda for future research.

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A STUDY ON CUSTOMER PREFERENCE AND ATTITUDE TOWARDS DATA CARD SERVICE PROVIDERS WITH REFERENCE TO COIMBATORE CITY

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ABSTRACT

The important aspect in the marketing field is to analyze the customer needs and thoughts. It is essential to know the customer preference before marketing any product. Customer preferences are changing day to day as per their needs. So it is important to analysis the customer preference and attitude to market a product. The main function of marketing is to analyze the customer's mindset and then advertising about the product begins. The customer satisfaction is the fundamental thing in any business organization. The Research work "A study on customer preference and attitude towards data card service provider reference to Coimbatore city", analysis the customer preference and attitude towards data cards especially AIRTEL, BSNL, RELIANCE and MTS. The research design is a descriptive research design and primary data have been collected through questionnaire. The statistical tools used are Simple percentage analysis, Rank analysis, Weighted Mean, Chi – Square and ANOVA. The findings from the analysis were discussed in detail and suggestions have been given.

KEYWORDS

customer preference, data card service.

INTRODUCTION

Exchange of information becomes the necessity of life to a common man. In the modern world an individual tends to communicate anything to everything right from the place where he/she stands. Even while riding vehicle he / she wants communicate within a fraction of second at quick speed with clear voice, without any disturbance. Like line crossing, out of order, etc. most of which lack in the connection given by the department of tele-communication. Internet emerges as a boon quench such a thirst, by providing facilities, which a common man cannot imagine. Internet Services can effectively provided by data cards. Day by day many new competitors enter the market with new attractive schemes, provide additional facilities, add new features to existing ones, reduce the charges, introduce varieties of data card models a healthy competition that benefits the subscribers. Hence in this context, it is important to study the functioning of data card service provider and the utilization of their services by the customers.

REVIEW OF LITERATURE

1. **Mr. Bhatt (2008)**, in his study titled "A Study of Data Card Usage Among the Post Graduate Students" analyzed that it is important for net users, service providers, content developers, equipment manufacturers, as well as for parents and young people alike that the key characteristics of Data Card technology is well understood so that the risks associated with its potentially damaging or disruptive aspects can be mitigated. This paper has tried to compare the usage difference by gender with respect to the difference manufacturing and service provider companies.
2. **Mr. Kumar (2008)**, in his study titled "Customer Satisfaction and Discontentment vis-a-vis BSNL Landline Service: A Study" analyzed that at present, services marketing plays a major role in the national economy. In the service sector, telecom industry is the most active and attractive. Though the telecom industry is growing rapidly, India's telecom density is less than the world's average telecom density as most of India's market is yet to be covered. This attracts private operators to enter into the Indian telecom industry, which makes the Bharat Sanchar Nigam Limited (BSNL) more alert to run its business and survive in the market
3. **Dr. EniolaSamuel (2006)**, in his study titled "Customer Satisfaction In The Mobile Telecommunications Industry In Nigeria" This study aimed at investigation the overall customer satisfaction of the mobile telecoms industry in Nigeria, factors influencing satisfaction and the relationship between satisfaction and demographics. The results obtained in this research indicated that 57% of the respondents were satisfied and 5% highly satisfied. The combination of network quality, billing, validity period and customer support (mobile services attributes) showed strong relationship with satisfaction while age, gender, location and employment variables showed weak relationship.

SCOPE OF THE STUDY

Scope of the study is among the mobile customers of AIRTEL, RELIANCE, BSNL and MTS as they are the leading data card suppliers in Tamilnadu. The growing competition in the global market is showing that it is becoming increasingly important for companies to grow with the expectation of their customers and gain new customers. As data card usage is increasing day to day, gaining knowledge about customers' behavior is substantively important which can only be examined by analyzing the role of various factors affecting purchasing behavior of data card among customers and processes. And also analyzing about the major four data card suppliers in Tamil Nadu it will be easy to find the best data card service provider. This research study will be useful for AIRTEL, RELIANCE, BSNL and MTS to understand the expectations and requirements for customers and can serve them in a better way.

STATEMENT OF THE PROBLEM

In our country the growth of service marketing especially in telecommunication industry is in its infancy stage, as compared to the industrially advanced countries. It is for the fact that the economy of our country has been in the developing stage. There are various internet services provider's in our country and they are playing an essential role in fulfilling the needs of the customers. However the following questions may arise about customer preference and satisfaction.

1. What are all expectations by the customer's regarding service provided by the data card service provider?
2. Whether the service provided by data card service provider is satisfying the customers?
3. Are the facilities available adequate to satisfy the customers?

4. What are the factors motivate the customers to buy a particular brand?

OBJECTIVE OF THE STUDY

PRIMARY OBJECTIVE

- 1) To find out the customer preference towards various data cards
- 2) To find out the customer attitude towards various data cards.
- 3) To find out the most preferred data card of the consumers.

SECONDARY OBJECTIVE

- 1) To Study about the awareness among the customers about internet and data card.
- 2) To Study about purchase decision behavior of the customer.
- 3) To study about the factor influencing the buying of data card.

RESEARCH METHODOLOGY

TYPE OF RESEARCH: DESCRIPTIVE RESEARCH

The research was descriptive in nature, researcher attempt to obtain a complete and accurate description of situation. After analyzing the data the researcher attempts to predict the result of action. Descriptive study is a comparative design that throws light on specifying objects techniques of collecting the information taking out sample processing, analyzing and question of report of finding.

SAMPLING DESIGN

It is a definite plan for obtaining sample from a given population. It refers to the technique or procedure the researcher would adopt in selecting items for the sample. It consists of selecting the study and selection of the sample. In this study, convenience sampling design was used which purely depends on the viewpoints of researcher.

SAMPLING METHOD

The sampling method adopted for the study was non-probability sampling. The respondents were chosen on the basis of convenience. In other words sampling procedure adopted was non-probability convenience sampling.

SAMPLE SIZE

The sample size for the study was determined. A sample of 200 respondents was chosen for administering the questionnaire.

SAMPLE AREA

The area for the study was conducted in Coimbatore city.

STATISTICAL TOOLS USED IN THE STUDY

The collected data is tabulated and analyzed using

1. Simple percentage Analysis
2. Rank Analysis – Mean Calculation
3. Chi – Square Analysis
4. ANOVA

FINDINGS OF THE STUDY

- It is inferred that 25.5% of the respondents are using the Internet Services once in a day, 26.5% are using twice in a day and 48% are using regularly.
- It is inferred that 31% of the respondents are customers of Airtel, 15.5% are customers of BSNL, 19% are MTS customers, 23.5% are Reliance customers and 11% are customers of others.
- It is inferred that 46.5% of the respondents are using internet for 10 hrs to 15 hrs or > 500 MB in a month, 33.5% of the respondents are using internet for 15 hrs to 30 hrs or > 500 MB to 1 GB, 17% of the respondents are using the internet for 30 hrs to 45 hrs or > 1 GB to 2.5 GB and 3% of the respondents are using the internet for 45 hrs & above or 2.5 GB and above
- It is inferred that in a month, 39% of the respondents are spending Rs.300 to Rs.350 for using internet, 38% of the respondents are spending Rs.350 to Rs.500 for using internet, 20.5% of the respondents are spending Rs.500 to Rs.800 for using the internet for and 2.5% of the respondents are spending Rs 800 and above for using internet.
- It is inferred that 48% of the respondents spent Below Rs 1500 for initial setup of data card, 38.5% of the respondents spent Rs1500 to 2500 for initial setup, 6.5% of the respondents spent Rs2500 to 3500 for initial setup and 7% of the respondents spent more than Rs 3500 for initial setup.
- It is inferred that 21% of the respondents are using the data card from 1-6 months, 33.5% of the respondents using the data card from 7-12 months, 30.5% of the respondents using the data card from 1-one and a 1/2 years and 15% of the respondents are using the data card for more than one and a 1/2 years.
- It is inferred that 34% of the respondents are using post paid connection and 66% are using prepaid connection
- It is inferred that 40.5% of the respondents are influenced through TV advertisement to by the data card, 27.5% of the respondents are influenced through friends & family to by the data card, 21% of the respondents are influenced through magazine & newspaper to by the data card and 11% of the respondents are influenced through others to by the data card.
- It is inferred that 83.5% of the respondents are satisfied with the physical attributes and 16.5% of the respondents are not satisfied with the physical attributes.
- It is inferred that 61.5% of the respondents will definitely prefer high phone book memory, 28% of the respondents will probably prefer high phone book memory, 9% of the respondents will definitely not prefer high phone book memory and 2% of the respondents will not probably prefer high phone book memory.
- It is inferred that 72.5% of respondent are having 24X7 customer services and 27.5% are not having 24X7 customer services.
- It is inferred that 22.5 % of the respondents are highly satisfied with the 3G facility, 43 % of the respondents are satisfied with the 3G facility of the data card, 21.5% of the respondents are neither satisfied not dissatisfied with the 3G facility of the data card and 6% of the respondents are dissatisfied with 3G facility of the data card and 7% are highly dissatisfied with the 3G facility of the data card
- It is inferred that 52% of respondent are not satisfied with the billing amount according to the usage and 48% are with the billing amount according to the usage.
- It is inferred that 26.5% of the respondents will definitely recommend about data card to others, 62% of the respondents will probably recommend about data card to others, 6% of the respondents will definitely not recommend about data card to others and 6% of the respondents will not probably recommend about data card to others.
- It is inferred that 34.5% of the respondents will buy the same data card in future, 62% of the respondents will not buy the same data card in future and 43% of the respondents may will buy the same data card in future.
- It is inferred that 34% of the respondents prefer Airtel data card in future, 12.5% prefer BSNL data card in future, 21.5% of the respondents prefer MTS data card in future, 17% of the respondents prefer Reliance data card in future, and of the respondents prefer other data cards in future.
- It is inferred that 31.5 % of the respondents are highly satisfied with the data card, 40 % of the respondents are satisfied with the data card, 15.5% of the respondents are neither satisfied not dissatisfied with the data card and ,7% of the respondents are dissatisfied with the data card and 6% are highly dissatisfied with the data card.

- It is inferred Airtel holds rank 1, Reliance holds rank 2, MTS holds rank 3, Others holds rank 4 and BSNL holds rank 5 as per the customer preference
- It is inferred Net Speed holds rank 1, Price holds rank 2, Easy handling holds rank 3, Availability in store holds rank 4, Signal Strength holds rank 5, Installation process holds rank 6, Tariff plan holds rank 7, User friendly holds rank 8, Offer/Discounts holds rank 9 and Durability holds rank 10 as per customer preference
- It is inferred Reduce network traffic holds rank 1, High net speed holds rank 2, Reduce Charges holds rank 3, Others holds rank 4 and Access in all areas holds rank 5 as the expectation of customers in future
- It is inferred that the customers give first priority to high phone book memory, second priority to Micro SD card slot (Expandable Memory), Third priority to Support SMS (high Storage capacity) and fourth priority to Support SMS (High Storage capacity) as the additional feature expected at the time of purchase
- It is inferred that the customers give first priority to price, second priority to net speed, third priority to user friendly, fourth priority signal strength and fifth priority periodical offers
- It is inferred that there is no significant relationship between the age and monthly average hours of Internet used by the respondents.
- It is inferred that there is significant relationship between the occupation and monthly expenditure of internet usage by the respondents.
- It is inferred that there is no significant relationship between the age and data card brand used by the respondents.
- It is inferred that there is a significant relationship between the data card brand used by the respondents and the satisfaction level of the data cards.
- It is inferred that there is significant relationship between the data card brand and durability used by the respondents

SUGGESTIONS

- To survive in such a competitive market, knowledge about the product is a must. For this there should be sustained efforts in making the consumer aware about the quality and its benefits. Companies should deliver attractive advertisements which contain information regarding its offers and discounts. Companies got a good tariff plan and other offers comparing with other service providers, but the customers are unaware about it. So effective advertisements only can serve the purpose tariffs.
- The company should provide free gift and some discounts in order to increase the customer preference of the data card.
- Device installation and registration on site should be easier to work so that customers need not to give more papers at the time of purchasing a new connection.
- Company should come with some good and effective plans to make the customer satisfied.
- BSNL and MTS have to offer additional features to attract more customers.
- MTS have to improve the customer service provided.

CONCLUSION

The study on the customer preference on various data cards is a study which was carried out to find out the preference and satisfaction of customer in choosing the data card and the scope for data card in the market. The factors that affect the customer decision making in the purchase of internet data card was also found out. The study also intended to know the awareness of customers about the internet data card. The objective of the study is achieved by analyzing the questionnaires filled by the customers of data card in Coimbatore city.

From the study it was found that the maximum respondents are using Airtel data card. The prominent factors are signal strength internet speed, tariff plan, easy handling of the internet data card and also the price. Though the Airtel has got very good customer services and many attractive factors, it become the market leader in the internet data card segment.

Improving the signal strength and internet speed of RELIANCE data card and restructure the tariff plans in order to suite the pocket of average Indian customer can make an impact in this segment. The MTS and BSNL Company should go for mass advertising and awareness drive about internet data card. They should take step to improve the awareness of the customer and prospective customer regarding their products and services and to improve the quality of data card.

LIMITATIONS OF THE STUDY

- The data collected for the study are qualitative being subject to the personal bias of the respondents.
- The data card of Airtel, Reliance, BSNL and MTS are in its initial of adaptation among the customers, so it takes time to know the actual impact it made and the factors influencing switching among consumers of Tamilnadu.
- The study is based only for the major four companies due to the complexity.

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ANNEXURE
TABLES

Variable	ATTRIBUTES	F	%	Variable	ATTRIBUTES	F	%
GENDER	Male	102	51	NET SETTER TYPE	Same data card service	127	63.5
	Female	98	49		Others	73	36.5
BASIS OF AGE	15-25	96	48	ATTRIBUTE TO BUY THE DATA CARD	Schemes	47	23.5
	25-35 Yrs	78	39		Network	67	33.5
	Above 35	26	13		Speed	82	41
OCCUPATION	Student	83	41.5		Others	4	2
	Govt	9	4.5	AVERAGE HOURS OF USAGE OF INTERNET -MONTH	10 hrs to 15 hrs	93	45.5
	Private	67	33.5		15 hrs to 30 hrs	67	35.5
	Self employee	31	15.5		30 hrs to 45 hrs	34	16
	Others	10	5		45 hrs & above	6	3
USAGE OF INTERNET SERVICES	Yes	162	81	AVERAGE EXPENDITURE FOR INTERNET IN A MONTH	Between Rs.300 to Rs.350	78	39
	No	38	19		Between Rs.350 to Rs.500	75	37.5
PURPOSE FOR DATA CARD SERVICES	Personal use	76	38		Between Rs.500 to Rs.800	43	21.5
	Business	26	13		Rs. 800 and above	4	2
FREQUENCY OF CONNECTION TO INTERNET IN PER DAY	Both	98	49	INITIAL SETUP OF INTERNET IN A MONTH	Below Rs 1500	96	48
	Once in a day	51	25.5		Between Rs 1500 to 2500	77	38.5
	Twice in a day	53	26.5		Between Rs2500 to 3500	13	6.5
REASON FOR USING DATA CARD	Regularly	96	48		Rs 3500and above	14	7
	Portable	44	22	TENURE OF USAGE OF DATA CARD	Between 1 to 6 months	42	21
	Cost	69	34.5		Between 7 to12 months	67	33.5
RESPONDENTS BASED OF THE DATA CARD BRANDS	Goodwill	76	38		Between 1 to 1.6 years	61	30.5
	Others	11	5.5		Above 1 year and 6 months	30	15
	Airtel	63	31.5	CURRENT OFFERS TO DATA CARDS	Yes	135	67.5
	BSNL	35	17.5		No	65	32.5
	MTS	35	17.5	NEW TECHNOLOGY INHERITED	Yes	89	44.5
NET CONNECTION IN DATA CARD	Reliance	47	23.5		No	111	55.5
	Others	20	10	SATISFACTION LEVEL- Price	Highly Satisfied	108	54.0
	Post paid	68	34		Satisfied	72	36
DATA CARD SERVICE PROVIDER	Pre paid	132	66		Neutral	14	7.0
	Friends &Family	55	27.5		Dissatisfied	2	1
	TV	81	40.5		Highly Dissatisfied	4	2
PHYSICAL ATTRIBUTES	Magazine& Newspaper	42	21	SATISFACTION LEVEL- Net Speed	Highly Satisfied	43	21.5
	Others	22	11		Satisfied	84	42
	Yes	167	83.5		Neutral	52	26
SCHEMES AND PROMOTIONS	No	33	16.5		Dissatisfied	15	7.5
	Free gift	22	11		Highly Dissatisfied	6	3
	Free Usage	94	47	SATISFACTION LEVEL-EASE of Access	Highly Satisfied	53	26.5
FEATURE- HIGH PHONE BOOK MEMORY	Discounts	84	42		Satisfied	55	27.5
	Definitely	123	61.5		Neutral	28	14
	Probably	55	27.5		Dissatisfied	19	9.5
	Definitely not	18	9.0		Highly Dissatisfied	45	22.5
FEATURE- MICRO SD CARD SLOT (EXPANDABLE MEMORY)	Probably not	4	2	SATISFACTION LEVEL- Mode of Payment	Highly Satisfied	31	15.5
	Definitely	69	34.5		Satisfied	65	32.5
	Probably	94	47		Neutral	59	29.5
	Definitely not	31	15.5		Dissatisfied	36	18.0
FEATURE- SUPPORT SMS(HIGH STORAGE CAPACITY)	Probably not	6	3		Highly Dissatisfied	9	4.5
	Definitely	80	40.0	(24X7) SERVICES	Yes	145	72.5
	Probably	59	29.5		No	55	27.5
	Definitely not	52	26.0	3G FACILITY PROVIDED	Highly Satisfied	45	22.5
FEATURE- Make and receive voice calls	Probably not	9	4.5		Satisfied	86	43
	Definitely	50	25.0		Neutral	43	21.5
	Probably	65	32.5		Dissatisfied	12	6
	Definitely not	38	19.0		Highly Dissatisfied	14	7
NET BILLING ACCORDING TO THE USAGE	Probably not	47	23.5	SATISFACTION LEVEL OF THE DATA CARD	Highly Satisfied	52	26
	Yes	104	52		Satisfied	86	43
RECOMMENDING THE DATA CARD TO OTHERS	No	96	48		Neutral	33	16.5
	Definitely	53	26.5		Dissatisfied	15	7.5
	Probably	124	62		Highly Dissatisfied	14	7
	Definitely not	12	6	CHOICE OF DATA CARD TO BUY IN FUTURE	Airtel	68	34
CHOICE OF SAME DATA CARD TO BUY IN FUTURE	Probably not	11	6		BSNL	25	12.5
	Yes	69	34.5		MTS	34	17
	No	45	22.5		Reliance	43	21.5
CHOICE OF SAME DATA CARD TO BUY IN FUTURE	May be	86	43				

RANK ANALYSIS – MEAN CALCULATION

DATA CARD FEATURES THAT IS EXPECTED BY THE CUSTOMERS IN FUTURE	MEAN VALUE	RANK	RANK OF DATA CARD BRANDS	MEAN VALUE	RANK
Reduce Charges	3.01	3	Airtel	2.68	1
High net speed	2.89	2	BSNL	3.22	5
Reduce network traffic	2.77	1	MTS	2.72	2
Access in all areas	3.18	5	Reliance	3.18	3
Others	3.17	4	Others	3.21	4

CHI SQUARE ANALYSIS**PERSONAL FACTOR AGE AND MONTHLY AVERAGE HOURS OF INTERNET USAGE**

Personal Factor Age & monthly average hours of Internet usage	Chi – Square Analysis (Calculated Value)	P value (Expected Value)	Significant/Not significant	Hypothesis Accepted/ Rejected
	10.56	12.59	Not Significant	Accepted

There is a no significant relationship between the age and monthly average hours of Internet used by the respondents.

PERSONAL FACTOR OCCUPATION AND AVERAGE MONTHLY EXPENDITURE FOR INTERNET USAGE

Occupation & Monthly Expenditure of Internet usage	Chi – Square Analysis (Calculated Value)	P value (Expected Value)	Significant/Not significant	Hypothesis Accepted/ Rejected
	32.21	21.06	Significant	Rejected

There is a significant relationship between the occupation and monthly expenditure of internet usage by the respondents.

ANOVA**PERSONAL FACTOR AGE AND DATA CARD BRAND**

Sources of variation	Sum of Squares	Degrees of Freedom	Mean Square	F- Ratio	5% F-Limit
Between Sample	342.66	4	85.66	0.803	3.48
Within Sample	1066.67	10	106.66		

There is no significant relationship between the age and data card brand used by the respondents.

DATA CARD BRAND AND SATISFACTION LEVEL

Sources of variation	Sum of Squares (SS)	Degrees of Freedom	Mean Square (MS)	F- Ratio	5% F-Limit
Between Sample	722	4	180.5	7.88	2.87
Within Sample	458.08	20	22.9		

There is a significant relationship between the data card brand used by the respondents and the satisfaction level of the data cards.

THE SIGNIFICANCE OF EMPLOYEES TRAINING IN THE HOTEL INDUSTRY: A CASE STUDY

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ABSTRACT

It is boom time for India's Tourism and Hospitality sector. Driven by a surge in business traveler arrivals and a soaring interest in the country, India has emerged as a leading tourist destination. The world's leading travel and tourism journal, "Conde Nast Traveler", ranked India amongst top 4 preferred holiday destinations in the world. Another important feature of the hospitality industry, which is of particular significance to India, is its contribution to national integration and preservation of natural as well as cultural environments and enrichment of the social and cultural lives of people. Over 382 million domestic tourists visiting different parts of the country every year return with a better understanding of the people living in different regions of the country. They have a better appreciation of the cultural diversity of India. Thus, hospitality industry has been recognized as an important instrument for sustainable human development including Poverty elimination, Environmental regeneration, job creation; and Advancement of women and other disadvantaged groups. Training is a continuous process and that people's skills need to be continually updated to avoid becoming obsolete just like technologies which become outdated if development is not ongoing. The effect of training at the top filters downward throughout the entire organization where well trained staff builds stronger teams of employees, in turn leading to better financial results. Gob believes that Hospitality operators are generally strong believers in management and employees training and are prepared to invest in effective training programmes. Training and development are essential in providing employees with the right skills for their present and future jobs. The world today is constantly evolving, with customers demanding more, which in turn adds pressure to companies and their employees. Therefore, in times of recessions, decreasing the budgets of training programs is a way for companies in all industries to manage and minimize their financial losses. The purpose of this paper is to identify the different techniques that the hotel industry could use to maintain the training and development of their employees. This paper will also look at the literature supporting the cost-effective practices of training and development and the methods used to evaluate training programs. In concluding the paper, a set of general recommendations is suggested for the hotel industry and the human resources department when developing cost effective training programs.

KEYWORDS

Hotel Industry, Human Resource, Training & Development Techniques, Types of Training, Hoteliers upgrading skills.

INTRODUCTION

Hotel business is an independent branch of the hotel industry. Therefore, the question of hotel staff training is of a great importance. Nowadays, many universities have special departments, where specialists for the hotel industry are being trained. Major hotel chains create special schools, where hotel business is studied. There are hundreds of different external programs, which help to obtain skills of various professions in hotel business.

Human resources are the most powerful sources. How to attract outstanding personnel, how to make full use of employees' abilities and potentials in order to help achieve the organizational objectives are the questions that every leader should take into consideration. Staff training is a very essential part of Human Resource Management, it is a path for the management to know about their employees, it is a way to help employees to make best use of their own abilities, and it is a method to assist employees to become more professional at what they do. With the help of HRM, business success is partly guaranteed. The purpose of this paper is to help every employee in the hotel industry to find out the importance of staff training.

Human Resources are the biggest asset of any organization. Retaining good and highly motivated employees is a big challenge. Employees are motivated not only because of their pay package they get, they also look at various other direct and indirect benefits they get from the organization such as, good boss, training, working atmosphere, career development, class of the hotel and other benefits. Training helps in team building and bringing the entire organization together. One has to realize that success of any organization depends on the coordination and cooperation of all the departments. Training helps in creating and retaining such organization!

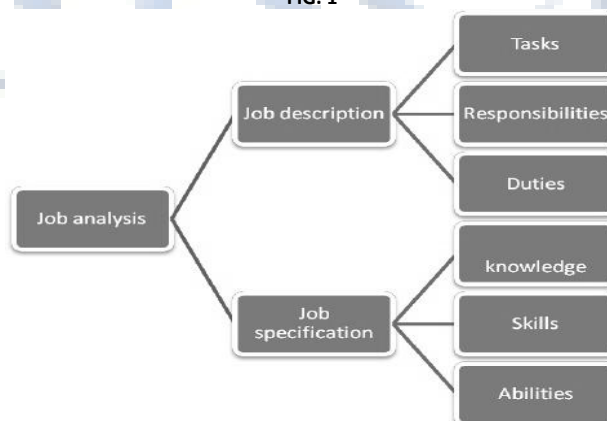
ROLES OF HRM

Managing human resources is very important in a firm, a good HRM team is organized and everyone in the team has his separate responsibilities, job analysis, recruiting, training and evaluating.

JOB ANALYSIS

Job analysis is the procedure through which you determine the duties of these jobs and the characteristics of the people who should be hired for them." Job analysis is the basis of all the other departmental activities. In the job analysis, HRM considers what jobs are needed, and writes the job description; clarify each job's tasks, responsibilities and duties. As well as job specification, the person takes care of writing job specification should be clear about what kind of knowledge, skills and abilities are required in the work.

FIG. 1



RECRUITING

According to the job analysis human resource staff responsible for recruiting would know how many employees to hire and what kind of people are to be hired. Recruiting can be divided into internal recruiting and external recruiting, as the name suggested, HR department can hire employees from workers inside the organization a transfer from a branch, or any kind of promotion etc. Hiring from outside sources is called external recruiting.

TRAINING

After successfully and carefully chosen new employees, these employees need to be trained to be on the job, orientation will be organized in the beginning of their work, and other kinds of trainings will catch up.

The need for training has to start from analyzing the requirement of the training needs based on the established standards of service. Training of the junior staff, middle-management and senior-management are not the same. One has to identify the training needs at different levels of the organization. Once this is done, one can formulate the training program for each level. Choosing of the trainer has to be done cautiously depending on the needs and the talent required for training. Correct methodology has to be identified and adopted for each levels of training. Hence, it is important to understand the training cycle.

Training cycle consists of the following components:

- ❖ Assessment of the need
- ❖ Identify training objectives
- ❖ Establish training criteria
- ❖ Selection of trainees
- ❖ Pretest trainees – if required
- ❖ Choose training methods
- ❖ Implement training
- ❖ Evaluation of training program

The training function of any organization can be viewed as a key subsystem of that organization, as shown in the figure below.

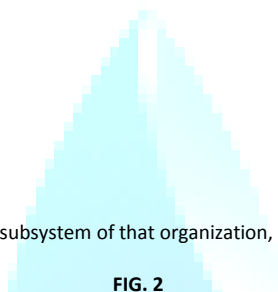
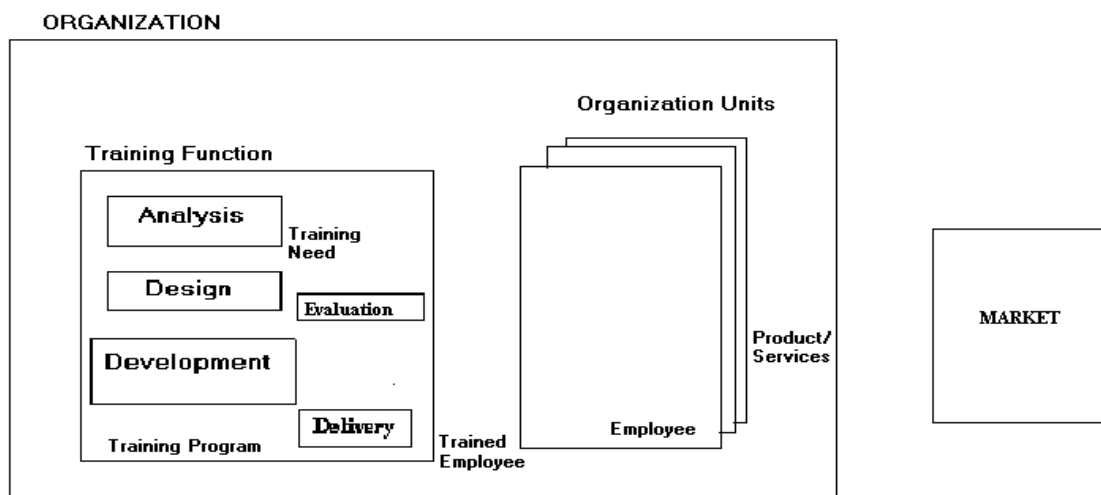


FIG. 2



TYPES OF TRAINING

SORT BY TRAINING CONTENT

Trainings are held for different purposes, some are organized to help new employees to get to know the hotel, some are for improving employees' professional skills, therefore, the trainings can be divided by their contents:

• APPRENTICE TRAINING

To introduce hotel general information and basic skills needed at work to new workers. This training helps building up good relationships between employees themselves and as well as between employees and management team. Moreover, it helps employees to set up the right attitude towards work.

• CERTIFICATION TRAINING

After this kind of training, employee get professional certificate on practical or theoretical tests. It aims to improve employees' skills and motivates them when they pass the tests.

• SIMULATION TRAINING

Practical training is held with the help of Human Resource Department, aiming to improve methods of working and increase work effectiveness by simulating the real workplace. This training is in existence in everyday work, therefore it is long-term. In order to have good results from this training, department heads play very important roles by using proper training skills.

• ON-THE-JOB TRAINING

Employees' professional quality is the key of hotel services, the rules and principles of work are taught in this kind of training, besides, courtesy, manners and techniques of handling interpersonal relations are taught as well. This kind of training aims to train employees to learn the best way to do the work in the most quickly and effective way.

• LANGUAGE TRAINING

Hotel employees are required to be able to speak one or two foreign languages, for different departments, different work categories or different positions, language requirements also differ. English as an international used language, every staff needs to be familiar with. Another language is required or to be trained depending on the location of the hotel.

• HOTEL SERVICES AND ADMINISTRATION TRAINING

This training is more focused on a specific subject according to the request of improving administration and services, including telephone techniques, guest relations, sales skills, public relations general information and application, safety and first-aid etc.

• CROSS TRAINING

To ensure the communication among departments and increase the ability of adjusting to distinguished environments, cross training is used to assist employees to receive knowledge and skills from other departments.

METHODS OF TRAINING

LEVELS OF TRAINING	NARRATIVE	METHODS OF TRAINING	DURATION
Induction training	Training for newly employed staff, to familiarize them with the strategic goals and functions of their organization and their responsibilities.	<i>On the job</i> Job instruction	1 week
Basic training	It takes place within an officers' first year on the job to enhance their skills in performing their duties effectively.	<i>On the job</i> Apprenticeship, Internships, Job rotation, Supervisory assistance and mentoring	1 month
Specialized training	It is a specialized training which reflects the Training Needs Assessment (TNA) on a specified number of employees.	<i>Off-the-job</i> Formal courses	1 day – 1year
Training for special groups	Training organized for women and disabled. This is to emphasize equal opportunity for all employees.	<i>On the job</i> Job instruction Supervisory assistance <i>Off-the-job</i> ; Formal courses	1 – 5 days
Leadership and development program	Training for experienced staff, aimed at enhancing the officer's employability over the long term. It takes place from the 8th year of service	<i>Off-the-job</i> Formal courses Field trips	Ongoing, Half day – 7 days
Counterpart or complement training	It is provided by foreign experts to their local counterparts. This is done to sustain the services provided by these experts Up on expiry of their contracts.	<i>On the job</i> Apprenticeship Job instruction	Ongoing, Half day – 7 days

EVALUATING

Once the training is over, evaluation of the training program has to be done to know the effectiveness of the training. Most managers seldom do the evaluation of the training program. One has to verify what was being done and what change has taken place due to training and its effectiveness in terms of job satisfaction, guest satisfaction, cost reduction etc. depending on the training objective.

It is necessary to have performance appraisals for employees in a period of time; the evaluation comes out from feedback of their department's representatives, co-workers and the training process etc. The evaluation encourages and motivates them to work harder and better in the future, and also helps them to improve their skills and abilities by rewarding, compensating and more practicing.

STAFF TRAINING IN HOTEL INDUSTRY

Training is the process that provides employees with the knowledge and the skills required to operate within the systems and standards set by management. Training, in the most simplistic definition, is an activity that changes people's behavior. As discussed earlier Staff Training is an indispensable part of Human Resource Management activities, more and more companies have realized how important it is to maintain training in the changing and complex work environment. In modern hotel business, it is all about competence in people, and especially the employees' qualities. The level of service quality depends on the qualities of employees. The qualities are about knowledge, skills and thoughts which lead to a hotel's survival and development. Therefore, staff training is essential in many ways; it increases productivity while employees are armed with professional knowledge, experienced skills and valid thoughts; staff training also motivates and inspires workers by providing employees all needed information in work as well as help them to recognize how important their jobs are. Training and development can be seen as a key instrument in the implementation of HRM practices and policies.

Hasty development of hotel industry and competition has led to the need for personnel training. The level of quality of service is dependant of the qualities of employees. Employee qualities are linked to knowledge, skills, competences, experience etc. which lead to the development of hotels. Therefore employee training is of vital importance since employee performance and productivity increases as well. They possess professional knowledge, experience and valuable skills that can be used to perform more effectively. Training is important in the motivation and inspiration of workers by securing needed information for the job, and it helps them get to know the important associations.

THE IMPORTANCE OF STAFF TRAINING

Training is an important aspect of career development. It gives an employee motivation and a sense of belonging. Well trained employees would be happy to do their work very effectively and efficiently. Normally, in a good organization along with promotions an employee would be given training to learn the requisites of the newly promoted job requirement. These kinds of trainings are mainly devoted to develop managerial skills in a person and are generally called career development or career planning. The idea of these trainings are to increase managerial performance, enhance job satisfaction or improve knowledge, skills and abilities and also helps in identifying strengths, weakness and interests.

Staff training is a significant part as well as the key function of Human Resource Management and Development; it is the crucial path of motivating employees and increasing productivity in the business. With the development of the technologies and the whole business environment, employees are requested to be more skilled and qualified, even if you are a good employee today, you could be out of the line some other day if you do not keep studying. A company needs organized staff training if wants to be competitive among others. Staff training is the key task to help everyone in the company to be more united.

Training could be enormously demanding and should be in-depth; lack of training or poor training brings out high employee turnover and the delivery of substandard products and services.

BENEFITS OF STAFF TRAINING

Staff training enhances the capabilities of employees and strengthens their competitive advantage. Effective training will improve the personal characters and professional abilities. Not only employees, management and organization would benefit from staff training, customers and guests benefit as well, because of the received quality products and services.

- Diminish learning costs.
- Enhance the commitment of employees by encouraging them to identify with the mission & objectives of the organisation.
- Improve operational flexibility by extending the range of skills possessed by employees.
- Attract high quality employees by offering those learning and development opportunities increasing their levels of competence and enhancing their skills thus enabling them to obtain more job satisfaction to gain higher rewards and to progress within the organisation.
- Facilitate to manage change by increasing understanding of the reasons for change and providing people with the knowledge and skills they need to adjust to new situations.
- Offer higher levels of service to customers.
- Develop individual, team and corporate performance in terms of output, quality, speed and overall productivity.
- Help develop a positive culture in the organisation, one for example that is orientated towards performance improvement and also

- To increase the levels of service quality or professionalism the organisation presents to the public,
- To tailor the service type to the specific establishment,
- That there are multiple beneficiaries from the use of staff training – the establishment, but also stimulation for staff members.

CONCLUSION

Importance of training and development can be highlighted from the above proverb. Employee development is the process whereby people learn the skills, knowledge, attitudes and behaviors needed in order to perform their job effectively. With growing economy, organizations are reaping the benefits and growing with faster pace. The growth rate of an organisation is likely to be limited more by its people than by any other factor.

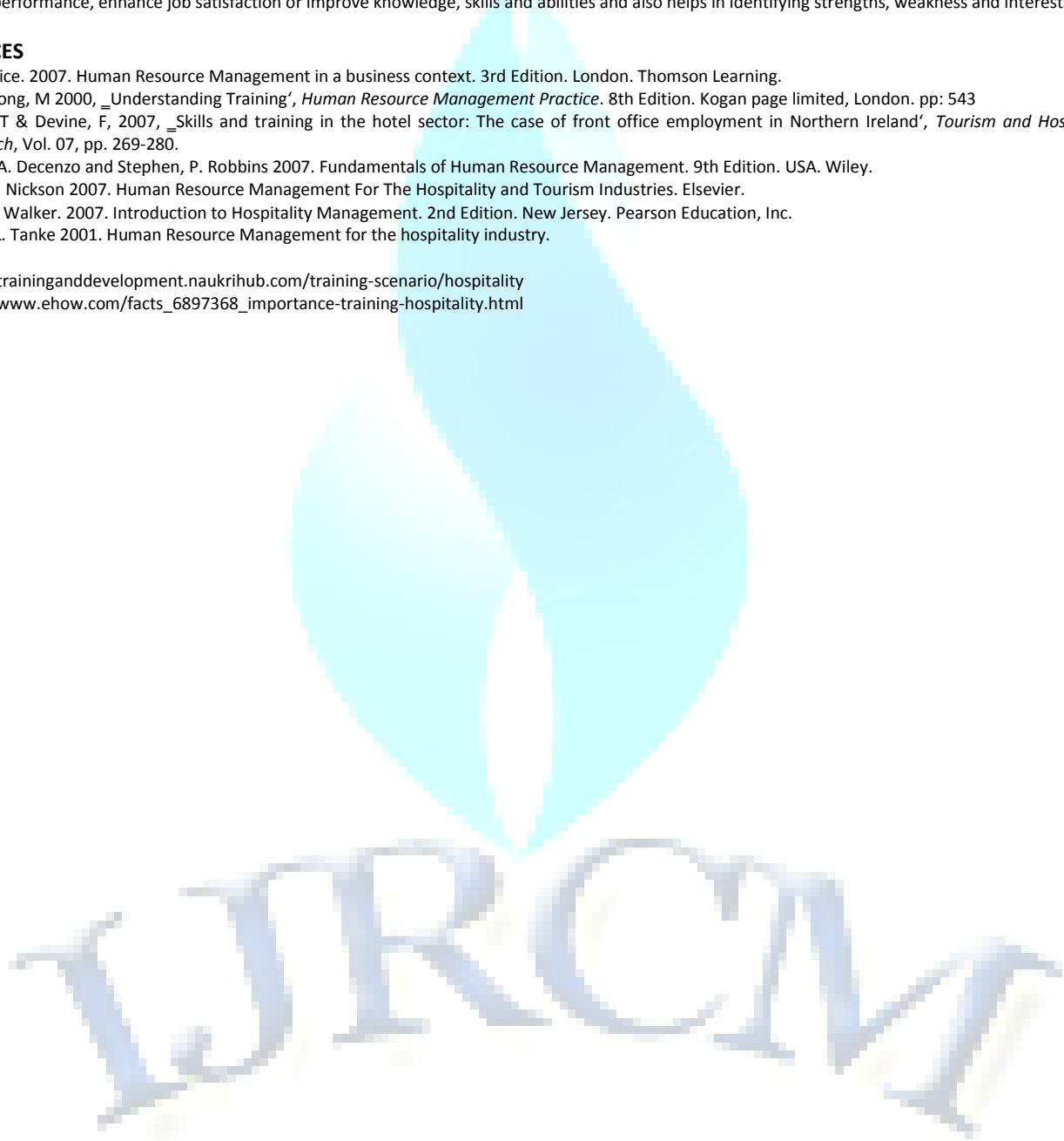
Staff training is an essential management tool, it has many benefits, such as shortens the study time, increases work effectiveness, helps employees and the company itself to compete in the fast changing environment, reduces damages and wastage. Staff training is a way of motivating employees, upgrading their skills, expanding their knowledge, preparing employees for self-development. Training is an important aspect of career development. It gives an employee motivation and a sense of belonging. Well trained employees would be happy to do their work very effectively and efficiently. Normally, in a good organization along with promotions an employee would be given training to learn the requisites of the newly promoted job requirement. These kinds of trainings are mainly devoted to develop managerial skills in a person and are generally called career development or career planning. The idea of these trainings are to increase managerial performance, enhance job satisfaction or improve knowledge, skills and abilities and also helps in identifying strengths, weakness and interests.

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A STUDY ON CUSTOMER SATISFACTION TOWARDS HEALTH DRINKS PRODUCTS (WITH SPECIAL REFERENCE TO COIMBATORE CITY)

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ABSTRACT

Health is man's precious possession. It influences all his activities and shapes his destiny. An understanding of health is the basis of all health care. Health is wealth. This indicates the importance of health. Health, intact is a key to education, success, good citizenship and happy life. Without good health and individual cannot perform efficiently. A healthy individual is like a pillar of a society. The health of an individual by keeping himself free from disease helps in stopping the spread of disease in one's own community and neighborhood or society. The study of consumer preferences on health drinks gains importance to know the buyer behavior of health drink users. The consumer is price determining factor or decisive force in the market. So the producer should understand what exactly is expected from him by the consumers who are highly sensitive and reactive. The above proposition implies that there is an imperative necessity on the part of the manufacturers to supply tastier drinks at competitive prices but at the same time should see that the quantity or standard is not deteriorated.

KEYWORDS

customer satisfaction, health drink products.

INTRODUCTION

Consumer is the king in modern marketing. Consumer behavior and attitude helps to determine technique and strategies by the marketers for attaining great competition advantage in the market. Consumer behavioral changes make "Yesterday's luxurious today's necessities". The modern and competitive world people must do heavy work both mentally and physically. So that they require energy and stamina for that they want nutritious and health drinks. Health is man's precious possession. It influences all his activities and shapes his destiny. An understanding of health is the basis of all health care. Health is wealth. This indicates the importance of health. Health, intact is a key to education, success, good citizenship and happy life. Without good health and individual cannot perform efficiently. A healthy individual is like a pillar of a society. The health of an individual by keeping himself free from disease helps in stopping the spread of disease in one's own community and neighborhood or society. The study of consumer preferences on health drinks gains importance to know the buyer behavior of health drink users.

IMPORTANCE OF THE STUDY

The study of consumer behavior becomes indispensable as the success or failure of products depends upon the consumer. The present study attempts to know the buyer behavior of health drink users. The investigation throws light on the preference of health drink users. An attempt has been made by the researcher to know the consumer preference, awareness regarding brand, price, quality, quantity, advertisement and satisfaction etc., the findings of the study will ultimately reveal why certain brands are preferred by various consumers.

SCOPE OF THE STUDY

In order to know the details about customers taste and preferences of health drinks in this study makes an attempt to analyze the various factors influencing consumer in purchase of nutritious or health drinks. That is, the knowledge ability of consumers about the various products attributes like price, quality, packages etc., and also to know the reasons for brand preferences.

OBJECTIVES OF THE STUDY

1. To find out the reason for preferring a particular brand of health drink.
2. To analyses the taste and preference of health drink users.
3. To discuss the reasons for brand preferences like company reputation price, quality, friends and doctors advice, availability etc., and to know the marketability of various brands.
4. To determine the satisfaction level of different brands.

RESEARCH METHODOLOGY

Research Design: It is purely and simply the frame work on plan for the study is that guides the collection and analysis of data. The research design used here is the exploratory research design. Exploratory research is most commonly unstructured, "informal" research that is undertaken to gain background information about the general nature of the research problem.

METHODOLOGY

SAMPLING FOR TECHNIQUES

It is the procedure or process of selecting a sample from the population. A sampling can also be his process of drawing a sample from a population and of compiling a suitable statistic from such a sample in order to estimate the parameter down from the parent population and to the significance of the statistic computed from such sample.

"This method for using research is survey method"

COLLECTION OF DATA

A well structured questionnaire was prepared for the purpose of collection of data. The questionnaire includes personal background information of the consumers, preferences of consumers towards the particular brand, consumption level, purchasing pattern, usage level, reasons for consumption, place of purchase made, media influence of the respondents, opinions about free gifts and satisfaction level, etc.,

SAMPLE SIZE

It refers to the number of items to be selected from the universe to constitute a sample; here the sample size is 100 respondents.

AREA OF THE STUDY

The area of the study refers to Coimbatore city.

TOOLS USED**SIMPLE PERCENTAGE**

The frequency distribution (Descriptive/ percentage analysis) of the variables were calculated with the help of simple percentage, by writing the $f_a = f/n \times 100$, f denotes the number of respondents, and n denotes the total number of sample population.

CROSS TABULATION AND CHI SQUARE

The cross tabulation procedures form the basis for two way and measure the association for two – way tables. In this it forms an association between the factors of demographics and the selected factors.

STATEMENT OF THE PROBLEM

Consumer preference varies from brand to brand on the basis of quality, price, and advertisement etc., Consumer preference also varies with their income, age, sex or other characteristics. There are seven brands are available in the market. Horlicks, Complain, Bourn vita, Maltova, Viva and. The study Covers all these brands of health drinks. This research work has been carried out to know why these health drinks are needed and what institutional values are Included, this study would bring to light which brand of health drink is mostly preferred by the consumers and why they choose a particular health drink.

REVIEW OF LITERATURE

1. According to GSK sources, Viva is based on the belief that a good start to the day ensures that rest of it goes well too. New Viva is Vita health, combination of nine essential vitamins (vitamin A, C, D, B1, B2, B6, B12, Niacin and Folic acid), Iron, Phosphorus and Calcium. Viva contains a natural goodness of milk, wheat and malted barley. Maltova, a chocolate health food drink, was acquired from Jagjit Industries in Feb 2000.
2. Soft Drink "Pouring Rights": Marketing Empty Calories to Children Healthy People 2010 objectives call for meals and snacks served in schools to contribute to overall diets that meet federal dietary guidelines. Sales in schools of foods and drinks high in calories and low in nutrients undermine this health objective, as well as participation in the more nutritious, federally sponsored, school lunch programs. Competitive foods also undermine nutrition information taught in the classroom. Lucrative contracts between school districts and soft drink companies for exclusive rights to sell one brand are the latest development in the increasing commercialization of school food. These contracts, intended to elicit brand loyalty among young children who have a lifetime of purchases ahead of them, are especially questionable because they place schools in the position of "pushing" soft drink consumption. "Pouring rights" contracts deserve attention from public health professionals concerned about the nutritional quality of children's diets.

FINDINGS

1. 45% of the respondents are female.
2. Majority of the health drink user belong to the age group of 21-30
3. Majority of the respondents has studied up to graduation.
4. The Analysis reveals that the majority of private employees are using health drinks i.e., 30%.
5. 54% of the respondents are married.
6. Mainly the family size of the respondents is between 4-6 members.
7. More than 31% of the respondents earn an income Rs.3000 -5000, only 9% of the respondents are earning income above Rs.11000
8. Average amount spent by a family on health is Rs. 100-175.
9. Of the several brand of health drink. 44% of the consumers prefer Horlicks.
10. Horlicks has secured First rank.
11. 58% of the consumers purchase the health drink once a month.
12. Average quantity purchased by the respondent is 1kg per month.
13. 45% of health drink users prefer refill pack, as it is cheaper.
14. 40% of the consumers purchase the health drinks from retailers and consumer rarely prefers to buy the health drinks from canteen.
15. Most of the consumers are taking health drink for the period of 2-4 years.
16. 67% of the respondents are taking health drink twice a day. In general the head of the family take, decision as to the choice of the brand 35%.
17. Health drinks are taken for good health. Quite a few take health drinks by Doctor's recommendation 12% and some take the health drinks for energy 9%.
18. Among several media, television influences the most of the consumers.
19. Gift offered by the manufacturer / sellers act as stimulation factor.
20. 26% of the respondents change their brand due to price increase.
21. 74% the respondents using their brand without any change.
22. Most of the people are satisfied with the usage of health drinks.
23. In case of Horlicks, out of 44 respondents 22 respondents have chosen this for the purpose of quality of satisfies.
24. 19%, respondents have expressed as "satisfied" due to "energy" for complain.
25. 44% of the Horlicks users are satisfied with their brand.
26. Complan users are satisfied at 19% level.
27. Consumer satisfaction for Bourn vita is 10%.
28. Maltova has secured 10% of the consumer satisfaction.
29. The respondents of Viva expressed 'satisfaction' at 17% level.

SUGGESTIONS

1. Brand awareness should be created in rural area to improve the sales.
2. Sensible advertisement should be made for better impression regarding health drink advertisement is powerful one.
3. Demand of some brands depends upon the price; if the price is reduced all the consumers will prefer that brand.
4. Improvement of quality should be seriously considered.
5. There should be regular supply of all brands of nutritious drinks.
6. When compared with bottle pack, the quality of refill pack is good. So the quality of product in the bottle pack also to is improved.
7. Companies should take actions if they receive any complaints and replace the damaged product with in a responsible time.

CONCLUSION

All People, whether young or old, like health drinks. They like health drinks for relaxation, refreshment and get energy. Thus health drinks have become part and parcel of their lives. As regards manufacturers, they should realize that consumer is the focal point of any business enterprise. They should be conscious of the fact the consumer is price determining factor or decisive force in the market. So the producer should understand what exactly is expected from him by the consumers who are highly sensitive and reactive. The above proposition implies that there is an imperative necessity on the part of the manufacturers to supply tastier drinks at competitive prices but at the same time should see that the quantity or standard is not deteriorated. Thus the consumer is the most important aspect in his business. He should deliver quality product at an acceptable price.

ANNEXURE

Variable		F	%	Variable		F	%
Gender	Male	55	55	Brand preference	Horlicks	44	44
	Female	45	45		Complain	19	19
Age group of the respondents	> 20 Yrs	10	10		Bournvita	10	10
	21-30 Yrs	57	57		Maltova	10	10
	31-40 Yrs	14	14		Viva	17	17
	41-50 Yrs	13	13		1/2 Kg.	11	11
	< 50 Yrs	6	6	Quantity used per month	1 Kg.	60	60
Education level	SSLC	5	5		1.5 Kg.	26	26
	HSC	9	9		2 Kg.	3	3
	Graduate	34	34		Once in month	24	24
	Post graduate	46	46		Twice in month	67	67
	others	6	6		More than Twice	9	9
Occupation	Govt. Employee	22	22	Consumption stage	Children	26	26
	Pvt. Employee	30	30		Adult	34	34
	Professional	23	23		Middle aged	19	19
	Business	11	11		All others	21	21
	others	10	10	Period of Consumption	1-2 Yrs	13	13
Family Size	8-4 members	36	36		2-4 Yrs	42	42
	4-6 members	50	50		4-6 Yrs	15	15
	6-10 members	9	9		6-8 Yrs	12	12
	10 & above	5	5		> 8 Yrs	18	18
Income Per month	> Rs.3000	6	6	Purchase Influence	Head	15	15
	Rs.3000-5000	10	10		Spouse	18	18
	Rs.5000-7000	28	28		Children	27	27
	Rs.7000-9000	23	23		Friends	26	26
	Rs.9000 - 11000	13	13		Relatives	14	14
Expenses per month	> Rs.11000	20	20	Reason for consumption	Refreshment	32	32
	Rs.75 - 100	50	50		Fashion	23	23
	Rs.175 - 250	44	44		Alternate drink for tea & coffee	29	29
	Rs. 251 above	6	6		Doctors recommendation	12	12
Consumption	Yes	100	100		Others	9	9
	No	0	0	Media Influence	Television	54	54
Opinion	Encouraging and Inductive	56	56		Newspaper	41	41
	Poor quality	44	44		Magazine	5	5

CHI-SQUARE

Variables	>3000	3001-5000	5001-7000	7001-9000	9001-11000	< 11000	Total
Below 20 Years	1(1)	2(1)	2(3)	3(3)	2(2)	2(2)	12
21-30Years	2(4)	4(6)	17(15)	14(13)	8(7)	11(11)	56
31-40 Years	2(1)	2(1)	3(4)	3(3)	1(2)	2(2)	13
41-50	1(1)	1(1)	3(3)	2(2)	1(1)	2(2)	10
Above 50Years	1(1)	1(1)	2(2)	1(2)	1(1)	2(2)	8
Total	7	10	27	23	13	19	100
Age to Income	Calculated Value : 7.21. Table value at 5% level 31.41. DOF :20						
SSLC	1(1)	2(1)	2(2)	3(3)	1(1)	1(2)	10
HSC	2(1)	3(1)	4(2)	1(3)	1(2)	2(4)	13
Graduate	1(1)	2(2)	5(2)	4(4)	2(1)	2(6)	16
Post graduate	2(3)	2(4)	2(5)	15(9)	3(3)	12(12)	36
Others	1(1)	1(2)	2(4)	3(7)	1(2)	17(9)	25
Total	7	10	15	26	8	34	100
Qualification to Income	Calculated Value : 45.01. Table value at 5% level 31.41. DOF :20						
Govt. Employee	2(2)	2(2)	6(6)	5(5)	3(3)	4(4)	22
Pvt. Employee	1(2)	3(3)	8(8)	7(6)	4(4)	5(5)	28
Professional	2(2)	2(2)	8(8)	6(6)	4(4)	5(5)	27
Business Man	1(1)	1(1)	4(4)	3(3)	2(2)	3(3)	14
House wife	1(1)	1(1)	3(2)	2(2)	1(1)	1(2)	9
Total	7	9	29	23	14	18	100
Occupation to Income	Calculated Value : 1.66. Table value at 5% level 31.41. DOF :20						

CHI – SQUARE

Variables	Horlicks	Complain	Bounvita	Malt ova	Viva	Total
Below 20 Years	5(5)	2(1)	1(1)	1(1)	1(2)	10
21-30Years	26(26)	11(10)	6(6)	5(5)	9(10)	57
31-40 Years	5(6)	2(3)	1(1)	2(2)	2(2)	12
41-50	5(5)	2(3)	1(1)	1(1)	3(1)	12
Above 50Years	4(3)	2(2)	1(1)	1(1)	1(1)	9
Total	45	19	10	10	16	100
Age to Brand Preference	Calculated Value : 1.02, Table Value at 5% level : 26.296, DOB : 16					
SSLC	2(2)	1(1)	1(1)	1(1)	1(1)	6
HSC	3(4)	2(2)	2(1)	1(1)	2(2)	10
Graduate	15(13)	8(8)	3(4)	3(4)	6(6)	35
Post graduate	16(16)	10(9)	4(5)	4(4)	8(8)	42
Others	2(3)	1(2)	2(1)	1(1)	1(1)	7
Total	38	22	12	10	18	100
Qualification to Brand	Calculated Value : 3.69, Table Value at 5% level : 26.296, DOB : 16					
Govt. Employee	7(7)	4(4)	2(2)	2(2)	3(2)	17
Pvt. Employee	11(12)	6(6)	2(1)	2(1)	4(6)	26
Professional	14(16)	7(6)	2(3)	2(3)	5(4)	32
Business Man	7(8)	4(4)	2(2)	2(2)	3(1)	17
House wife	4(1)	2(2)	1(1)	1(1)	1(3)	8
Total	44	22	9	9	16	100
Occupation to Brand	Calculated Value : 20.51, Table Value at 5% level : 26.296, DOB : 16					
Below 3000	3(3)	1(1)	1(1)	1(1)	1(1)	7
3001-5000	4(4)	2(2)	1(1)	1(1)	2(1)	9
5001-7000	14(14)	5(5)	3(3)	3(3)	5(5)	30
7001-9000	9(9)	4(4)	2(2)	2(2)	4(4)	21
9001-11000	6(6)	2(2)	1(1)	1(1)	2(3)	13
11000above	9(9)	3(3)	2(2)	2(2)	4(4)	20
Total	45	17	10	10	18	100
Income to Brand	Calculated Value : 1.33, Table Value at 5% level : 31.410, DOB : 20					

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DATA MINING PRACTICES: A STUDY PAPER

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ABSTRACT

In this paper, the thought of data mining was précised and its importance towards its methodologies was showed. The data mining based on Neural Network and Genetic Algorithm is researched in detail and the key technology and ways to achieve the data mining on Neural Network and Genetic Algorithm are also surveyed. This paper also conducts a formal review of the area of rule extraction from ANN and GA.

KEYWORDS

Data Mining, Neural Network, Rule Extraction. Genetic Algorithm.

I. INTRODUCTION

Data mining talk about extracting or mining the knowledge from large amount of data. The word data mining is properly named as 'Knowledge mining from data' or "Knowledge mining".

Data collection and storage technology has made it likely for organizations to store huge amounts of data at lesser cost. Taking advantage of this stored data, in order to extract useful and actionable information, is the overall goal of the generic activity termed as data mining.

Data mining comprises of computational process of bulky data sets patterns discovery. The aim of this innovative analysis process is to extract information from a data set and transform it into an reasonable structure for further use. The procedures used are at the occasion of artificial intelligence, machine learning, statistics, database systems and business intelligence. Data Mining is all about solving problems by exploring data at present in databases.

HOW DOES DATA MINING WORK?

Despite the fact information technology has been evolving separate transaction and analytical systems; data mining offers the link between the two. Data mining software investigates relationships and patterns in stored transaction data based on flexible user queries. Numerous analytical software are available: statistical, machine learning, and neural networks. Four types of relationships are hunted:

Classes: Stored data is used to detect data in predetermined groups. For example, a restaurant chain could mine customer purchase data to decide when customers visit and what they naturally order. This information could be used to increase traffic by devouring daily specials.

Clusters: Data items are clustered according to logical relationships or consumer preferences. For example, data can be mined to categorize market segments or consumer attractions.

Associations: Data can be mined to identify associations. The beer-diaper example is an example of associative mining.

Sequential patterns: Data is mined to forestall behaviour patterns and trends.

Data mining involves of five key elements:

- Extract, transform, and load transaction data onto the data warehouse system.
- Store and manage the data in a multidimensional database system.
- Provide data access to business analysts and information technology professionals.
- Analyse the data by application software.
- Present the data in a useful format, such as a graph or table.

Data mining functionalities are used to specify the kind of patterns to be found in data mining tasks. Data mining tasks can be classified in two categories- descriptive and predictive. Descriptive mining tasks characterize the general properties of the data in database. Predictive mining tasks perform inference on the current data in order to make predictions.

The purpose of a data mining effort is normally one or the other to create a descriptive model or a predictive model. A descriptive model presents, in concise form, the main characteristics of the data set. It is fundamentally a summary of the data points, making it possible to study key aspects of the data set. Typically, a descriptive model is found through undirected data mining; i.e. a bottom-up approach where the data "speaks for itself". Undirected data mining finds patterns in the data set but leaves the interpretation of the patterns to the data miner. The purpose of a **predictive model** is to allow the data miner to forecast an unfamiliar value of a specific variable; the target variable. If the target value is one of a predefined number of discrete labels, the data mining task is so-called classification. If the target variable is a real number, the task is regression.

The predictive model is thus formed from given known values of variables, possibly comprising previous values of the target variable. The training data consists of pairs of measurements, each consisting of an input vector $x(i)$ with a corresponding target value $y(i)$. The predictive model is an estimation of the function $y=f(x; q)$ able to predict a value y , given an input vector of measured values x and a set of estimated parameters q for the model f . The process of finding the best q values is the core of the data mining technique.

At the core of the data mining process is the use of a data mining technique. Some data mining techniques directly acquire the information by carrying out a descriptive partitioning of the data. However, data mining techniques utilize stored data in order to build predictive models. General point is that there is strong pact among both researchers and executives about the criteria that all data mining techniques must meet. Significantly, the techniques should have great performance. This criterion is, for predictive modeling, understood to mean that the technique should produce models that will generalize well, i.e. models having high accuracy when performing predictions based on data.

Classification and prediction are two forms of data analysis that can be used to extract models describing the important data classes or to predict the future data trends. Such analysis can help to provide us with a better understanding of the data at large. The classification predicts categorical (discrete, unordered) labels, prediction model, and continuous valued function.

II. PROCEDURES OF DATA MINING

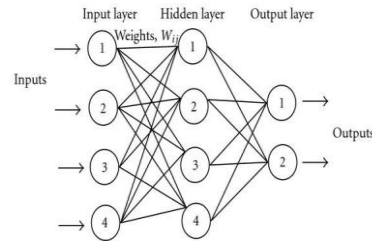
NEURAL NETWORK

An artificial neuron network (ANN) is a computational model constructed on the structure and functions of biological neural networks. Information that runs through the network disturbs the structure because a neural network changes in a sense based on that input and output. It is a nonlinear statistical data modelling tool wherever the complex relationships between inputs and outputs are modelled or patterns are established.

An ANN has numerous pluses but one of the most familiar is the fact that it can actually learn from witnessing data sets. In this way, ANN is used as a random function estimate tool. These types of tools help estimate the most cost-effective and ultimate methods for arriving at solutions while describing computing functions or distributions. It takes data samples rather than full data sets to arrive at solutions, which saves both time and money. ANNs are considered fairly simple mathematical models to increase existing data analysis technologies.

ANNs have three layers that are intersected. The first layer comprises of input neurons. Those neurons send data on to the second layer, which in turn sends the output neurons to the third layer.

FIG. 1: NEURAL NETWORK WITH HIDDEN LAYERS



DECISION TREES

Decision tree is a widely used data mining method. In decision theory, a decision tree is a graph of decisions and their possible consequences, represented in form of branches and nodes.

This data mining method is been used in various fields in business and science for many years and has given outstanding results. Decision trees offer a symbolic decision-making model with high level of interpretability.

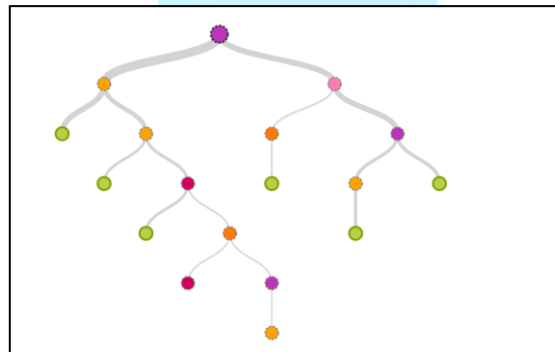
A decision tree is a special form of tree structure. The tree consists of nodes where a logical decision has to be made, and connecting branches that are chosen according to the result of this decision. The nodes and branches that are followed constitute a sequential path through a decision tree that reaches a final decision in the end. Decision trees are generated from the training data in a top-down direction. The root node of a decision tree is the tree's initial state - the first decision node. Each node in a tree contains some data.

On a basis of an algorithm some calculations are completed, and the decision tree node is been split into two or more branches. In some cases, the node cannot be split, in this case it will be the final decision node.

The process is repeated until obtaining a completely discriminating tree. At this very point the decision tree might have nodes that are too specific to noise, that might be present in the training data. This is called over-fitting. To avoid over-fitting, a decision tree is generalized, by eliminating sub-trees.

Once a decision tree solution is generated from the learning data, it can be used for predictive analysis or estimating the best decision.

FIG. 2: VIEW OF DECISION TREE



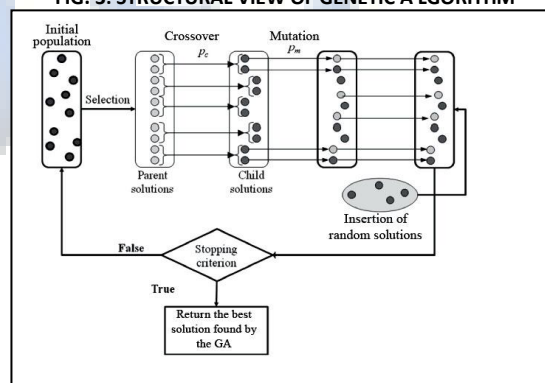
Decision trees can be viewed from the business perspective as creating a segmentation of the original data set. Thus marketing managers make use of segmentation of customers, products and sales region for predictive study. These predictive segments derived from the decision tree also come with a description of the characteristics that define the predictive segment. Because of their tree structure and skill to easily generate rules the method is a favoured technique for building understandable models.

GENETIC ALGORITHM

Genetic Algorithm challenge to incorporate ideas of natural evaluation. The common idea behind GAs is that we can shape a better solution if we one way or another combine the "good" parts of other solutions similar to the nature does by joining the DNA of living beings.

Genetic Algorithm is mainly used as a problem solving policy in order to provide with a optimal solution. They are the finest way to solve the problem for which little is branded. They will work well in any hunt space because they form a very universal algorithm. The only thing to be well-known is what the particular situation is where the solution performs very well, and a genetic algorithm will produce a high quality solution. Genetic algorithms use the principles of selection and evolution to yield numerous solutions to a specified problem.

FIG. 3: STRUCTURAL VIEW OF GENETIC ALGORITHM



RULE EXTRACTION

The taxonomy of Rule extraction comprises three main principles for evaluation of algorithms: the scope of use, the type of dependency on the black box and the format of the extract description. The first dimension concerns with the possibility of use of an algorithm either regression or classification. The second dimension emphasises on the extraction algorithm on the core black-box: independent versus dependent algorithms. The third criterion focuses on the attained

rules that might be advisable: predictive versus descriptive algorithms. Moreover this taxonomy the evaluation criteria appears in almost all of these surveys- Quality of the extracted rule; Scalability of the algorithm; uniformity of the algorithm.

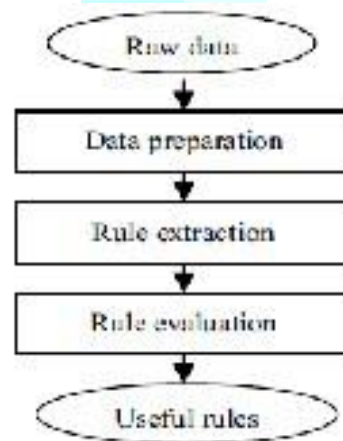
Generally a rule comprises two values. A left hand antecedent and a right hand consequent. An antecedent can have one or multiple conditions which must be true in order for the consequent to be true for a given precision whereas a consequent is just a single condition. Thus while mining a rule from a database antecedent, consequent, accuracy, and coverage are all targeted. Sometimes "interestingness" is also targeted used for ranking. The situation occurs when rules have high coverage and accuracy but deviate from standards. It is also essential to note that even though patterns are produced from rule induction system they all not necessarily mean that a left hand side should cause the right hand side part to come about. Once rules are created and interestingness is checked they can be used for predictions in business where each rule completes a prediction keeping a consequent as the target and the accuracy of the rule as the accuracy of the prediction which gives an opportunity for the overall system to improve and execute well.

For data mining domain, the non-existence of explanation facilities seems to be a serious problem as it produce opaque model, along with that accuracy is also required. To eradicate the deficiency of ANN and decision tree, we suggest rule extraction to produce a clear model along with accuracy. It is becoming increasingly outward that the absence of an explanation capability in ANN systems bounds the realizations of the packed potential of such systems, and it is this precise deficiency that the rule extraction process looks for to reduce. Experience from the field of expert systems has shown that an explanation capability is a vital function provided by symbolic AI systems. In particular, the ability to generate even limited

Explanation is totally crucial for user acceptance of such systems. Meanwhile the purpose of most data mining systems is to support decision making, the need for explanation abilities in these systems is apparent. But many systems must be regarded as black boxes; i.e. they are opaque to the user.

For the rules to be useful there are two pieces of information that must be supplied as well as the actual rule:

FIG. 4: PROCESS OF RULE EXTRACTION



- Accuracy - How often is the rule correct?
- Coverage - How often does the rule apply?

Only because the pattern in the database is expressed as rule, it does not mean that it is true always. So like data mining algorithms it is likewise important to identify and make clear the uncertainty in the rule. This is called accuracy. The exposure of the rule means how much of the database it "covers" or applies to.

III CONCLUSIONS

If the formation of computer algorithms being based on the evolutionary of the organism is amazing, the richness with which these methodologies are realistic in so many areas is no less than shocking. At present data mining is a new and important area of research and ANN itself is a very suitable for unravelling the problems of data mining because its features of good robustness, self-organizing adaptive, parallel processing, distributed storage and high grade of fault tolerance. The commercial, educational and scientific applications are gradually dependent on these methodologies.

Five criteria for rule extraction, and they are as follows:

- **Comprehensibility:** The extent to which extracted representations are humanly comprehensible.
- **Fidelity:** The extent to which extracted representations accurately model the networks from which they were extracted.
- **Accuracy:** The ability of extracted representations to make accurate predictions on previously unseen cases.
- **Scalability:** The ability of the method to scale to networks with large input spaces and large numbers of weighted connections.

Generality: The extent to which the method requires special training.

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ASSESSING THE ORTHOPEDICALLY HANDICAPPED CUSTOMERS' (OHC) ACCEPTANCE OF MOBILE BANKING ADOPTION THROUGH EXTENDED TECHNOLOGY ACCEPTANCE MODEL

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ABSTRACT

The globalisation of Indian economy has allowed the emergence of innovative technologies and process. The information communication and technological developments have significant contribution to the rapid growth of Indian banking industry. The electronic channel of banking is diffusing into the younger generation customers. The banking industry has witnessed quick transition as the market moved to plastic money, then moved to computer based banking and now mobile banking. These banking technologies have offered solutions for serving the huge population. Accessing the branch banking facilities or the ATM centres by orthopedically handicapped customers (OHCs) is a greatest challenge. Banks still are not able find comprehensive solution to the problem. Therefore assessing the electronic channel options for serving the OHCs has become critical. But no attempt has been made by researchers so far to assess the OHCs acceptance of Mobile banking channel in India. This paper is an effort to measure the orthopedically challenged customers' acceptance of mobile banking. Extended TAM (technology acceptance model) was used for assessing the new technology acceptance. Study covered 100 OHCs from Tiruvannamalai district, Tamilnadu (INDIA) using purposive snowball sampling. Survey was done using structured questionnaire with five point likert scale. The study highlighted OHCs positive attitude and intention to use mobile banking channel. Factors like perceived Ease of use and Perceived usefulness established significant relationship with the intention to use. The outcome of this paper is a worthy addition to the existing literature and also offers enormous scope for future research.

KEYWORDS

Banking technology, Mobile banking, new technology acceptance, orthopedically handicapped customers and Technology acceptance model.

INTRODUCTION

Information and communication technology has taken the centre stage in the current business scenario. India is one of the developing countries that are growing at a rapid pace. The globalisation of Indian economy has allowed the emergence of innovative technologies and process. The information communication and technological developments have significant contribution to the rapid growth of Indian banking industry. Information technology has helped the banking industry to meet the needs and wants of the diversified and large population base of India. The banking industry has witnessed quick transition as the market moved to plastic money, then moved to computer based banking and now mobile banking. The electronic channel of banking is diffusing into the younger generation customers. These banking technologies have offered solutions for serving the huge population. Mobile banking has proved to be very critical in including the non-banked segments of the Indian regions that cover both rural and urban segments. Apart from normal customers the banking strategies have focused on creating technological aid through the electronic channels to the disabled people who experience accessibility issues. The biggest advantage of the electronic channel of banking has been the convenience and ease of banking, as it allows the challenged people to bank from anywhere, anytime. Accessing the branch banking facilities or the ATM centres by orthopedically handicapped customers (OHCs) is a challenge. Banks still are not able find comprehensive solution that offers independent and fully accessible banking solutions. Adoption of mobile banking channel by the OHCs might offer a great relief as it helps them stay at home and bank. The problems of reaching the bank with physical limitation can be reduced to a greater extend by ensuring acceptance of mobile banking channel. Are the OHCs willing to accept this new technology and what is their attitude towards the mobile channel? Therefore assessing the electronic channel options for serving the OHCs has become critical. But no attempt has been made by researchers so far to assess the OHCs' acceptance of Mobile banking channel in India. This paper is an effort that will focus on evaluating the acceptance of Mobile banking channel by OHCs. It will also attempt to identify various critical factors and its relationship with the other variables using technology acceptance model (TAM). The study covers 100 orthopedically challenged customers with bank account and regular income through questionnaire. This paper will offer huge literature support to the inclusive banking for disabled customers. It will also create awareness level on the opportunities and option available for disabled people to access banking services.

REVIEW OF LITERATURE

a. MOBILE BANKING

Banking through mobile phone offers a life time solution in terms of time and mobility limitations. Mobile banking is considered to be a a solution to cover or include segments and people living in remote villages as well as people with disability. Lee and Chung (2009) defined Mobile banking as "banking transactions using mobile devices such as cell phones, PDAs (Personal Digital Assistants), smart phones and other devices (except for laptops)". Generally banking through mobile phone implementations have a banking application installed on users' SIM. Once signed up, an electronic account is formed which facilitates the customer to deposit and take cash or transfer money from their account to others account (Tobbin, 2010).

Mobile banking is also being understood as an extension of existing banking solutions to existing customers. The mobile phone is only used as another channel to an existing bank account (Porteous, 2006). Porteous (2006) distinguishes "additive" mobile banking models from the "transformational" models, and defines transformational mobile banking services as "those in which the financial product linked to the use of the phone is targeted at the unbanked, who are largely low income people". Porteous stressed that a service becomes transformational when it causes a shift in the access frontier. By additive, mobile banking complements services offered by the banking system, such as chequebooks, ATMs, voicemail/landline interfaces, smart cards, point-of-sale networks, and Internet resources. The mobile platform offers a convenient additional method for managing money without handling cash (Donner and Tellez, 2008). On the other hand, the transformational models lead to the creation of new accounts to non-banking customers. The distinction is particularly important for the industry, researchers and for policymakers in assessing the usage and impact of the mobile banking phenomenon (Donner, 2007).

Milne (2006) highlights the need for a good relationship between the mobile operator and the bank for a successful provision of banking solutions to the unreached segments.

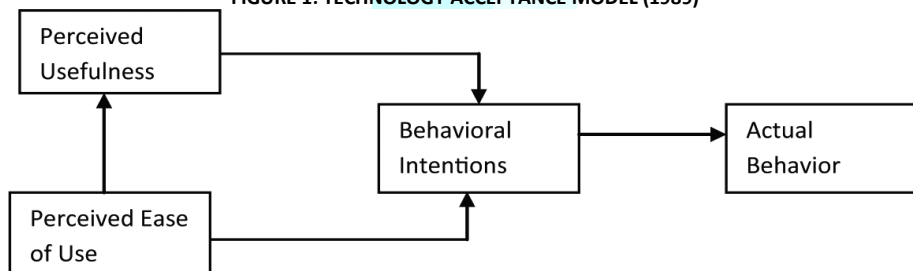
b. MOBILE BANKING ADOPTION

The adoption and use of mobile banking has the potential to extend the limited nature and reach of the formal financial sector to the poor and rural population in Africa. However, although mobile banking for the unbanked has been deployed in at least 44 countries so far, there is currently scant literature on its adoption and use (Donner and Tellez, 2008). Morawczynski's (2011) study provided significant insight into the adoption, use and impact of M-PESA in Kenya. However, there is still a shortage of research that properly conceptualizes why the unbanked and the poor adopt mobile banking. Furthermore, Donner and Tellez (2008) criticized the lack of scholarly research on adoption and impact of mobile banking in the developing world and called for studies that consider the social, economic and cultural environments within which such systems operate (Donner and Tellez, 2008). This is contrary to the extensive use of models and frameworks to examine the consumer acceptance of additive mobile banking applications (Chung and Kwon, 2009; Gu et al., 2009; Luarm and Lin, 2005; Yu and Fang, 2009). Technology acceptance models have been the most common model for creating frameworks to assess the adoption of transformational mobile banking services. The theoretical background of this study is thus drawn from the Technology Acceptance Model (Davis, 1989).

c. TECHNOLOGY ACCEPTANCE MODEL (TAM)

TAM is the most commonly used framework for conducting research on adoption of new technology. The literatures highlight show that the TAM is most suitable for assessing the mobile banking adoptions. The TAM is established on the premises that the constructs, perceived usefulness and perceived ease of use are fundamental determinants of system adoption and use (Davis, 1989) (Figure 1). These two beliefs create a favourable disposition or intention towards use and consequently affect its use. Perceived Usefulness (PU) is said to be the degree to which person thinks that using a particular system will enhance his or her performance. Also, Perceived Ease of Use (PEOU) is "the degree to which a person believes that using a particular system will be free of effort" (Davis, 1989). A number of measures have been used for the PU and PEOU constructs (Davis, 1989; Legris et al., 2003; Venkatesh et al., 2002).

Recent studies have used the 'TAM' variables to assess the adoption of electronic and mobile related systems, such as mobile payments, mobile banking, m-commerce (Kim et al., 2010).

FIGURE 1: TECHNOLOGY ACCEPTANCE MODEL (1989)

Lu et al. (2005, p. 207) state that: "throughout the years, TAM has received extensive empirical support through validations, applications and replications for its power to predict use of information systems". Also, Legris et al. (2003, p. 202) conclude that, "TAM has proven to be a useful theoretical model in helping to understand and explain user behavior in information system implementation". Furthermore, Bagozzi (2007) suggested that better contributions to the TAM which finds the antecedents of the PU and the PEOU constructs are needed to further explain the effect of these beliefs on behavioural intentions.

STATEMENT OF THE PROBLEM/ IMPORTANCE OF THE STUDY

Accessing the branch banking facilities or the ATM centres by orthopedically handicapped customers (OHCs) is a big challenge due to physical limitation. Banks still are not able find comprehensive solution that offers independent and fully accessible banking solutions, which makes it critical to study the possibilities and opportunities available through electronic mode of banking channel for the disabled customers. But no attempt has been made by researchers so far to assess the OHCs' adoption of new technology in India. Therefore this paper attempts to evaluate the mobile banking adoption by orthopedically challenged customers' and the relationship between the critical factors influencing the acceptance.

The findings of this research will be a worthy addition to the existing knowledge of inclusive banking for disabled customers in India apart from creating awareness among the OHCs on the opportunities available through electronic channel for consuming the banking services and features.

OBJECTIVES OF THE STUDY

The paper aims to assess the OHCs acceptance of Mobile phone as a channel for banking. Following are the objectives of the research.

- To assess the relationship between variables and their dynamics on adoption of mobile banking channel
- To determine the demographic differences on the OHCs intention to use mobile banking

HYPOTHESES

Following hypothesis were framed to establish the research objectives

- H1: Self Efficacy has significant impact on the OHCs' perceived ease of using mobile banking channel
- H2: Anxiety towards using mobile banking impacts on the perceived ease of using mobile banking
- H3: Cost of using mobile banking channel has influence on the perceived usefulness
- H4: Compatibility of mobile banking channel has significant influence on the perceived usefulness of the mobile banking channel
- H5: perceived ease of using mobile phone impacts on the perceived usefulness of mobile banking channel
- H6: perceived ease of use and perceived usefulness impacts on the attitude towards mobile banking channel
- H7: perceived risk impacts of the OHCs' intention-to-use mobile banking
- H8: OHCs' attitude towards mobile banking channel has significant impact on the intention to use mobile banking
- H9: There is a significant difference in the demographic characteristics (Age, Occupation and Education) of OHCs on their intention to use mobile banking channel

RESEARCH METHODOLOGY

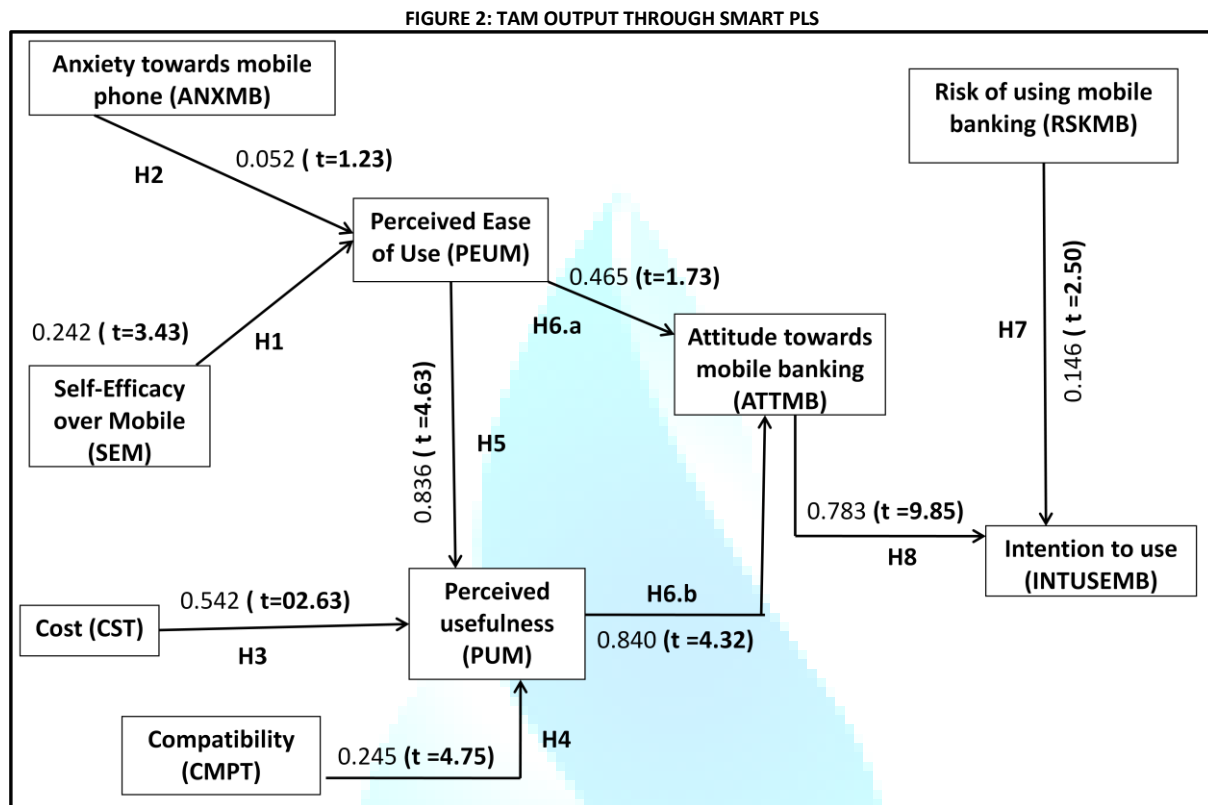
It is an empirical research covering 100 orthopedically handicapped customers of savings bank account with regular income. The data collection was done through survey using structured questionnaire comprising close ended questions. The constructs were presented in the questionnaire with five point 'likert scale' where five interprets positive and one interprets negative response. The OHCs who cannot walk without support of Wheelchair, crutches, canes, and walkers with regular income holding bank account are the inclusive criteria. Snowball or referral sampling procedure was adopted. TAM was used for identifying relationship between variables for mobile banking adoption. The TAM variables were tested using smart PLS software application for validating structural equation model.

DISCUSSION OF FINDINGS

The major findings of the research after analysing the data are presented below for discussion and further conclusion.

Objective 1

The constructs and variables to be extended with TAM for evaluation of OHCs acceptance of mobile banking channel was identified through literature review. The extended TAM model was processed through smart PLS (Partial least Square) and following model is the output that explain beta co-efficient and t-value.



* Acceptable limit for testing the significance of relationship in smart PLS: t value >1.96

Figure 2 is the output of the smart PLS testing the extended TAM model that explains the significance of the variables as well as the interrelationship between the variables. The below mentioned are the hypothesised outcome of the model.

The H1 is significant and H2 is not significant: Out of two variables (Anxiety & SEM) connected to the perceived Ease of using mobile (PEUM) banking channel, the Anxiety is insignificant to the perceived ease of using mobile phones as t value is 1.23 which lesser than acceptable limit of 1.96. Self-efficacy over mobile phones (SEM) has significant impact on the PEUM, which proves that SEM is the only factor that relates to PEUM.

The analysis highlighted that both H3 and H4 are significant as their t values are above the acceptable limit. Therefore it reveals that both Cost (CST) of Mobile banking channel as well as compatibility (CMPT) of the mobile banking channel will determine the perceived usefulness (PUM). The H5 test was positive as the model revealed that PEUM (t=4.63) also impacts the PUM along with CST (t=2.63) and CMPT (t=4.75). It is observed from the result that PEUM establishes the strongest relationship and higher significance to PUM when compared to CST and CMPT as the PEUM has a coefficient is 0.836 while CST (beta coefficient=0.542) and CMPT (beta coefficient=0.245) has lesser coefficient.

Hypothesis H6a is negative as the results show that PEUM is insignificant to the attitude towards mobile banking (ATTMB) with the t value 1.73 which is lower than acceptable limit of 1.96. at the same time PUM has proved to have significant impact on the attitude towards mobile banking. Therefore PUM is the only factor that influences the OHCs' attitude towards the mobile banking channel.

Finally, both OHCs' perceived risk (H7) and attitude towards mobile banking channel (H8) are significant factors those determine the OHCs' intention-to-use mobile banking channel (INTUSEMB). The t value of both attitude (9.85) and perceived risk (2.50) are higher than 1.96. Between the two significant variables, PUMB has the higher significant as it reveals higher beta coefficient when compared to perceived risk. Therefore PEUMB establishes stronger relationship with intention to use rather than perceived risk.

TABLE 1: SHOWING THE R2 VALUES EXPLAINING THE STRENGTH OF RELATIONSHIP BETWEEN VARIABLES

Determinants or predictors	Dependent factor	R2 (% of explanation)
Self efficacy (SEM)	Perceived ease of using Mobile banking channel (PEUM)	0.63 (63%)
PEUM	Perceived usefulness of Mobile banking channel (PUM)	0.93 (93%)
Cost of Mobile banking channel (CST)		
Compatibility of the Mobile banking channel (CMPT)		
PUM	Attitude towards Mobile banking (ATTMB)	0.46 (46%)
Perceived risk	Intention-to-use Mobile banking channel (INTUSEMB)	0.876 (87%)
ATTMB		

The table above shows the factors explaining different variables. From table1 it is inferred that self efficacy SEM explains 63% of PEUM. Cost, Compatibility and PEUM explain 93% of the relationship with PUM. PUM explains 46% of significance to OHCs' attitude towards PUM. Perceived risk and ATTMB together explains 87% of relationship with the OHCs' intention to use mobile banking channel.

Objective 2

In order to understand the differences or divide in the demographic profiles on the OHCs' intention to use mobile banking channel ANOVA was used. The hypothesised (H9) outcome highlighted that there is a significant difference in the age group of the OHCs' on the intention to use mobile banking channel (INTUSEMB).

Similarly the difference exists in their Occupation on the INTUSEMB. The calculations also highlighted that there no significant difference in their marital status, gender and education on their intention-to-use mobile banking channel.

CONCLUSION

The paper was set up for assessing the orthopedically handicapped customers' acceptance of mobile banking channel by extending the constructs and variables of technology acceptance model. The output revealed factors establishing interrelationship between and within factor. It also highlighted the existence of demographic divide (Age, Occupation) on the OHCs' intention to use mobile banking channel. It also revealed the non-existence of differences in the marital status, gender and education on the INTUSEMB. The outcome of this paper is an important contribution to the existing literatures on inclusive banking for the disabled customers in India. This information of this paper will also help the bankers in aligning or promoting mobile banking channel apart from understanding these needs of the special customers. The information sourced through this research will provide input into banking service design and process that will include special segment while also aiding policy decisions.

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A FINANCIAL ANALYSIS OF INDIAN AND FOREIGN STEEL INDUSTRIES: A COMPARISON

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ABSTRACT

Financial statement analysis is often divided into two sub-parts i.e. "Profitability Analysis" and "Risk Analysis". This is a natural division since much of our thinking about any firm's performance is influenced by our study of the relationship between risk and return in finance. This paper represents an empirical study which examines the profitability from different perspectives of Steel industries in world with a data of 10 years from 2003 to 2013 and 04 major Steel companies have been considered as sample units. For this analytical study, the researcher has used Ratio Techniques for analysis and to test hypothesis Single Factor ANOVA (F-test) has been applied. The study reveals Arcelor Mittal remained an outperforming player over the last decade in the Steel industry with leading in the profitability from the different perspectives.

KEYWORDS

steel industry, financial analysis.

INTRODUCTION

The industry directly employs more than two million people worldwide, with a further two million contractors and four million people in supporting industries. Considering steel's position as the key product supplier to industries such as automotive, construction, transport, power and machine goods, and using a multiplier of 25:1, the steel industry is at the source of employment for more than 50 million people. World crude steel production has increased from 851 megatonnes (Mt) in 2001 to 1,606 Mt for the year 2013. (It was 28.3 Mt in 1900). World average steel use per capita has steadily increased from 150kg in 2001 to 225 kg in 2013.

India, Brazil, South Korea and Turkey have all entered the top ten steel producers list in the past 40 years. By sector, global steel recovery rates for recycling are estimated at 85% for construction, 85% for automotive, 90% for machinery and 50% for electrical and domestic appliances. This leads to a global weighted average of more than 83%. The amount of energy required to produce a tonne of steel has been reduced by 50% in the past 30 years. 97% of steel by-products can be reused.

Steel is crucial to the development of any modern economy and is considered to be the backbone of the human civilisation. The level of per capita consumption of steel is treated as one of the important indicators of socio-economic development and living standard of the people in any country. It is a product of a large and technologically complex industry having strong forward and backward linkages in terms of material flow and income generation. All major industrial economies are characterised by the existence of a strong steel industry and the growth of many of these economies has been largely shaped by the strength of their steel industries in their initial stages of development

LITERATURE REVIEW

A study by Amarjit Gill 1, Nahum Biger 2, Neil Mathur 3 (2010), under the title "The Relationship Between Working Capital Management And Profitability: Evidence from the United States", the aim of this paper is to find the relationship between working capital management and profitability.

N. Venkanaramana and K. Ramakrishnaiah (2012), under their study titled with "Profitability and Financial Performance – A Case study on selected Cement companies in India" analyzed that the profitability of the selected companies have a favourable trends towards in terms of Return on Equity Ratio, Return on Capital Employed.

OBJECTIVE OF THE STUDY

This study attempts to analyze the profitability of the Selected Steel companies in terms of Gross profit ratio, Operating margin ratio, Net profit ratio, Earnings Before Interest (EBIT) and Earnings per Share (EPS).

HYPOTHESIS OF THE STUDY

1. Gross profit ratio is uniform in the sample units.
2. Operating margin ratio is uniform in the sample units.
3. Net profit ratio is uniform in the sample units.
4. Earnings Before Tax is uniform in the sample units.
5. Earnings per Share (EPS) ratio is uniform in the sample units.

TOOLS AND TECHNIQUES

For the purpose of analysis the researcher has used 'Ratio Technique' and to test hypothesis 'Single Factor ANOVA (F-test) has been applied which is one of the statistical techniques that helps in analyzing the consistency, stability and overall trends in different profitability measurements of the selected companies.

EMPIRICAL ANALYSIS

1. **Gross Profit Ratio** This ratio indicates the efficiency of trading activities. The relationship of Gross profit to sales is known as gross profit ratio. This ratio demonstrates how well the business is efficiently producing the products. It shows how well the products are priced given the direct wages and variable costs it takes to create them. The better the ratio is, the higher the profit potential will be.

$$\text{Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} * 100$$

HYPOTHESIS

H₁: There is significant difference in the gross profit ratio of the selected companies.

TABLE 1

Gross Profit Ratio (%) (figures in US \$)						
Year	Arcelor Mittal	Posco	Nippon Steel	Tata Steel	Mean	S.D
2004	33.8	27.6	16.5	0	19.5	12.8
2005	23.6	28.6	20.5	0	18.2	10.9
2006	17.8	23	21.6	0	15.6	9.2
2007	19.3	21.2	20.8	0	15.3	8.9
2008	15.1	22	18.1	0	13.8	8.3
2009	3.4	15.8	13.9	0	8.3	6.7
2010	8.9	15	9.5	0	8.4	5.4
2011	9.0	13.2	11.8	53.4	21.9	18.3
2012	0.1	11.7	10.1	40	15.5	14.8
2013	5.3	11.1	9.3	56.1	20.4	20.7
Mean	13.6	18.9	15.2	15.0	15.7	2.0
S.D	9.8	6.1	4.7	23.2	4.4	7.3

Table 1 represents the gross profit ratios of the selected steel companies. It can be seen that the companies average on an aggregate basis remained 15.7% as against which Posco showed the highest average gross profit ratio of 18.9% followed by Nippon Steel (15.2%), Tata Steel (15.0%), Arcelor Mittal (13.6%). . The company with higher GP ratio reflects the efficiency in production whereas the company with lower GP ratios compared to industry average will find it difficult to recover its operating expenses and to build up reserves after paying all fixed interest charges and dividends.

TABLE 2: ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	16782.71	3	5594.238	0.799978	0.502057	2.866266
Within Groups	251747.7	36	6992.991			
Total	268530.4	39				

Table 2 shows the calculation of single factor ANOVA wherein, F-calculated (0.79) is lesser than F-critical (2.87) leading to the conclusion that the gross profit ratios of the selected companies differ significantly.

2. OPERATING MARGIN RATIO

Operating margin ratio provides a lot of important information to its business owners regarding cost control. It shows how much case is thrown off after most of the expenses are met. A high operating margin means that a company has good cost control and that sales are increasing faster than costs, which is an optimal situation for the company.

$$\frac{\text{profit before interest and Tax}}{\text{Net Sales}} * 100$$

Ratio =

HYPOTHESIS

H₁: The operating margin ratio is not uniform during the study period of the selected companies

TABLE 3

Operating Margin Ratio (%)						
Year	Arcelor Mittal	Posco	Nippon Steel	Tata Steel	Mean	S.D
2004	27.7	22.2	7.7	0	14.4	11.1
2005	16.9	23.1	12.7	0	13.2	8.5
2006	12.7	17	14.8	0	11.1	6.6
2007	14.1	15.6	13.5	0	10.8	6.3
2008	9.8	17.2	11.3	0	9.6	6.2
2009	-2.6	10.5	7.2	0	3.8	5.3
2010	4.6	9.5	0.9	0	3.8	3.7
2011	5.2	7.9	4	9.8	6.7	2.3
2012	-3.2	5.2	1.9	5.8	2.4	3.6
2013	1.5	4.2	0.5	2.4	2.2	1.4
Mean	8.7	13.2	7.5	1.8	7.8	4.1
S.D	9.1	6.4	5.2	3.2	4.4	2.1

From Table 3 it can be observed that the industry average of 10.6%, Posco reported an aggregated average of 13.2% followed by Arcelor Mittal (8.7%) and Nippon Steel with 7.5%. Tata Steel (1.8%). Operating profit margin shows how efficiently the managers of a company using business operation to generate the profits. The reason why Arcelor Mittal and Nippon Steel stood last can be visible from the table where Arcelor Mittal incurred operating loss in the year 2009 and 2012. All these caused Arcelor Mittal on an aggregate basis to earn lower operating margin wherein case of Nippon Steel the operating margin has been continuously declining from the year 2008 till 2013 and in the year 2013 it had become 0.5 showing poor efficiency of the management.

TABLE 4: ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	664.726	3	221.5753	4.972547	0.005465	2.866266
Within Groups	1604.15	36	44.55972			
Total	2268.876	39				

Table 4 indicates the calculations of single factor ANOVA wherein, F-calculated (1.68) is lesser than F-critical (2.86) drawing to the conclusion that the operating margin ratio is not uniform during the study period of the selected companies

3. NET PROFIT RATIO

Net profit ratio is used to measure the overall profitability and it indicates the firm's capacity to face adverse economic conditions like – increased market competition, economic downturn and a sudden decrease in market demand for the business products. The higher the ratio is, the more effective the company is in converting revenue into actual profits.

$$\text{Ratio} = \frac{\text{Profit After Tax}}{\text{Net Sales}} * 100$$

HYPOTHESIS

H₁: That there is a significant difference in the Net Profit Ratio for the different companies.

TABLE 5

Net Profit Ratio (%)						
Year	Arcelor Mittal	Posco	Nippon Steel	Tata Steel	Mean	S.D
2004	21.8	0	1.42	0	5.8	9.3
2005	12.0	0	6.51	22.52	10.2	8.3
2006	8.9	0	8.8	18.45	9.0	6.5
2007	9.9	1.37	8.16	16.57	9.0	5.4
2008	7.5	-5.07	7.35	9.39	4.8	5.8
2009	0.2	-2.74	3.25	3.27	1.0	2.5
2010	3.7	0.65	-0.33	-2.01	0.5	2.1
2011	2.4	-2.58	2.27	7.4	2.4	3.5
2012	-4.6	-5.56	1.43	4.06	-1.2	4.0
2013	-3.2	-0.63	-2.84	-5.24	-3.0	1.6
Mean	5.9	-1.5	3.6	7.4	3.9	3.4
S.D	7.5	2.3	3.7	8.8	4.4	2.6

The overall profitability based on sales i.e. Net Profit ratios of the selected companies are visible in Table 5. The industry average on an aggregate basis remained 3.9% which shows not sound profitability of the industry as a whole. However, as compared to the previously calculated gross profitability and operating profitability here the results are somewhat different. Tata Steel which showed lower operating profitability here stood the first with an aggregate average Net Profitability of 7.4% followed by Arcelor Mittal of (5.9%), Nippon (3.6%), The lowest average Net Profitability in case of Posco (-1.5%) is because of incurring huge losses but it showed high in the operating profitability. In the year 2008 (-5.07%), (-2.58%) in the year 2011, (-5.56%) in the year 2012 and (-0.63%) in the year 2013 which indicates that Posco will find it difficult to survive in tough times since the company does not have much cushioning against adverse conditions.

TABLE 6: ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	451.4198	3	150.4733	3.565334	0.023429	2.866266
Within Groups	1519.363	36	42.20453			
Total	1970.783	39				

The calculations of One-way F-test (ANOVA) are shown in the Table 6. Here, the F –calculated (7.1) is greater than F-critical (4.38) indicating that there is a significant difference of Net Profitability in the sample units.

4. EARNINGS BEFORE TAX (EBT): NEED DEFINITION

EBIT = Revenue – Expenses

TABLE 7

Earnings Before Tax (%)						
Year	Arcelor Mittal	Posco	Nippon Steel	Tata Steel	Mean	S.D
2004	27.6	0	2.52	0	7.5	11.6
2005	16.7	0	10.9	34.02	15.4	12.3
2006	12.2	0	14.48	27.24	13.5	9.7
2007	14.2	2.29	14.44	25.04	14.0	8.1
2008	9.2	-6.15	12.54	12.45	7.0	7.7
2009	-6.8	-3.71	5.89	4.58	0.0	5.4
2010	2.4	1.04	0.32	0.03	0.9	0.9
2011	2.9	-3.05	4.51	9.97	3.6	4.6
2012	-6.9	-6.41	2.93	6.46	-1.0	5.8
2013	-3.0	-0.97	-3.12	-3.07	-2.5	0.9
Mean	6.9	-1.7	6.5	11.7	5.8	4.8
S.D	10.6	2.8	5.9	12.2	6.3	3.7

It is an indicator of a company's financial performance. A measure of a company's ability to produce income on its operations in a given year.

TABLE 8: ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	923.2511	3	307.7504	3.643263	0.021561	2.866266
Within Groups	3040.959	36	84.47108			
Total	3964.21	39				

Table 8 shows the calculations of ANOVA wherein F-calculated (3.64) is greater than F- critical (2.86) indicating that the EBIT of the selected companies is not uniform during the study period.

5. EARNINGS PER SHARE

EPS represents the earnings available to equity shareholders per share. EPS remains industry standard in determining the corporate profitability for shareholders. EPS ratio calculated for a no. of years indicates whether or not the earning power of the company has increased or not.

$$\text{Ratio} = \frac{\text{profit after Tax} - \text{preference share dividends}}{\text{Total number equity shares}} * 100$$

TABLE 9

Earnings Per Share \$						
Year	Arcelor Mittal	Posco	Nippon Steel	Tata Steel	Mean	S.D
2004	27.6	0	2.52	0	7.5	11.6
2005	16.7	0	10.9	1.1	7.2	7.0
2006	12.2	0	14.48	1.15	7.0	6.5
2007	14.2	2.29	14.44	1.25	8.0	6.3
2008	9.2	-6.15	12.54	2.78	4.6	7.1
2009	-6.8	-3.71	5.89	1.01	-0.9	4.8
2010	2.4	1.04	0.32	-0.43	0.8	1.0
2011	2.9	-3.05	4.51	1.58	1.5	2.8
2012	-6.9	-6.41	2.93	0.91	-2.4	4.3
2013	-3.0	-0.97	-3.12	0.06	-1.8	1.3
Mean	6.9	-1.7	6.5	0.9	3.2	3.7
S.D	10.6	2.8	5.9	0.9	3.9	3.7

If it is about analyzing profitability from different viewpoints, the profitability analysis is said to be incomplete if we do not consider the profitability from the viewpoint of shareholders. Table 9 depicts the earnings per share (EPS) of the selected companies over the last decade. The industry average on an aggregate basis is \$3.2 as against which Arcelor Mittal scored the highest average EPS of \$6.9 followed by Nippon Steel (\$6.5), Tata Steel (\$0.9) and Posco incurred heavy loss in the share. EPS remains the industry standard in determining the corporate profitability. The highest EPS was of \$27.6 achieved by Arcelor Mittal in the year 2004 and the next highest EPS was of \$16.7 again by Arcelor Mittal achieved in the year 2005 as against this, the lowest or even negative EPS of \$6.41 was registered by Posco during the year 2012.

TABLE 10: ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	20293.4	3	6764.468	8.921182	0.000149	2.866266
Within Groups	27296.93	36	758.2479			
Total	47590.33	39				

Table 10 shows the calculations of ANOVA wherein F-calculated (8.90) is greater than F- critical (2.86) indicating that the EPS of the selected companies is not uniform during the study period.

FINDINGS OF THE STUDY

Arcelor Mittal showed its greatest ability and consistency to control its manufacturing costs and also in managing the margins it makes on the products it purchases or sells. Operating profitability shows the success rate of the managers. Posco and Arcelor Mittal with the highest operating margins showed that their sales were increasing faster than the costs showing a highly liquid position of both the companies.

Tata Steel showed the highest Net Profitability indicating the efficiency of the company to control its costs and the same can be seen in case of Arcelor Mittal whereas Posco registered the lowest average Net Profitability indicating its poor efficiency in managing the costs.

Ceteris paribus i.e. other things being equal, the only way to grow individual shareholders claim to profit and to generate return on investment – is to increase EPS. This can be visible in case of all the selected companies however the two extremes are Arcelor Mittal and Nippon Steel with the highest average EPS, Tata Steel having EPS value with \$0.9 and Posco with the lowest average EPS.

CONCLUSION

Ratio Analysis is helpful for any shareholder, investor, creditor, banker or any other party who is concerned with the financial performance of the company. Single factor ANOVA technique helps in analyzing the significance of empirical study by comparing different ratios over a period of time which provides a good sense to the management of the company as well as to the relevant shareholders. The results of this empirical study reveal that Arcelor Mittal remained an outperformer of the steel industries of world whereas Nippon Steel remained consistent and next best after the Arcelor Mittal. Tata Steel and Posco did well during the study period.

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TRENDS OF FDI IN INDIA

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ABSTRACT

The paper presented deals with the trend of FDI India. FDI is important for a developing country like, India. FDI improves the foreign exchange position, helps in capital formation and so on. Cumulative amount of FDI (from April 2000 to July 2012) into India stood at US\$ 176.76 billion. Retailing is the interface between the producer and the individual consumer, buying for personal consumption. It is the last link that connects the consumer with the manufacturing and distribution chains. India has the highest retail density in the world with 15 million outlets. It is a known fact that retail is related aam bania but when multi brand is being discussed it is not only the aam bania in the picture. It totally becomes a new scenario.

KEYWORDS

FDI, Multi brand retail, EMES.

INTRODUCTION

FDI in layman's term is an investment to acquire long term interest in enterprises operating outside of the economy of the investor. It can be also looked as a source of external finance which means that countries with limited amounts of capital can receive finance beyond national borders from wealthier countries. Retail sector is a strong pillar for the Indian economy as it contributes around 13% of GDP and provides employment to 7% of the workforce.

India's ruling congress party had one of the most shocking political victory on 5th December, 2012, when lower house of parliament voted (254 votes) in favour of allowing foreign supermarket chains in India. The heated debate for approval of India allowed a total foreign participation in aviation retail up to 49%, broadcast sector up to 74%, multi brand retail up to 51% and single brand retail up to 100%. However, the choice of allowing FDI in multi brand retail up to 51% has been left on the choice of states by making necessary reforms in the Foreign Exchange Management Act.

The benefits of opening the economy for FDI cannot be overlooked. The benefits cannot be overlooked. The economy of China is one of the examples which has benefitted from the FDI. Some of the benefits are:

- (a) Improves foreign exchange position of the country;
- (b) Employment generation and increase in production;
- (c) Helps in transfer of new technologies, management skills, intellectual property;
- (d) Helps in capital formation by bringing fresh capital;
- (e) Increases competition within the local market and this brings higher efficiencies
- (f) Helps in increasing exports;
- (g) Increase tax revenues.

In multi brand a single retailer comes with the number of new brands in the market to capture the market, example of such companies are tesco, big bazaar Walmart and so on. These big companies have huge fund available at their ease. They have lobbying capacity. They have the capacity to invest in other economies.

The world is looking towards India as an attractive avenue for investment as India is the 3rd largest economy of the world in terms of purchasing power parity theory. India has technical expertise and skilled managers and a growing middle class market of more than 300 million and this represents an attractive market. Looking at the benefits of FDI and the financial position of the country the government has been trying hard to do away with the limitations of FDI. The opposition and the public at large has been opposing FDI remembering the British East India Company, thinking of the MNCs taking over the domestic industries and their dominance over the market. Through several rounds of negotiation and parliamentary meetings the government has been successful in permitting the FDI in many sectors of the economy.

OBJECTIVES OF THE STUDY

1. to examine the trends of FDI in India
2. to study the investment environment.

METHODOLOGY

Paper is based on secondary data. The analysis has been done by studying the related material since post liberalisation.

REVIEW OF LITERATURE

Rajlakshmi K. And Ramchandran F., (2011), "Impact of FDI in India's automobile sector with reference to passenger cars. The author has studied the foreign investment flows through the automobile sector with reference to passenger cars. The research methodology used for analysis includes the use of AIRMA, coefficient, linear and compound model. The period of study is from 1991 to 2011. This paper is an empirical study of FDI flows after post liberalisation period. The author has also identified the problems faced by India in FDI growth of automobile sector through suggestions of policy implications. The author has also examined the trend and composition of FDI flow and effect of FDI on economic growth.

MacDougall (Dougall, 1966) had done good work on foreign investment. Some of them had also raised important issues; like adverse impact of foreign capital on the levels of domestic savings was first raised by Trygve Haavelmo (Haavelmo, 1963)

According to the study by Anil Kumar (Anil Kumar Vol. 2, No. 1, January 2007) that emerging economies undertake some capital formation on their own, but in this era of globalization, they increasingly rely on foreign capital.

One of the earliest studies on the relationship between FDI and growth is that of Papanek (Papanek, 1973). Among country – specific studies, the work of Gustav Rains and Chi Shive on Taiwan (Rains and Shive, 1985) is very exhaustive. In 1970 Robert Aliber raised many theoretical issues like whether FDI is a currency area phenomenon (Aliber, 1970).

Dr. S N Babar and Dr. B V Khandare, (2012), "Structure of FDI in India during globalisation period". The study is mainly focused on changing structure and direction of India's FDI during globalisation period. The study is done through analysis of benefits of FDI for economic growth. The study has been done through sectoral analysis of FDI participation, as well as through study of country wise flow of foreign inflow in India till 2010.

To the literature on FDI, the greatest contribution was made by Charles, P Kindleberger-Hymer approach.

The study of the literature related to the topic has helped a lot getting a precise picture of FDI as medium of finance for emerging economies.

STUDY

Indian government has opened the economy through a series of steps with liberalization process brought through Industrial Policy of 1991. In 1995 through the WTO's general agreement on trade and services, wholesale and retail services were opened for FDI. In 2006 investment upto 51% in single brand retail outlet was permitted. 100% FDI was allowed in single brand retail. Until 2011, Indian central government denied (FDI) in multi-brand retail, forbidding foreign groups from any ownership in convenience stores or any retail outlets. Even single-brand retail was limited to 51% ownership and a bureaucratic process. In September 2013 Government approved the allowance of 51% foreign investment in multi-brand retail.

A study of India's policy towards FDI in comparison to emerging market economies (EMEs) brings out the fact that India's approach towards FDI has been conservative but it started getting its momentum with liberalization policy. As part of the economic liberalization process set in place by the Industrial Policy of 1991, the Indian government has opened the retail sector to FDI slowly through a series of steps:

1995 : World Trade Organisation's (WTO) General Agreement on Trade in Services, which includes both wholesale and retailing services, came into effect

1997 : FDI in cash and carry (wholesale) with 100% rights allowed under the government approval route;

2006 : FDI in cash and carry (wholesale) was brought under automatic approval route; Upto 51% investment in single brand retail outlet permitted, subject to Press Note 3 (2006 series)

2011 : 100% FDI in Single Brand Retail allowed'

2012 : On Sept. 13, Government approved the allowance of 51 percent foreign investment in multi-brand retail, [It also relaxed FDI norms for civil aviation and broadcasting sectors]

TABLE 1

S. No	Financial Year (April – March)	Amount of FDI Inflows		%age growth over previous year (in terms of US \$)
		In Rs, crores	In US\$ million	
1	2000-01	10733	2463	-
2	2001-02	18654	4065	(+) 65 %
3	2002-03	12871	2705	(-) 33 %
4	2003-04	10064	2188	(-) 19 %
5	2004-05	14653	3219	(+) 47 %
6	2005-06	24584	5540	(+) 72 %
7	2006-07	56390	12492	(+) 125 %
8	2007-08	98642	24575	(+) 97 %
9	2008-09 '**	142829	31396	(+) 28 %
10	2009-10 #	123120	25834	(-) 18 %
11	2010-11 #	88520	19427	(-) 25 %
12	2011-12 # (April - January 2012)	122307	26192	-
CUMULATIVE TOTAL (from April 2000 to January 2012)		723367	160096	-

Source: RBI's Bulletin May 2012 dt. 10.05.2012 (Table No. 44 – FOREIGN INVESTMENT INFLOWS).

FDI has grown in size nearly 5 fold during first decade of the present millennium then also it has lagged behind in comparison to other countries. It is clear from this table.

TABLE 2: COUNTRIES WITH HIGHER ESTIMATED LEVEL OF FDI INFLOWS THAN INDIA IN 2010

	Amount (US\$ billion)				Variation (Percent)		
	2007	2008	2009	2010 (Estimates)	2008	2009	2010 (Estimates)
World	2100.0	1770.9	1114.2	1122.0	-15.7	-37.1	10.7
Developed Economies	1444.1	1018.3	565.9	526.6	-29.5	-44.4	-6.9
United States	266.0	324.6	129.9	186.1	22.0	-60.0	43.3
France	96.2	62.3	59.6	57.4	-35.2	-4.3	-3.7
Belgium	118.4	110.0	33.8	50.5	-7.1	-69.3	49.4
United Kingdom	186.4	91.5	45.7	46.2	-50.9	-50.1	1.1
Germany	76.5	24.4	35.6	34.4	-68.1	45.9	-3.4
Developing Economies	564.9	630.0	478.3	524.8	11.5	-24.1	19.7
China	83.5	108.3	95.0	101.0	29.7	-12.3	6.3
Hong Kong	54.3	59.6	48.4	62.6	9.8	-18.8	29.3
Russian Federation	55.1	75.5	38.7	39.7	37.0	-48.7	2.6
Singapore	35.8	10.9	16.8	37.4	-69.6	54.1	122.6
Saudi Arabia	22.8	38.2	35.5	-	67.5	-7.1	-
Brazil	34.6	45.1	25.9	30.2	30.3	-42.6	16.6
India	25.0	40.4	34.6	23.7	61.6	-14.4	-31.5

Source: World Investment Report, 2010 and Global Investment Trends Monitor, UNCTAD.

India is the 3rd largest economy of the world in terms of purchasing power parity and thus looks attractive to the world for FDI. India has technical expertise and skilled managers and a growing middle class market of more than 300 million and this represents an attractive market. Government of India, has been trying hard to do away with the FDI caps for majority of the sectors, but there are still critical areas like retailing and insurance where there is lot of opposition from local Indians / Indian companies.

Some of the major economic sectors where India can attract investment are as follows:-

Telecommunications
Apparels
Information Technology
Pharmacy
Auto parts
Jewellery
Chemicals

In last few years, certainly foreign investments have shown upward trends but the strict FDI policies have put hurdles in the growth in this sector. India is however set to become one of the major recipients of FDI in the Asia-Pacific region because of the economic reforms for increasing foreign investment and the deregulation of this important sector.

FDI has received criticism from the opposition and local businessmen on the basis of these grounds.

- Domestic companies fear that they may lose their ownership to overseas company
 - Small enterprises fear that they may not be able to compete with world class large companies and may ultimately be edged out of business;
 - Large giants of the world try to monopolise and take over the highly profitable sectors;
 - Such foreign companies invest more in machinery and intellectual property than in wages of the local people;
 - Government has less control over the functioning of such companies as they usually work as wholly owned subsidiary of an overseas company
- Improved macroeconomic conditions, particularly in India, which boosted corporate profits coupled with better stock market valuations and rising business confidence augured well for global FDI prospects. According to UNCTAD, these favourable developments may help translate MNC's record level of cash holdings into new investments. The share of developing countries, which now constitutes over 50 per cent in total FDI inflows, may increase further on the back of strong growth prospects. However, currency volatility, sovereign debt problems and potential protectionist policies may pose some risks to this positive outlook.

FDI is prohibited under the Government Route as well as the Automatic Route in the following sectors:

- Atomic Energy
- Lottery Business
- Gambling and Betting
- Business of Chit Fund
- Nidhi Company
- Agricultural (excluding Floriculture, Horticulture, Development of seeds, Animal Husbandry, Pisciculture and cultivation of vegetables, mushrooms, etc. under controlled conditions and services related to agro and allied sectors) and Plantations activities (other than Tea Plantations)
- Housing and Real Estate business (except development of townships, construction of residential/commercial premises, roads or bridges to the extent specified in notification)
- Trading in Transferable Development Rights (TDRs).
- Manufacture of cigars, cheroots, cigarillos and cigarettes, of tobacco or of tobacco substitutes.

CONCLUSION

The study of the trends of FDI inflow in India reveal that inflow of capital from other countries have been sluggish despite relatively better economic performance ahead of global recovery in comparison to EMEs. This has raised questions especially in the backdrop of the widening of current account deficit beyond the sustainable level of about 3%.

It has been found in the study undertaken by a panel of 10 major EMEs that FDI is significantly influenced by openness, growth prospects, macroeconomic sustainability, labour cost and policy environment.

In comparison to the kind of work force present in India, the jobs will be lost by many unskilled labourers. Technical job avenues will be created. Millions of additional jobs will be created during the building of and maintenance of retail stores, roads, cold storage centres, software industry, electronic cash registers and other retail supporting organizations. Government keeping this in consideration the present and the potential workforce should be trained so that the country does not suffers from employment. Our population should at large be able to take the advantage of openness of economy.

Walmart, Carefour, TESCO, Metro, Coop are some of over 350 global retail companies. These retail companies have operated for 30 years in numerous countries. The unorganized retail market is as large as 95%. They are deep rooted in our economy. They don't survive because of the scale but for their location. They always have their place in the map. We should not fear FDI and should not look at it like SEZ.

FDI if allowed in agriculture also it help them. A farmer the retailer, processor, etc., directly and not through intermediaries, which alone will help bring down prices by 25%. So it is observed that it will help in curbing the inflation in food items.

Foreign retailers are catalysts of new technology and price reduction. India too will benefit by connecting with the world, rather than by keeping itself aloof in the name of safety.

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CURRENT e-CRM PRACTICES IN INDIAN PRIVATE SECTOR BANKS AND THE NEED FOR STRATEGIC APPROACH

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ABSTRACT

With the increasing number of private sector banks creating many alternatives for customers to invest in, it has become imperative for banks to keep their customers satisfied. Most importantly it is important to retain the profitable customers because there is a general notion that retaining an existing customer is less costly than acquiring a new one. e-CRM is currently being debated as one of the new advancements in marketing which can address this problem. It is being seen as a tool to acquire and retain customers using the one of the efficient channels known as web. In this paper we will try to provide an insight into current e-CRM practices in leading private sector banks in India and the issues related with it based on secondary data obtained from different reliable sources and some suggestive measures have been discussed for successful implementation of the e-CRM programmes. This paper is informative and the data used is secondary data collected from different reliable resources.

KEYWORDS

e-CRM practices, Indian private sector banks, strategic approach.

1. INTRODUCTION

Earlier marketers especially in the industrial area used tools and techniques of mass marketing to attract and acquire the customers. But in recent times of robust competition and newly emerging techniques based on rather efficient information, this has become highly ineffective. The highly intensive competition and technological developments have forced companies to find measures for reducing costs in order to gain the competitive advantage. Studies have shown that while manufacturing costs declined from 55% to 30% and management costs declined from 25% to 15%, the marketing costs have increased from 20% to 55% (Sheth, 1998).

In recent times it has been seen that companies are devising ways to retain their existing profitable customers. On average, businesses spend six times more to acquire customers than they do to keep them (Gruen, 1997). All these considerations have lead companies to develop and maintain the relationships efficiently through Customer Relationship Management (CRM). CRM can be viewed as a practical implementation of Relationship Marketing theory, with emphasis on one-to-one marketing techniques enabled through technology (Buttle, 2004; F. D. Davis, 1989; Doherty & Lockett, 2007; Gambeson, 2004; Ryals & Knox, 2001). Recent robust developments in technology, increasing accessibility of users to web, and the emphasis on one-to-one marketing techniques, customer relationship management (CRM) is being viewed as new important strategy in marketing (Palmatier, Gopalakrishna, & Houston, 2006; Payne & Frow, 2005). With different views by academicians, Customer Relationship Management can be classified into four groups (as strategy, technology, process and information system) (Thompson and Moscardini, 2002).

1.1 STRATEGIC VIEW

CRM as a strategy means that a company decides to create relationships with customers that have not existed already. The company classifies these customers based on their potential and current values for the company and divides them into sections. Then, the company defines a strategy to determine when and how the investment of various sources in each customer, based on where the customer is a strategic sector (Rigby et al., 2002).

1.2 TECHNOLOGY VIEW

CRM technology Communicate between the duties of directors of an organization (sales, marketing, and customer service) and the factors behind the organization (finance, operations, logistics, and human resources) and customer contact points. CRM integrates information from different systems in a unified view of customer.

1.3 PROCESS VIEW

According to this view, CRM is a process of learning about customers and to do all those things that keep them satisfied that even perhaps be this satisfaction beyond customers expectations (Nickels 2008). This view, CRM consider as a set of business processes (Zablah et al, 2004). CRM as a process includes all activities of company with purpose of creating a beneficial communications with the customer (Swift, 2001).

1.4 INFORMATION SYSTEMS VIEW

According to this View, CRM refers to management of efficient communication with the customers by a company with the help of software technology and internet (Chen and Popovich, 2003).

Here we will try to focus and provide some insight into the Information systems view of Customer Relationship Management which has given rise to e-CRM (Electronic Customer Relationship Management).

Electronic Customer Relationship Management integrates technologies of new electronic channels such as web wireless and voice technologies and combines them with E-business application into the overall enterprise customer Relationship Management strategy (Shan and Lee). Employees that interact with customers at the various touch points (e.g. contact centre, sales presentation, service delivery); can help in obtaining the important customer information required for CRM strategies. It is argued that e-CRM can help to retain the valuable customers by enhancing the analytical capability of the companies to capture, organize and distribute the data obtained through web.

2. OBJECTIVES OF THE STUDY

1. To review the literature on the concept and use of e-CRM in general.
2. To highlight the use of e-CRM practices in Indian Banking sector with reference to ICICI and HDFC bank with relevant issues and the need for strategic approach.

3. LITERATURE REVIEW

The Customer Relationship Management is still in its pioneering stage. Customer relationship management in electronic commerce (e-CRM) is one of the fastest growing management techniques adopted by online enterprises (Reichleld and Scheffer, 2000). As suggested by Gilbert, 2003 CRM has emerged due to the change in marketing environment. The link of the CRM with the technology makes it's more interesting to explore. That is the reason that research on CRM has increased in recent years (Kamakura et al., 2005; Ngai, 2005). Technological developments enable businesses to implement CRM systems that can create practical mass customization marketing programs, based on one-to-one marketing techniques. It is suggested by academics that the link between marketing and technology can help to build and maintain long term, mutually beneficial interactions with large numbers of customers with relatively lower costs (Peppers, Rogers, & Dorf, 1999; Reinartz & Kumar, 2000). Within the framework of CRM, a number of channels exist for interacting with customers. One of these channels is "electronic", commonly known as "e-commerce" or "e-business". Companies should be able to integrate the online channels with the traditional customer touch-points via e-CRM. It is the combination of hardware and software to capture and analyze the data (Dyche, 2001).

Through e-CRM companies try to identify and understand customer's demographic pattern of purchasing and other relevant information in order to create new business opportunities giving importance to customers. However it is important for an organisation to define its business objective and assess its current position with respect to its marketing environment before implementing the e-CRM. An organisation must also align its existing strategy with the new possibilities.

The most widely tool of e-CRM in banking is the eBanking. According to Heikki et al. (2002), the transformation from the traditional banking towards e-banking has been a 'leap' change. The evolution of electronic banking started from the use of automatic teller machines (ATM) and has passed through telephone banking, direct bill payment, electronic fund transfer and the revolutionary online banking (Alter, 2002).

3.1 EVOLUTION OF e-CRM

Age	Year	Lessons Learned	Milestones
Introduction	1980s to early 1990	Very expensive to maintain	Focusing on automating and standardizing the internal processes to make the customers an asset
Growth	Mid-1990 to end 1990	Some vendors are slow to respond to the Internet	Due to the emergence of the Web, client/server architecture behind CRM applications would disappear
Paradigm Shift	2000	Adoption of ICT technologies	e-CRM
Ubiquitous	After 2000	Services Across Platforms	mCRM, Self-Service CRM etc.

4. CURRENT STATUS OF e-CRM IN INDIAN BANKS

Internet in recent times has emerged as one of the potent way to ease the access to banks. With the innovative technologies provided by telecom providers, banks have made it possible for customers to pay bills at home with the use of internet. These include MTNL, BSES, and AIRTEL etc.

Understanding the importance of internet as a medium to reach the customers, Indian private sector banks like ICICI Bank, HDFC Bank, Global Trust Bank and UTI Bank, have taken the lead in e-banking. Foreign banks operating in India like Citibank Federal Bank, HSBC Bank, Deutsche Bank and ABN Amro Bank, RBS are also in the same practice.

Recently it has been seen that even the Indian public sector banks like SBI have begun the internet enabled services for their customers.

With the introduction of the utility bill to payment through Internet it has revolutionised the bill payment in India. ICICI is being seen as the pioneer in this practice in India. It has over 1 million internet users of which more than 25 percent are of NRIs. The bank is looking to get competitive advantage by the use of technology to deliver customised and better services to its customers.

It is also being seen as leader in B2B business solution by creating a sophisticated common platform for multichannel transaction. With a new banking service called 'Infinity' can intimate about the loss of an ATM card over the net when using Infinity. Corporate sector can issue letter of credit and make inquiries regarding bills sent for collection via this service. It also provides facility for nicknaming all accounts to avoid remarking lengthy accounts number.

UTI in connection Cosmat Max is looking to create a communication network for its customers. The network is said to help in ATM servicing and internal management information system with the 50 VSAT terminals at strategic locations.

Call centre Automation, Data warehousing, Email Management, Field Service Automation, Marketing Automation and by using CRM technology, HDFC is looking to make the customers aware and expand its customer base. As far as HDFC Bank is concerned, it has also set a new trend with its e-shopping experience secure online and real time with the launch of its payment gateway. This allows any Visa/Master credit card holder anywhere in the world to make payments for global services over the Internet. The bank is also looking to offer secure business to customer e-com. Transactions to its customers to facilitate their business transactions. The first secure, on-line and real-time e-com. credit card transaction in the country was done on the Easy.2 shoppe.com shopping mall, enabled by HDFC bank on a Visa card, heralding the launch of the payment gateway. With the direct debit offered by HDFC bank the customers can make payment directly into the merchants account from their account with secure password.

For achieving the goal of enhancing the service quality, HDFC bank adopted a tailor made CRM initiative called the CRMnext in 2008. This programme called for a single 360 degree customer view by integrating data warehousing with other core banking applications. It has lead to growth of 113% in customer base to over 25 million from 2008 to November 2012.

Studies show that assets business of HDFC bank has grown by 100% over 2008 levels. Furthermore the leads generated have increased from 1,50,000 per month in March 2008 to 3,50,000 per month in Nov. 2012. 8-9 million personalized offers per month are generated through CRMnext. The lead conversion has also increased to 32 during this period. Quality of documentation has improved from 60% FTR (First Time Right) to 97% FTR. The bank's loyalty index rose from 38 in 2007 to 62 in 2010 (benchmarked at 54 for the industry). The number of customer complaints reduced from 36 per 10k customers in 2007-2008 to 5 per 10k customers in Nov. 2012. The service quality rating of the bank improved from 65% in 2007-2008 to 97% in 2011-2012.

All these achievements have made HDFC to receive the IBA Banking Technology Award in 2010 for steps undertaken to strengthen relationships with its customers in the areas of retail and corporate banking. Model Bank Award in Nov 2012 is another result of the CRMnext initiative by HDFC bank for delivering excellent customer service experiences across channels like branch, phone banking, call centres etc.

Figure no. 1 depicts the most common Core Banking Solution software that is used by the banks. It serves as an integral part of e-CRM programme in most of the private as well as public sector banks.

5. RECENTLY USED e-CRM TOOLS BY BANKS IN INDIA

Banks leveraging technology can develop innovative customer solutions to attain growth with profitability within the framework of sound risk-management practices. Techno-savvy banks are tapping into online services to initiate a new era in relationship management to create one to one relationships as well as one to many relationships to enhance their competitive advantage. Recent developments in critical areas of IT, have changed the way banks are managing their customer relationships. The following are some of the latest e-CRM techniques used by banks in offering new products and services to its customers.

5.1 INTERNET BANKING

Internet banking is the magical tool that has revolutionized the banking through the widely used medium of internet. Internet banking is a powerful tool of direct marketing and cross selling at reduced costs. It gives customer the benefit to perform banking activities like fund transfer, merchant bill payments etc without visiting the branch, hence saving the time and effort. The private sector banks like ICICI Bank, HDFC Bank, UTI Bank and the Global Trust Bank initiated the Net Banking as a part of their banking. The most commonly operations done through Net Banking are:

- Payment of Utility Bills-electricity, phone etc.
- Online Railway ticket booking

- Inter Bank funds transfer Third party transfers
- Credit Card bill payments
- Linked mobile alerts

5.2 DATA WAREHOUSING AND DATA MINING

As is the case with every corporate organisation, banks have always made strategies to retain the profitable and loyal customers. Data warehousing is a technique where relevant and important information about the customers is captured. This pertinent information is then systematically analysed to customize the offerings according to customer profile, income, needs etc.

5.3 ATMS

ATM (Automated Teller Machine) is yet another convenience created out of the e-CRM initiatives by the private sector banks. Initially the ATM operations were confined to withdrawing the requisite amount of money from a particular location. But now banks are enhancing the usability of the ATMs from intra bank transfers to mobile recharge payments and much more. With the usage of ATMs getting popular, this practice has triggered good competition among the banks operating in India. This has led to increased number of ATMs being installed recently.

5.4 TELEBANKING OR MOBILE BANKING

With mobile banking, customers have an instant access to queries related to the transactions of their accounts. It usually keeps the customers aware of the balances of their accounts and hence often reduces the amount of confirmatory actions that are being asked after a transaction has happened. So it can help build trust and satisfaction from the customer perspective. The mobile banking facility in the private sector banks like ICICI and HDFC is generally seen two ways:

- Alert facility: ICICI bank mobile banking alerts facility keeps us informed about the significant transactions in your accounts. It keeps us updated wherever we go.
- Request facility: ICICI bank mobile banking requests facility enables us to query for our account balance.

5.5 E-MAIL

E-mail serves as an effective and cheapest way of communication that's being used by banks these days. By emails, banks can disseminate a lot of important information to their customers with one click. It helps to reach to the larger customer and future customer base with relatively lower cost.

5.6 INSTA BANKING

Leading private sector banks like ICICI Bank offers a service called as "Insta Banking" which enables customer to conduct banking transactions anytime from anywhere. This service can be availed anywhere-Anytime banking service through 24-hour channels like ATM, Internet Banking, Instant Voice Response (IVR) Banking and Mobile Banking, and from 8 a.m. to 8 p.m. From balance enquiry to checking cheque status to ordering a new cheque book, you can communicate with ICICI Bank from the comfort of your home or in the middle of a busy day at the office.

5.7 CALL CENTRES

The call centre also provides an opportunity to shift the qualitative nature of the relationship between bank and customer to a new level. Much of the extra leverage with customers that the call centre brings are tactical.

6. SOME CHALLENGES AND ISSUES RELATED TO IMPLEMENTATION OF e-CRM IN INDIAN PRIVATE SECTOR BANKS

6.1 CRM: TECHNOLOGY ISSUES

The following are the impediments to e-CRM implementation in context of technology:

- **Technology misunderstood:** Technology as a tool should not be only confined to recording and dissemination of information. Systematic and need related analysis of information is vital to make it useful for further usage.
- **Lack of Integration:** Information in current technological environment is obtained via multiple channels at a point of time. Currently with many companies and banks it's a challenge to integrate these different channels into a coherent system.
- **Empowerment to frontline staff:** The frontline staff of banks lacks the motivation and training to analyse and forward the customer data and profiles so that the prospects could be changed into customers.

6.2 DATA ISSUES

- **Fragmented Data:** Systematically collecting and organising this huge data and to assimilate it into a central repository system is a challenging task.
- **Lack of skill and initiative to manage and utilise data:** Employees expected to organise and systematically manage data may not do it efficiently because of the lack of understanding of the strategic perspective of this activity. They also lack the necessary infrastructure and skill to complete this task.

6.3 PEOPLE ISSUES

- Lack of motivation for utilising the potential of e- CRM solution
- Inadequate performance management parameters
- Less or insufficient decision making authority : In order to use CRM concept towards customer centricity ,sufficient decision making power is required to provide customised, responsive and proactive services
- Training: Staff lacks training in IT, its applications, the complete use of software and its applications as well as marketing skills, analytical skills, uses of customer information and service skills for implementation CRM.

6.4 PROCESS ISSUES

Like CRM, e-CRM should be viewed as an integrated process:

- **Change in Culture:** The e-CRM implementation requires an organisation to keep the strategy in central scheme of things related to vision, mission and other goals of company.
- **Acceptance of change:** CRM success also depends on how the different systems and traditional practices reasonably accept the required changes which are aimed at better servicing.

7. STRATEGIC FRAMEWORK TO ADDRESS THE IMPLEMENTATION ISSUES

A global survey conducted by the IBM Institute for Business Value and part of IBM Business Consulting Services three part series 'Doing CRM Right', claims that only 15 percent of CRM projects are fully successful, but that the success rate can be improved to as high as 80 percent, through proper business methodology and prioritisation. For making the e-CRM investments more successful and achieving the profitable results, banks need to adapt the right strategy and integrate the e-CRM initiatives into the core business philosophy. Corporate strategy should be changed to customer-centered instead of product-centered.

7.1 RECOGNISING CRM AS A STRATEGIC INITIATIVE

The e-CRM should be inculcated in the long term strategy of the banks. This is possible if the banks are following the customer centric philosophy. The implementation should be done which will fit the long term goals of becoming a customer centered organisation.

If the relative role of technology in maintaining the e-CRM is adequately communicated, the employees are going to buy the idea of implementation rather appropriately. Every department in addition to IT department must be integrated to the central scheme of e-CRM implementation to make it successful.

7.2 TOP MANAGEMENT SUPPORT

For proper deployment of e-CRM, the top management should be supportive and active in the initiation of process. A study of best practices adopted by organisations successful in implementation of CRM indicates that senior managers of these firms create a vision for how CRM will change their organisations. The vision of the bank must correlate with the e-CRM implementation. For example, at a major Canadian Bank, initially the vision was associated with the

development of customer information systems. With time the vision became more focused on the delivery of differentiated value propositions through products to customers.

7.3 REALIGNMENT OF ORGANISATIONAL STRUCTURE AND PRACTICES

The structure of the banks should be realigned apart from installing the above discussed e-CRM tools. The present structures in most banks are product and process centric. Having installed technology set up for e-CRM, relevant changes in structure making it compatible to adoption and use of technology enabled CRM is the need of the hour.

7.4 CHANGE IN CULTURE

Each employee can contribute in value addition to customer irrespective of his task and role in process sequence. Each employee in an organisation must be customer centric to improve the customer satisfaction. Hence the culture and perceptions of employees towards keeping the customer satisfied should change accordingly.

7.5 COMMUNICATION AND COORDINATION

To make the e-CRM technology investments successful coordination of human efforts and customer communications to software enabled CRM updates, alerts and templates is essential. This can be achieved by Multichannel Integration Process. To achieve the e-CRM objectives, information regarding transactions and enquiries across channels like internet, mobile, call center, branch, POS terminal, ATM, etc need to be tracked and processed in order get better insights into customers preferred products, channel preference, usage frequency, needs and wants. This, unified customer view will also enable informed decision making preventing attrition, bad loans and frauds.

7.6 MOTIVATION

Lack of can be addressed by helping employee at all levels to understand CRM concepts and firm's vision for CRM as well as communicating customer, market and profitability data to describe the Banks' progress, as it proceeds on its e-CRM journey.

7.7 TRAINING

Appropriate training should be also given to end users in order keep them informed about the key e-CRM practices and how bank is trying to make the relations with customers better. Training at all levels focused on e-CRM philosophy, applications in banking, new processes to be adopted, employee's role in customer service, and change management along with use of new technology is the need of the hour. It requires intense training, a real dialogue between marketing, technology departments and all channels, it requires commitment to document customer needs whenever possible and a proactive approach towards using customer intelligence on a continuous basis.

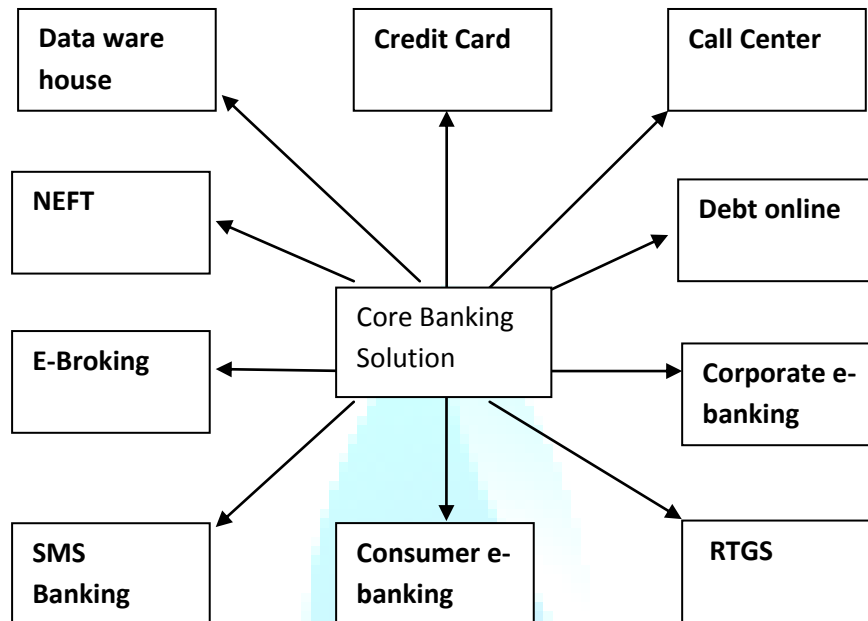
8. CONCLUSION

As the banks need to collect, organise and use the information related to customers in a systematic manner, e-CRM is a potent and efficient way to do that. It can help with developing the accurate customer profiles to customize the offerings and improve the customer experience by building healthy relationships. With some efficient data mining techniques, e-CRM will act as a facilitator in converting the loads of information into useful customer profiles and touch points hence improving the quality of data. An organisation must keep a customer centric approach in implementing the e-CRM strategy to make it a profitable one and this will include the culture, process and people being integrated into the core framework. Banks need to understand that they need to make a beginning. Start small, but start. Later they can learn and improve. Finally, it is very important to communicate, train and measure all activities. The framework recommends leadership and motivation driven by top management to optimise customer relationships on the basis of customer information. It points out the need for training at all levels along with coordination and communication amongst various departments. As it has been Banks that have achieved positive ROI have focused on 4 fundamental tenets. First, they have focused on the creation of an overarching, customer-centric business strategy, streamlined operations, superior analytics and integrated collaborative channels. Second, these banks have adopted a transformational approach to ensure that all sources of value are identified and appropriately measured. Third, they have developed a value-based e-CRM ROI model that is aligned with the bank's strategic objectives. And finally, based on appetite and readiness for change, these banks evaluated numerous implementation options before making a final decision. Thus, a strategic approach towards e-CRM implementation will enable attainment of the desired benefits of the e-CRM investments made by banks

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FIGURE 1: CORE BANKING SOLUTION USED BY BANKS.



SECURITY ISSUES IN e-COMMERCE

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ABSTRACT

E-commerce security is the protection of e-commerce assets from unauthorized access, use, alteration, or destruction. It is a part of the information security framework and is specifically applied to the components that affect e-commerce. Dimensions of e-commerce security are integrity, non-repudiation, authenticity, confidentiality, privacy, availability. Today's consumer is confronted by a maze of different online commerce opportunities, choices, and decisions, none of which were available or even fathomable 20 years ago. E-commerce is gaining momentum and acceptance; previously risky online activities such as banking are now considered safe and reliable, yet popular methods used to access sensitive information online present serious security risks.^[6] Most consumers accept terms and conditions too easily and without a second thought, compromising online anonymity and privacy. E-commerce isn't just increasing, it's evolving. The exponential rate of e-commerce growth has far surpassed mainstream security measures set in place to properly regulate online commerce and prevent consumer identity fraud. Every time a new e-commerce innovation is released, a new security risk is posed for consumers. To ensure the security, privacy and effectiveness of e-commerce, on one hand businesses should authenticate business transactions, control access to resources such as web pages for registered or selected users, encrypt communications and implement security technologies, while on other hand consumers need to be cautious and attentive to minute details.^[4]

KEYWORDS

e-commerce, information security.

1. INTRODUCTION TO e-COMMERCE

E-commerce (electronic commerce or ec) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business. The terms *e-commerce* and *e-business* are often used interchangeably. The term *e-tail* is also sometimes used in reference to transactional processes around online retail.^[4]

E-commerce is conducted using a variety of applications, such as email, fax, online catalogs and shopping carts, electronic data interchange (edi), file transfer protocol, and web services. Most of this is business-to-business, with some companies attempting to use email and fax for unsolicited ads (usually viewed as spam) to consumers and other business prospects, as well as to send out e-newsletters to subscribers.

The benefits of e-commerce include its around-the-clock availability, the speed of access, a wider selection of goods and services, accessibility, and international reach. Its perceived downsides include sometimes-limited customer service, not being able to see or touch a product prior to purchase, and the necessitated wait time for product shipping.

2. PURPOSE OF STUDY

- Study the overview of e-commerce security
- Discuss the threats to e-commerce security
- Understand the tools for e-commerce security
- Understand the secure online shopping guidelines

3. e-COMMERCE SECURITY

E-commerce security is a part of the information security framework and is specifically applied to the components that affect e-commerce that include computer security, data security and other wider domains of the information security framework. Today, privacy and security are a major concern for electronic technologies. M-commerce shares security concerns with other technologies in the field. Privacy concerns have been found, revealing a lack of trust in a variety of contexts, including commerce, electronic health records, e-recruitment technology and social networking, and this has directly influenced users. Security is one of the principal and continuing concerns that restrict customers and organizations engaging with e-commerce. The e-commerce industry is slowly addressing security issues on their internal networks. There are guidelines for securing systems and networks available for the e-commerce systems personnel to read and implement. Educating the consumer on security issues is still in the infancy stage but will prove to be the most critical element of the e-commerce security architecture.^[1]

Security is an essential part of any transaction that takes place over the internet. Customer will lose his/her faith in e-business if its security is compromised.^[7] Following are the essential requirements for safe e-payments/transactions:

Confidentiality: Information should not be accessible to unauthorized person. It should not be intercepted during transmission.

Integrity: Information should not be altered during its transmission over the network.

Authenticity: There should be a mechanism to authenticate user before giving him/her access to required information.

Non-repudiability: It is protection against denial of order or denial of payment. Once a sender sends a message, the sender should not be able to deny sending the message. Similarly the recipient of message should not be able to deny receipt.

Encryption: Information should be encrypted and decrypted only by authorized user.

4. e-COMMERCE SECURITY THREATS

The direct threats to e-commerce servers can be classified as malicious code threats and transmission threats.^[3] Malicious or rogue programming code is introduced into the server in order to gain access to the system resources. Very often, the intent of malicious code attacks is to cause large scale damage to the e-commerce server. With transmission threats, the threats and risks can be classified as either as active or passive. With passive threats, the main goal is to listen (or eavesdrop) to transmissions to the server. With active threats, the intent is to alter the flow of data transmission or to create a rogue transmission aimed directly at the e-commerce server.

MALICIOUS CODE ATTACKS

Viruses and worms: A virus attaches itself to executable code and is executed when the software program begins to run or an infected file is opened. However, a worm does not need a host to replicate. Rather, the worm replicates itself through the internet, and can literally infect millions of computers on a global basis in just a matter of hours. Worms by themselves do not cause damage to a system like a virus does. However, worms can shut down parts of the internet or e-commerce servers, because they can use up valuable resources of the internet, as well as the memory and processing power of servers and other computers.

Trojan horses: A Trojan horse is a piece of programming code that is layered behind another program, and can perform covert, malicious functions. For example, your e-commerce server can display a "cool-looking" screen saver, but behind that could be a piece of hidden code, causing damage to your system. One way to get a Trojan horse attack is by downloading software from the internet. Make sure that whatever software is downloaded comes from an authentic and verified source, and that all defense mechanisms are activated on your server.

Logic bombs: A logic bomb is a version of a Trojan horse, however, it is event or time specific. For example, a logic bomb will release malicious or rogue code in an e-commerce server after some specific time has elapsed or a particular event in application or processing has occurred.

TRANSMISSION THREATS

Denial of service attacks: With a denial of service attack, the main intention is to deny your customers the services provided on your e-commerce server. This happens when a massive amount of invalid data is sent to the server. Because the server can handle and process so much information at any given time, it is unable to keep with the information and data overflow. As a result, the server becomes "confused", and subsequently shuts down.

Ping of death: With a ping of death attack, a massive data packet is sent to the server. As a result, the memory buffers of the e-commerce server are totally overloaded, thus causing it to crash.

SYN flooding: A SYN flood is a form of denial-of-service attack in which an attacker sends a succession of SYN requests to a target's system in an attempt to consume enough server resources to make the system unresponsive to legitimate traffic

Ip spoofing: The intent here is to change the source address of a data packet to give it the appearance that it originated from another computer. With ip spoofing, it is difficult to identify the real attacker, since all e-commerce server logs will show connections from a legitimate source.

5. e-COMMERCE SECURITY TOOLS

Firewalls: (for software and hardware): A firewall is a system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both. Firewalls are frequently used to prevent unauthorized internet users from accessing private networks connected to the internet, especially intranets. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.

Public key infrastructure: A pki (public key infrastructure) enables users of a basically unsecure public network such as the internet to securely and privately exchange data and money through the use of a public and a private cryptographic key pair that is obtained and shared through a trusted authority.

Encryption software: Encryption software is software whose main task is encryption and decryption of data, usually in the form of files on (or sectors of) hard drives and removable media, email messages, or in the form of packets sent over computer networks. It is a very effective and practical way to safeguard the data being transmitted over the network. Sender of the information encrypts the data using a secret code and specified receiver only can decrypt the data using the same or different secret code.

Digital signature: Digital signature ensures the authenticity of the information. A digital signature is a e-signature authentic authenticated through encryption and password.

Security certificates: Security certificate is unique digital id used to verify identity of an individual website or user.

6. GUIDELINES TO SHOP ONLINE SAFELY

SHOP AT SECURE WEB SITES

A secure web site uses encryption and authentication standards to protect the confidentiality of information sent during web transactions. A secure web page can be identified using following guidelines:

1. The url of a secure webpage begins with the letters https
2. Ensure that the address bar has some element of green in it. Different browsers use different elements. Microsoft's internet explorer - background is shaded green. Apple's safari and google's chrome - https is shaded green
3. Look for a closed padlock. If that lock is open, you should assume it is not a secure site. Most web browsers display the 'lock' icon somewhere in the window of the browser. Microsoft's internet explorer displays a lock in the lower-right of the browser window. Mozilla's firefox displays the lock icon in the lower-left corner of the window. The lock is not just a picture. You can click or double click on it to see details of the site's security. This is important because some fraudulent sites are built with a bar at the bottom of the page to imitate the lock icon of your browser.

INVESTIGATE ABOUT THE WEB SITE BEFORE YOU ORDER

Avoid doing business with unknown *web sites*. If you are going to deal with a web site for the first time, do your homework before buying their products. Start business with an unknown website by ordering something inexpensive. This will help you judge the authenticity of the web site.

Reliable *web sites* should advertise their physical business address and contact number, either customer service or an order line. Call the phone number and ask questions to determine if the business is legitimate.

READ THE WEB SITE'S PRIVACY AND SECURITY POLICIES

Every reputable online web site offers information about how it processes your order. It is usually listed in the section entitled —privacy policy.^[8] Reputable companies will be open about how they collect data from you and what they do with it. Many now also belong to web-seal approval or trust mark programs that set out guidelines on the treatment of your information.

USE SAFE PAYMENT OPTIONS

Credit cards are generally the safest option because they allow buyers to seek a credit from the issuer if the product isn't delivered or isn't what was ordered.

^[9]Also, unlike debit cards, credit cards may have a limit on the monetary amount you will be responsible for paying if your information is stolen and used by someone else. Never send cash through the mail or use a money-wiring service because you'll have no recourse if something goes wrong. Don't forget to review return policies. You want a no-hassle ability to return items.

USE VIRTUAL CREDIT CARDS AS NEEDED

Virtual credit cards are temporary payment cards, and come in the form of a physical plastic card, or as a generated credit card number, and they're separate from your bank information.^[10] This type of disposable credit card payment method contains a pre-set spending amount, has a shorter-than-usual expiration date, and is equivalent to a regular credit card for most payments purposes. Virtual credit card payments are usually charged to your credit or debit card, rather than directly to your bank account, essentially offering an additional layer of protection. When you pay with a virtual credit card, your banking information remains separate from your individual purchase, thus ensuring if the card number is stolen, hackers cannot access your accounts or re-use the card fraudulently.

DISCLOSE ONLY THE BARE FACTS WHEN YOU ORDER

When making a purchase online, there is certain information that you must provide to the web merchant such as your name and address. Often, a merchant will try to obtain more information about you. They may ask questions about your leisure lifestyle or annual income. Be alert to the kinds of information being collected to complete the transaction. Make sure you think it is necessary for the vendor to request that information. Remember, you only need to fill out required fields on a vendors checkout form. Before providing personal or financial information, make sure you understand how your information will be stored and used. The information you provide is used to target you for marketing purposes. It can lead to "spam" or even direct mail and telephone solicitations. Don't answer any question you feel is not required to process your order. Often, the web site will mark which questions need to be answered with an asterisk (*).

KEEP YOUR PASSWORD PRIVATE

You will usually be asked for a password before you make an online payment. This is to help keep your personal details private.^[11] Make sure you use a strong password - one that is a combination of letters (upper and lower case), numbers and symbols. Never reveal your password to anyone. When selecting a password, do not use commonly known information, such as your birthdate, mother's maiden name, or numbers from your driver's license or social security number. Do not reuse the same password for other sites, particularly sites associated with sensitive information.

DON'T FALL FOR "PHISHING" MESSAGES

Phishing is the process whereby someone attempts to obtain your confidential information, such as your passwords, your credit card number, your bank account details or other information protected by the data protection act.^[12] A phishing attack can be in the form of an official looking email or instant message, maybe directing you to an official looking website, or it could be an official sounding phone call.

Recognizing a phishing attack

There are number of clues that may indicate an email or website is not genuine such as:

1. Suspicious email links. Try hovering your mouse over a link without clicking on it. If the address that pops up does not match the link address as it is written in the email, it's a clear indication of a phishing email.
2. A link to a genuine website which takes you somewhere else
3. Spelling or grammatical mistakes, inappropriate use of capitals or exclamation marks, formatting errors
4. A generic email greeting
5. Claims that you need to act immediately to prevent something bad from happening (for example, your account will be deleted or your email will be lost)
6. Requests for personal information, such as your password or bank account number

However, you should always be wary as some phishing attacks may be sophisticated and difficult to spot. You should refuse to disclose confidential information until you have checked to your own satisfaction that the request is justified and legitimate and has been made by a genuine person or organization.

There are various phishing filters, like smartscreen filter in internet explorer, which will help protect you from phishing sites by warning you when it detects a distrustful website.

ALWAYS PRINT OR SAVE COPIES OF YOUR ORDERS

Print and save records of your online transactions, including the product description, price, online receipt, terms of the sale, and copies of any email exchange with the seller.^[9] If you cannot print one off, take a screenshot as a form of proof of purchase. We recommend you print out or save a copy of the web page(s) describing the item you ordered as well as the page showing company name, postal address, phone number, and legal terms, including return policy. Read your credit card statements as soon as you get them to make sure there aren't any unauthorized charges. If there is a discrepancy, call your bank and report it immediately

TURN YOUR COMPUTER OFF WHEN YOU'RE FINISHED SHOPPING

Many people leave their computers running and connected to the internet all day and night. This gives scammers 24/7 access to your computer to install malware and commit cyber crimes. To be safe, turn off your computer when it's not in use.

FIND OUT ABOUT BILLING, GUARANTEES, CANCELLATION POLICIES, SHIPPING AND DELIVERY CHARGES BEFORE YOU BUY

You can look for following information:^[13]

1. Packaging costs, delivery costs etc
2. Whether you will be billed before or after delivery of the products
3. Whether you can track the item from the moment of purchase to arrival at your door - this will help alert you of any hiccups in the delivery
4. Whether the product comes with a guarantee or warranty for defects etc.
5. How you can return the product if it doesn't work or meet your expectations - look for information on the site about cancellations, returns and refunds. Print off a copy for future reference
6. Who will bear the cost of returning the item (postage, fees etc.)

KNOW HOW ONLINE AUCTIONS OPERATE

Online auctions connect buyers and sellers, allowing them to communicate in a bidding process over items for sale.^[13] For the most part, online auction sites are a safe way to exchange goods. But it makes sense to be cautious and aware.

Online auctions can be a lot of fun and can also help you find good deals. They also attract scammers. Scammers will often try to get you to deal outside of online auction sites. They may claim the winner of an auction that you were bidding on has pulled out and offer the item to you. Once you have paid, you will never hear from them again and the auction site will not be able to help you. Following are the guidelines for participating safely in online auctions:

1. Always conduct transactions within the auction website and avoid private contact with buyers or sellers-scammers will often use this ploy to 'offer a better deal'.
2. Keep printed and/or electronic records of all bids, item descriptions, emails to and from the seller, and transaction records or receipts.
3. If the website uses a feedback rating system, check all comments left by previous buyers and sellers.
4. Use a secure payment method.
5. Avoid money transfers and direct debit, because they can be open to abuse.
6. Consider using the insurance offered by the auction facility.
7. Check the information on auction websites to help potential buyers and sellers.
8. Take the time to read the information about ways to reduce the risk on the auction site and the terms and conditions of contracts entered into by bidders and sellers.
9. Learn a site's return policy, as it may be difficult to return merchandise bought at auction. It's critical to check the policy, because you may be required to follow the seller's refund policy, rather than that of the auction site.

BE AWARE OF DYNAMIC PRICING

Dynamic pricing is a blanket term for any shopping experience where the price of an item fluctuates frequently based on complicated algorithms.^[14] Some online retailers use dynamic pricing to engage in price discrimination by charging different prices to different consumers for identical goods or services. While online shopping enables consumers to easily compare prices, it also allows businesses to collect detailed information about a customer's purchasing history and preferences. Online stores can use that information to customize the prices they charge you.

Online merchants can easily implement dynamic pricing by placing cookies on a customer's computer which will track the user's past interactions with the site. By using this information, sites can customize their interactions based on your past activities. Online stores can read the cookies on your browser to determine what products or services you searched for and bought and how much you paid for them. This information helps them to predict how much you might they visit the issuer's site.

Shared wi-fi = unsecure wi-fi

As a rule of thumb, assume all shared wi-fi networks are unsafe for your sensitive data. Everything from an online bank statement to a gmail account can be compromised when surfing the web on a shared wi-fi network. It's nearly impossible to accurately gauge how secure a wi-fi network is, and thus it's best to err on the side of caution.^[15]

PROTECT YOUR ONLINE IDENTITY ON THE SOCIAL FRONT

Online purchasing is getting more and more social, with 50 per cent of web sales projected to occur via social media by 2015.^[15] Each time you join a new site through the "login with facebook" option, you're extending your online identity further. In fact, an abundance of sites will first prompt you to become a member not by email, but by connecting a social media account. Is it a direct connection? Technically, no. Will it be used to shape your online identity? Absolutely. Your social media presence defines your digital footprint to the point where companies are looking to use your social media identity to combat online payment fraud and your social signals to tackle identity fraud in the near future.

Once you realize that the majority of your online activity is interconnected, you can better defend yourself from making thoughtless choices that may endanger your data. Just like you shouldn't post something you don't want your employer to see on facebook, you also shouldn't post anything you don't want a hacker to see, like a picture of your driver's license or passport, anything with a home address and any snapshots that include a visible credit card or credit card number.

7. CONCLUSION

Day by day e-commerce is playing a very vital role in online retail marketing and the number of people using this technology is increasing in leaps and bounds all over the world. However the exponential rate of e-commerce growth has lead to numerous security risks for consumers. In present scenario, consumer needs to be very cautious while making any kind of online transactions or even surfing the internet.

Common mistakes that leave people vulnerable include shopping on websites that aren't secure, giving out too much personal information, and leaving computers open to viruses. In this paper we discussed e-commerce security issues, security threats and guidelines for safe and secure online shopping through shopping web sites. A consumer can very well secure his online shopping to some extent by religiously following the guidelines mentioned in the research paper.

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STUDY ON INVESTOR'S PERCEPTIONS TOWARDS ONLINE TRADING WITH REFERENCE TO MAYILADUTHURAI TOWN

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ABSTRACT

Investment is the allocation of monetary resources to assets that are expected to yield some gain or positive return over a given period of time. These assets range from safe investments to risky Investments in this form are also called 'Financial investment'. From the point of view of people who invest their funds, they are the supplier of 'Capital' and in their view investment is a commitment of a person's funds to derive future income in the of interest, dividends, rent, premium, pension benefits or the appreciation of the value of their principal capital. To the financial investor it is not important whether money is invested for a productive use or for the purchase of secondhand instruments such as existing shares and stocks listed on the stock exchange. Most investments are considered to be transfers of financial assets from one person to another.

KEYWORDS

investor's perceptions, traditional trading, online trading.

INTRODUCTION

Constructive uses of new technologies have always contributed positively towards improving human life standards and the economy of a country. Such as online trading, in equity markets it increased trade volumes and number of investors trading in stock markets. Online trading was started in India in the year 1995, where a new system is formed which allows the investors to trade through an internet site where banks and demat accounts are electronically integrated. Such services are provided by many financial institutions like ICICI, Religare, HDFC, India bulls, Share khan and so on.

NEEDS FOR INVESTMENT

- Earn return on idle resources
- Generate a specified sum of money for a specific goal in life
- Make a provision for an uncertain future
- The three golden rules of investment are:
- Invest early
- Invest regularly
- Invest for long term and not short term

SCOPE FOR ONLINE TRADING

"Profiling internet shoppers: A study of expected adoption of online shopping in India", a research paper submitted by Darshan Parikh suggests that the continuous growth in the number of internet users and broadband subscribers, and the rapid pace of technological improvements and innovations also held the promise of greater acceptance of the digital medium by consumers.

Understanding online investor's perception is a major marketing challenge in financial service sector because lack of awareness in the minds of customers about the emerging financial service products, frequent scams, privacy and non-compliance of rules etc. in the financial service industry is resulting in the loss of confidence of the investors. Interference of regulatory bodies like SEBI, it often changes in the guidelines and policies of these regulatory bodies. Confused government policies with regarding to tax and legal issues also affect marketing of the financial products.

NEED FOR THE STUDY

Investments are both important and useful in the, context of present-day conditions. Some factors that have made investment decisions increasingly important are:

- ❖ Longer life expectancy or planning for retirement ,
- ❖ Increasingly rates of taxation
- ❖ High interest rates,
- ❖ High rate of inflation,
- ❖ Large incomes,
- ❖ Availability of a complex number of investment outlets.

OBJECTIVES OF THE STUDY

For conducting this study following objectives were set:

1. To analyze the investor's preference for traditional trading and online trading.
2. To find out the problems both actually faced and anticipated by investors.
3. To study investor's perception on online trading in Mayiladuthurai town.
4. To compare current usage of online trading and traditional trading.
5. To suggest various measures to improve the on – line trading.

SCOPE AND PERIOD OF THE STUDY

This descriptive study on investor's perception towards online trading, this study compares the current usage of online trading and traditional trading with special reference to Mayiladuthurai town. The period from July 2014 to August 2014 was the time taken for this study. This data was collected in Mayiladuthurai town only.

METHODOLOGY

For conducting this study, first step was to select sample, which was selected on a random basis. As this study was mainly based on primary data, so for conducting it investor's responses were collected through pre-determined set of questions in the form of well-designed questionnaire.

LIMITATION OF THE STUDY

This study is subject to following limitations:

- ❖ Due to shortage of time this study is conducted with the responses of 100 investors only.
 - ❖ Study area of this is confined to Mayiladuthurai town and nearby areas only.
- Deliberate and convenient sampling technique was used.

DATA ANALYSIS AND INTERPRETATION

Present study was an attempt to conduct to find out the trend of online trading in Indian stock markets. Although sample collected under study was through deliberate sampling in which mainly that investor group tapped who were expected to deal in stock trading. Total 100 respondents selected for study but out of this only 93 investors deal in stock trading and 8 investors did not invest in stock trading. Thus, for this study the researcher was left with 93 investors and all conclusions of this study are subject to responses given by these investors.

TABLE NO. 1: INVESTORS CLASSIFICATION

S.NO.	INVESTORS	RESPONDENTS	PERCENTAGE
1	Net Traders (NT)	31	33.33%
2	Traditional Traders (TT)	62	66.67%
	Total	93	100%

Source: primary Data

INFERENCE

From the above table reveals that 33.33% of the respondents are Net Traders and 66.67% of the respondents are Traditional Traders. Hence, the majority of the respondents are traditional trader

TABLE NO. 2: INVESTOR'S AGE PROFILE

S.NO.	INVESTOR'S AGE	RESPONDENTS	PERCENTAGE
1	Under 25 Years	19	20%
2	25 years-45 years	51	55%
3	Above 45 years	23	25%
	Total	93	100%

Source: primary Data

INFERENCE

After compiling the data on age of investors who deal in stock trading, it was found that majority of investors come under middle age group. May be the reason for this is that in this age investors are more aware, more responding, risk taker etc.

TABLE NO. 3: INVESTOR'S EDUCATIONAL LEVEL

S.NO.	INVESTORS	RESPONDENTS	PERCENTAGE
1	Graduate	25	27%
2	Post Graduate	68	73%
	Total	93	100%

Source: primary Data

INFERENCE

Table 4.3 reflects the educational status of investors. From this table it is quite clear that most of the investors are educated and they can be considered in the category of rational investors who are knowledgeable and have a strong judgment power.

TABLE NO. 4: INVESTOR'S INCOME LEVEL

S.NO.	INVESTOR'S AGE	RESPONDENTS	PERCENTAGE
1	Less than Rs.1,00,000	19	20%
2	Rs.1,00,000 – Rs. 2,00,000	45	48%
3	Rs.2,00,000 Above	29	32%
	Total	93	100%

Sources: primary Data

INFERENCE

From Table 4.4 it can clearly assess that majority of respondents under study are in the middle or above average group. This is because mainly those investors prefer to invest in stock trading who have some income base.

TABLE NO. 5: COMPUTER LITERACY LEVELS OF INVESTORS

S.No.	INVESTORS	COMPUTER LITERACY	
		Yes	No
1	Net Traders (NT)	31 (78.57%)	28% (21.42%)
2	Traditional Traders (TT)	64 (43.75%)	64% (56.25%)
	Total	92	100%

Sources: primary Data

INFERENCE

To judge that whether investors have knowledge of computers or not, the researcher asked to the investors responses in yes or no. From above table this fact becomes clearer that out of Net Traders most of them have obtained formal education in computers. From this data the researcher can give remarks that one of the reason that TT are not opting for online trading is that they are not computer literate.

RANKING OF PREFERENCE ORDER FOR STOCK TRADING

As for this study, two categories of investors were take Net Traders (NT) and Traditional Traders (TT) out first attempt was to find out the reasons why they opt for that particular mode for stock trading. Mainly this part was included in the questionnaire to find out that why TT was opting for that mechanism. For this purpose five statements were used which are the common objective for selecting the trading mode. Investors were asked to give ranks to their options for 1 to 5, where 1 means most preferred and 2 denote next preference and so on. In the next step scores were given to various ranks as 5,4,3,2,1 for ranks 1,2,3,4,5. Finally ranking is done on the basis of AWS.

TABLE NO. 6: PREFERENCE ORDERS OF TRADITIONAL TRADERS

	5	4	3	2	1	AWS	Rank
Less Cost	40 (64.5)	10 (16.1)	07 (11.3)	03 (4.8)	02 (3.2)	4.34	III
Convenience	46 (74.2)	06 (9.7)	05 (8.1)	04 (6.5)	01 (1.6)	4.48	I
Professional Management	38 (61.3)	12 (19.4)	08 (12.9)	03 (4.8)	01 (1.6)	4.34	III
Transparency	43 (69.4)	08 (12.9)	06 (9.7)	03 (4.8)	02 (3.2)	4.40	II
Less Time Consuming	44 (71.0)	07 (11.3)	05 (8.1)	04 (6.5)	02 (3.2)	4.40	II

Figures in parenthesis denote percentage

Source: primary Data (Using SPSS)

TABLE NO. 7: PREFERENCE ORDER OF NET TRADER

	5	4	3	2	1	AWS	Rank
Less Cost	15 (48.4)	08 (25.8)	05 (16.1)	02 (6.5)	01 (3.2)	4.10	III
Convenience	17 (54.8)	06 (19.4)	04 (12.9)	03 (9.7)	01 (3.2)	4.13	II
Professional Management	14 (45.2)	07 (22.6)	05 (16.1)	03 (9.7)	02 (6.5)	3.90	IV
Transparency	18 (58.1)	06 (19.4)	04 (12.9)	02 (6.5)	01 (3.2)	4.23	I
Less Time Consuming	13 (41.9)	08 (25.8)	05 (16.1)	03 (9.7)	02 (6.5)	3.87	V

Figures in parenthesis denote percentage

Source: primary Data (Using SPSS)

INFERENCE

The above table 4.6 reveals that preference orders of Traditional Traders rely on their brokers for share trading the main reason for that is they find it convenient (AWS 4.48). They also feel that the next preference for 'Transparency' and 'Less time consuming'. And it also finds that 'Less cost' and 'Professional Management' because the brokers have accurate knowledge about market trends. So according TT can earn better return from stock trading. If they involve brokers in their decision making as brokers can guide them in a better way.

In addition to this, during the study it was also observed that most of the TT was computer savvy so they don't find it difficult to deal in stock trading through internet.

Whereas in case of NT their main preference for Online trading. They also feel that in case of TT there are more chances of fraud by brokers. But, Online share trading (Net Traders) is absolutely secure and 'transparent' (AWS 4.23). The next preference will be given by the NT to 'more convenience' (AWS 4.13) and third preference for 'less cost' (AWS 4.10).

During the study, informal conversations with the investors lead to the conclusion that Net Traders are active players of stock market and they keep close watch on sensx movements. Net Traders were found to be more knowledgeable as compared to TT about share market.

PROBLEMS IN ONLINE TRADING

During the study, it was found that although technology is bringing boom in Indian economy, still majority of the people have not realized the importance of technology particularly in stock trading as it was evident from data that out of a total sample of 100 investors just 28% were trading online. Thus, while designing the questionnaire an attempt was made to find out the reasons or problems, which are hindering the growth of online trading. For this purpose responses of NT and TT were recorded separately on three point Liker scale (Table 4.8 & 4.9). As TT has never tried online trading, they were asked to give their opinion, as they perceive problems, which can encounter online trading

TABLE NO. 8: PROBLEMS IN ONLINE TRADING (Traditional Traders)

	Traditional Traders			AWS	S.D.
	Agree	Disagree	Neutral		
Inadequate Availability of Technology	07 (11.3)	40 (64.5)	15 (24.2)	1.87	.586
Risk of System Failure	14 (22.6)	35 (56.5)	13 (21.0)	2.02	.665
Lack of Professional Management	48 (77.4)	05 (8.1)	09 (14.5)	2.63	.730
High Transaction Cost	45 (72.6)	06 (9.7)	11 (17.7)	2.55	.783
Lack of Sufficient Information	38 (61.3)	11 (17.7)	13 (21.0)	2.40	.819
More Chances of Fraud (Broker Side)	44 (71.0)	06 (9.7)	12 (19.4)	2.52	.805
Poor Communication Network	25 (40.3)	30 (48.4)	07 (11.3)	2.29	.663
Lack of Transparency	38 (61.3)	18 (29.0)	06 (9.7)	2.52	.671

Figures in parenthesis denote percentage

Sources: primary Data (using spss)

TABLE NO. 9: PROBLEMS IN ONLINE TRADING (Net Traders)

	Net Traders				
	Agree	Disagree	Neutral	AWS	S.D.
Inadequate Availability of Technology	20 (64.5)	03 (9.7)	08 (25.8)	2.39	.882
Risk of System Failure	22 (71.0)	04 (12.9)	05 (16.1)	2.55	.768
Lack of Professional Management	02 (6.5)	23 (74.2)	06 (19.4)	1.87	.499
High Transaction Cost	21 (67.7)	03 (9.7)	07 (22.6)	2.45	.850
Lack of Sufficient Information	03 (9.7)	19 (61.3)	09 (29.0)	1.81	.601
More Chances of Fraud (Broker Side)	03 (9.7)	23 (74.2)	05 (16.1)	1.94	.512
Poor Communication Network	19 (61.3)	05 (16.1)	07 (22.6)	2.39	.844
Lack of Transparency	05 (16.1)	20 (64.5)	06 (19.4)	1.97	.605

Figures in parenthesis denote percentage

Sources: primary Data (Using SPSS)

INFERENCE

From the table 4.8 reveals that most of the investors agreed that online technology has more prone to failure because for Traditional Traders have 'lack of professional management'. However, it was also found that some of the TT has misconception about online trading that this trading process 'lack transparency' and leads to an increase in 'transaction cost'.

Responses given by NT reveal that the major problem indicated by them has that this system still required more advanced technology. One major problem indicated by NT has that they agreed 'high transaction cost' has the major problem in NT and 'inadequate availability of technology' has the third rank given by the investors.

ANALYSIS ON INVESTOR'S PERCEPTION ABOUT ONLINE TRADING

In the next phase of this study the researcher to know about the potential of online trading in the near future. With that objective the researcher started with structured question in the form of statements. Again response of NT and TT were recorded separately so that the researcher may especially come to know that whether in the near future TT will move towards online trading. Most of the investors admitted it that with the use of ICT in Indian stock market trading process has become more efficient (Table 4.11 & 4.12) NT admitted this fact that ICT has proved successful in making capital market more efficient but among TT. Only 39% (approx) agree to this statement.

TABLE NO. 10: ANALYSIS OF INVESTORS' PERCEPTION (Traditional Traders)

	Traditional Traders				
	Agree	Disagree	Neutral	AWS	S.D.
Online Trading has captured more Investors	40 (64.5)	10 (16.1)	12 (19.4)	2.48	.811
With online trading Indian capital market has become efficient	34 (54.8)	12 (19.4)	16 (25.8)	2.10	.651
Upward Trend in stock market is correlated with Net Trading	09 (14.5)	42 (67.7)	11 (17.7)	2.45	.810
Online Trading is reducing the role of broker's for stock Trading	07 (11.3)	41 (66.1)	14 (22.6)	1.97	.547
Net Trading has made Trading process more transparent	08 (12.9)	38 (61.3)	16 (25.8)	2.45	.850
Online Trading has bright future ahead	39 (62.9)	11 (17.7)	12 (19.4)	2.58	.765
Online Trading has reduced chances of fraud	19 (30.6)	30 (48.4)	13 (21.0)	2.68	.702
Online Trading gives more on investment	35 (56.5)	10 (16.1)	17 (27.4)	2.65	.709

Figures in parenthesis denote percentage

Sources: primary Data (Using SPSS)

TABLE NO. 11: ANALYSIS OF INVESTORS' PERCEPTION (Net Traders) Figures in parenthesis denote percentage

	Net Traders				
	Agree	Disagree	Neutral	AWS	S.D.
Online Trading has captured more Investors	21 (33.9)	04 (6.5)	06 (9.7)	2.48	.811
With online trading Indian capital market has become efficient	08 (12.9)	18 (29.0)	05 (8.1)	2.10	.651
Upward Trend in stock market is correlated with Net Trading	20 (32.3)	05 (8.1)	06 (9.7)	2.45	.810
Online Trading is reducing the role of broker's for stock Trading	04 (6.5)	22 (35.5)	05 (8.1)	1.97	.547
Net Trading has made Trading process more transparent	21 (33.9)	03 (4.8)	07 (11.3)	2.45	.850
Online Trading has bright future ahead	23 (37.1)	03 (4.8)	05 (8.1)	2.58	.765
Online Trading has reduced chances of fraud	25 (40.3)	02 (3.2)	04 (6.5)	2.68	.702
Online Trading gives more on investment	24 (38.7)	03 (4.8)	04 (6.5)	2.65	.709

Sources: primary Data (Using SPSS)

INFERENCE

64.5% of TT agree to this fact that online trading had captured more investors, 62.9% of TT agree online trading has bright future ahead, 56.5% of TT agree online trading gives more on investment. After collecting the responses of investors that whether they feel online trading has bright future ahead the researcher can comment that although NT are quite positively about net trading but still majority of TT are conservative and have positive view about online trading.

TABLE NO. 12: SATISFACTION LEVELS OF INVESTORS

S.No.	INVESTORS	Net trader	traditional trader
1	Yes	29 (94%)	39 (63%)
2	No	02 (06%)	23 (37%)
	Total	31 (100%)	62 (100%)

Sources: primary Data

INFERENCE

From the above table it is obvious that 94% NT have had good experience about online trading and they are satisfied about net trading. When the researcher analyzes the responses given by TT the researcher find that 63% investors are satisfied from trading through brokers. Thus, these results give us a clear picture that most of the Indian investors are conservative in nature, which means they do not want to taste new experiments. This fact is clearly reflected from responses given by TT were still majority of them trust their brokers and even they do not want to join online traders. But success of online trading can be clearly seen from the responses of NT, where out of the total, 94% NT were found to be satisfied and just 6% NT were not satisfied.

FINDINGS

Following crux is concluded after conducting this study:

- ❖ Indian investors are more conservative; they do not adopt any change easily.
- ❖ Till now just few investors can be recognized who are using technology for online stock trading. Even in our study out of total sample of 100 investors it was merely 28 investors who have experimented net trading.
- ❖ Most of the investors who deal in stock trading are in middle age, educated and have sufficient income base, however majority of NT are computer literate (78.57%) whereas most of TT are not computer illiterate (56.25%).
- ❖ TT still prefers to choose brokers as a stock trading mechanism because they are more loyal to their brokers. They find it more convenient and less time consuming process. Besides this, TT also feels that they themselves don't have sufficient knowledge about stock market whereas brokers are professional that can guide them better.
- ❖ NT prefers online trading because they find this system more transparent, where they can deal in stock trading with everything under their control. Moreover results of our study show that as most of NT is computer literate, they find it convenient to deal in online stock trading.
- ❖ Major problem which both NT and TT find in online trading is that still this process doesn't have sufficient technology available 87.5% TT and 75% NT agree to this problem with online trading.
- ❖ 95.31% TT have some misconception about system failure of online trading whereas 60.7% NT disagree with this statement.
- ❖ Majority of the investors agree to this fact that online trading has reduced the changes of fraud.
- ❖ 43.75% TT think that online trading has bright future ahead whereas NT are quite optimistic about the bright future of online trading and 96.42% NT agree with this statement.

CONCLUSION

Nevertheless, online trading has offered investors a platform with transparency in system. Although net trading at NSE is considered to be at its infancy stage but success trend of online trading predicts bright future where investors will get opportunity to buy; new integrated financial products. Online trading empowers educated investors to make their own decision with close watch on market sensitivity by browsing through various sites. Besides, net trading assures achievement of twin objectives of securities regulation, which are creation of efficient market to meet global requirements and investor's protection. But despite of the hard effort on the part of NSE to introduce sophisticated technology, online trading is considered to be on the way to its journey and lot more efforts are required to fully utilize the potential of ICT. Major impediments to growth of online stock trading are computer illiteracy, poor infrastructure, risk adverse attitude on investors etc. So with the growth of educated investors and support from SEBI, online trading is sure to grow at faster pace.

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IMPACT OF DEBT CAPITAL ON OUTREACH AND EFFICIENCY OF MICROFINANCE INSTITUTIONS: A SURVEY OF SOME SELECTED MFIs IN TANZANIA

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ABSTRACT

Financial and development economics researchers, practitioners, and donors are debating on the rightful effect of debt capital on the performance of MFIs in terms of outreach. Some argue that microfinance involvement in commercially procured funds is likely to cause the sector raise interest rates or increase loan sizes to maintain a certain level of operational return or profitability to be able to pay interest expenses on borrowed capital. Changes in either dimension could result into exclusion of some type of potential poor borrowers. Still others argue that debt capital enhances efficiency through economies of large scale when massive debt funds are used to expand operation. Thus, MFIs can reach more poor clients at low costs. This paper is a survey of secondary data from selected MFIs in Tanzania. Empirical evidences from this paper show that debt capital reduces outreach to poor clients of MFIs in Tanzania context. The policy implication for the paper is that since MFIs are perceived as people's development tool and poverty alleviation strategy, donation or government grants should be sustained in a long term in order to enable MFIs reach the poor who cannot afford high interest rates charged by debt financed MFIs.

KEYWORDS

Debt Capital, Microfinance Institutions.

1.0 INTRODUCTION

In Tanzania context, microfinance institutions have been in operations since colonial period though were not taken as important means of enhancing development. In the 1990s the government of Tanzania, through the support of the World Bank and the International Monetary Fund adopted economic reforms aimed at increasing growth, encouraging private sector development, market integration and industrial competitiveness. In the financial sector the reforms has included liberalization of interest rates, elimination of administrative credit allocation, strengthening the central bank's (Bank Of Tanzania) role in regulating and supervising the financial institutions, restructuring state owned financial institution, allowing entry of private sector (foreign and local) banks into the market, creation of the capital market security authority (1994) and the Dar es salaam stock exchange (1998). To enhance the access of financial services by large segment of the rural and urban population, the government initiated a micro finance policy in 2001. The policy invites the government in collaboration with the donor community to facilitate the development of micro finance institutions. The policy articulates the vision and strategy for the development of sustainable micro finance industry as an integral part of the financial sector, specifying the respective role of the key stake holders- the government and its principal agencies, institutional providers of micro finance services and the donor community (URT, 2001).

Since 2001, a number of micro finance institutions have been established and according to the BOT statistics there are more than 1800 microfinance institutions operating in Tanzania to date (BOT, 2012, www.bot.tz). These institutions include donor funded micro finance institutions (NGOs), community banks, village or ward banks and cooperative societies. The principal micro finance providers (especially in rural areas) include the Savings and Credit Cooperatives (SACCOS), SIDO, government assisted community banks and foreign donor- assisted Non – governmental Organizations (Examples are the PRIDE, FINCA, DUNDULIZA, SEDA to mention a few; Fraizer and Kazi, 2004).

Despite all these initiatives access to microfinance remain to be a critical problem to most people in the country (Satta, 2006). According to a study undertaken by BOT in 1997, it was found that 82 percent of households were saving in their homes, 79 percent of the households were willing and able to save if appropriate products and savings mechanism were there, where as 94 percent were willing to borrow more if more resources and appropriate methodology were available (Olomi, Chijoriga and Mori, 2009: p.132). In another study by Finscope (2007) it was confirmed that a large part of the population has no access to microfinance institutions, with over half of the population being completely excluded. Only 5% of the rural populations have access to formal main stream banks, and only 2% of the rural population have access to microfinance institutions. Among many reasons for the limited access to financial services is high interest rates charged, low financial capital base among MFIs (Fraizer and Kazi, 2004). Majority of MFIs are operating in small scale and some are donor dependant (Olomi, Chijoriga and Mori, 2009).

In an attempt to increase the capital base, microfinance institutions are now accessing a broad range of private capital from the financial markets. High profile financing transactions are now taking place; including securitization, local bond issues (bank borrowings), the first initial public offering of shares, bank – microfinance partnerships. Additionally, where legal structure permits, MFIs are launching large scale deposits mobilization campaigns as a core funding strategy (Meehan, 2004; CGAP, 2007). However, the key challenge ahead of MFIs managers is the sustenance of IMF's objectives of reaching the poor using commercially procured funds and blending it with donor funds (Morduch *et al.*, 1999; Woller and Brau, 2004).

2.0 STATEMENT OF THE PROBLEM

Financing decisions among MFIs is a salient issue yet to be explored in depth. Access to private capital such as bonds, initial public offering of shares, and the use of large scale deposits among microfinance institutions calls for efficient capital structure management and an understanding of its possible inherent mission drift. Different sources of funds have different costs implication and risks that may impact a firm's operations and mission (Modiglian and Miller, 1963, Jensen and Meckling, 1976). The argument is that microfinance involvement in private capital (e.g. debt) is likely to cause MFIs raise either interest rates or increase loan sizes to maintain a certain level of operational return or profitability (in order to pay interest and fees on debt). Changes in either dimension could result in the exclusion of some types of potential poor borrowers.

Still others (Morduch, *et al.* 1999; Morduch, 2000) argue that the use of debt will enhance efficiency through economies of large scale and the agency problem of debt, thus MFIs will be able to reach more poor clients at low costs¹. There is still limited empirical evidence both in Tanzania and internationally on the rightful nature and extent of the effect of private capital (bonds, deposits and equity shares) on MFIs performance. The impact of capital structure decisions on MFIs performance, in terms of outreach, efficiency and financial sustainability are currently researchable areas. Previous studies and theories on capital structure have focused on profit motivated businesses (Modiglian and Miller, 1963; Jensen, 1986 etc). This paper provides additional knowledge and evidence on the effect of capital structure decisions in the microfinance industry and in a developing economy context of Tanzania. The paper is organized as follows: The next section provides a brief review of information on microfinance outreach in Tanzania. This is followed by a review of related literature. The fourth section deals with methodological approach of the paper. The fifth section presents the findings and the sixth section which is the last section concludes the paper.

¹ See Welfarist and Institutionist theories under related literature section.

3.0 RELATED LITERATURE

3.1 DEFINITIONS AND CONCEPTUAL ISSUES OF THE STUDY

Financing decisions

Financing decisions of an organization are decision regarding the proportion of the various sources of funds used by a firm to finance both its fixed assets and operating activities (Brealey and Myers, 2003). Three major sources of funds are available namely equity funds (shareholders), debt funds, and retained earnings (*ibid*). In the microfinance industry donations has been a major source of funds (Morduch, 1999). A firm can issue large amount of debt (bonds) or very little debt. It can issue equity shares in an attempt to maximize its overall market returns and performance (Lindsay, and Sametz, 1963; Brealey and Myers, 2003, Abor, 2005).

Debt Capital

Debt capital is a type of long term funds a firm obtains by borrows from a financial institution or a company and commits itself to payment of a fixed interest at specified period and repayment of principal amount on maturity. Debt capital may also include short term funds obtained by firms or institutions from the issue of securities such as commercial papers, promissory notes, bills of exchange and others. Some debt issuers require collateral (secured debt) still other do not require collateral (Brealey and Myers, 2003; Majundar and Chhibber, 1999).

Microfinance institutions

Microfinance is a general term describing the practice of extending small (micro) loans and other financial services, such as savings accounts and insurance to low income borrowers for financing income generating self-employment projects (CGAP, 2004). Microfinance institutions are organizations that are engaged in the provision of micro loans, savings, insurances services, and sometimes remittances of funds to small and medium entrepreneurs and low income earners. Microfinance institutions seek to pursue and achieve two objectives. To achieve and demonstrate social as well as financial performance. The role of micro finance differs from one context to another and may encompass filling gaps in financial markets, providing risk tools to vulnerable groups or individuals, allowing micro-entrepreneurs to take advantage of economic opportunities, building social networks, and others. (CGAP, 2004, Schreiner, 2001; Otero *et al.*, 1994).

Outreach

Outreach in microfinance refers to the clientele characteristics of the MFIs. It is about the number of active clients served and the poverty level of the clients (Schreiner, 2004). For robustness purposes this study employs several indicators to measure outreach. These are: the number of clients served, nature and type of activities undertaken by borrowers, and gender of clients served by the MFIs. These variables are used as proxies for poverty level of the clients served.

Efficiency

Operational efficiency of an MFI is the degree to which it minimizes cost when delivering services. Operational efficiency depends on administrative and managerial decisions. Lending methods, efficient procedures and productive staff (Schreiner, 2001; 2002; 2003; CGAP, 2003). Several indicators can be used to measure efficiency. These are the Cost per client ratio, operating expense ratio, and number of borrowers per loan officers' ratio.

3.2 FINANCING THEORIES

3.2.1 Theories in profit motivated businesses

In their seminal work on the irrelevance of capital structure, Modigliani and Miller (1958) were the first financial economists to propose a theory on financing decisions. In their paper they argued that under perfect markets conditions (where there are no transaction cost, and no taxes and bankruptcy costs) the composition of the capital of the firm does not affect the value of the firm or its performance. They stated that what affects the firm's value is the earning potential of its assets but not the securities it issues. However, following critical challenges on the unrealistic assumption of perfect markets Modigliani and Miller (1963) revised their position by incorporating tax benefit on debt as an influencing variable on capital decisions. In this new dimension, they argued that capital structure matters under imperfect economies and suggesting that there is a relationship between financial leverage and economic performance of the firm, thus firms should use as much debt as possible in order to enhance their performance.

Subsequent to Modigliani and Miller works several theories have emerged on the relationship between capital structure and firm economic performance. One of those theories is the agency theory.

The Agency theory

The separation of ownership and control in firms normally result into agency problems. The seminal paper by Jensen and Meckling, (1976), hypothesis that high leverage (more debt) reduces the agency problem and increases firm value by constraining or encouraging managers to act more in the interests of shareholders.

Harris and Raviv (1991), and Majundar and Chhibber, (1999) tested the agency theory and reported that debt allows shareholders to discipline management because defaults allows creditors the option to force the firm into liquidation. In similar direction Jensen (1986) asserts that the pressure to generate cash flows to pay interest expenses on debt reduces the agency cost. Debt exposes firms to external scrutiny in the financial market, thus improving accountability and efficiency use of resources by managers (Easterbrook, 1984; Fosberg, 2004).

Generally, the tax benefit of debt and the pressure arising from free cash flow of debt provide acceptable explanation for shareholders (owners) to prefer debt than equity funds when firms need to finance their new investments.

3.2.2. Theories in the microfinance industry

The welfarist and institutionist theories

Private capital financing in the MFIs industry has created an interesting debate among finance and social economic researchers. The centre of the debate is on whether private capital can deter MFIs from reaching the poor. The debate has consolidated into two theories know as the institutionist theory and welfarist theory.

According to institutionists theory, microfinance should be integrated into formal financial systems, so as to ensure colossal and permanent access to financial services to increase clientele base. They advocate that in order to reach majority of the poor, MFIs should attract private investors by being commercially minded, operate at large scale and profitable. The role of donors should be to build the institutional capacity of MFIs and to support the development of experimental services and supporting the overall infrastructure of the financial system, (CGAP, 2004; 2007)

Institutionists do not believe in the effectiveness of subsidized credit programmes. They believe that such credit schemes will end up in the hands of those not-so-poor households which have enough influence and connections to divert scarce credits to them, while depriving the poorest (Gibbons and Meehan, 2000; Meehan, 2004).

The welfarist approach is explicit and focused to reaching the very poor first. They are less interested in banking per se than in using financial services as a means to alleviate directly the worst effects of deep poverty among participants and communities, even if some of these services require subsidies (Ferreira, 2004, p 9, Woller *et al.*, 1999). Welfarists argue that donations serve as a form of equity, and as such, the donors can be viewed as social investors. Unlike private investors who purchase equity in a publicly traded firm, social investors do not expect to earn monetary returns. Instead, these donor-investors realize a social, or *intrinsic*, return. Welfarists tend to emphasize poverty alleviation, place relatively greater weight on depth of outreach relative to breadth of outreach, and gauge institutional success more so according to social metrics (Woller and Brau, 2004).

The Welfarists fear that the commercialization of microfinance, more precisely, the need to be profitable in order to attract private capital, will divert the industry from its paramount goal of poverty alleviation (Woller *et al.*, 1999). They believe that there are many borrowers, who are poorer and harder to reach, that are unable to pay high interest rates. Thus, the win-win situation advocated by institutionists is, in practice, much more complicated to achieve than they claim (*ibid*).

On the whole, theories explaining the rationale for the selection of financing sources in profit making firms have been tested in depth in both developed and developing countries. There is general consensus that profit motivated firm finance their operations with due regard to risks associated to each source of funds. Thus firms finance their operations first with equity, then with retained earnings before resorting to debt capital. The combination of the various sources of funds takes into account the risks implication of each source to the firm. The challenge ahead of practitioners in MFIs and academic researchers is the

application of debt capital in the microfinance industry. Debt capital is associated with fixed interest rate payments and repayments of principal on maturity. Sometimes debt capital is linked with restrictive covenants which might hamper the implementation of poverty related policies in the long run. The implication of risks associated with debt capital has not been studied in depth both internationally and in Tanzania. Thus this paper presents the empirical evidence on the implication of debt capital on financial and social performance of MFIs in some selected MFIs in Tanzania.

4.0 METHODOLOGY

This paper used quantitative data and through a sample survey of MFIs operating in Tanzania. Time series -cross sectional data was used. The time series cross-sectional annual data enabled the study to track changes on financial capital used, outreach and efficiency among sampled MFIs. Historical data over the period from 2005 to 2009 (a five years period) was collected on issues such as sources of funds, cost implication of each financing source, outreach structure, client selection methodology, lending methodology, clients poverty status, assets structure, staff capacity, loan portfolio, and other related information. The required secondary data was collected from a web site of the MIX market an international organization dealing with evaluation of microfinance institutions where most MFIs report their financial statements and other operational performance information annually. The MFIs included in sample were those which consistently contained all the necessary information needed in the study over the study period. Those with missing information were dropped in the sample. The sample size was 8 MFIs which resulted into 48 observations (8 MFIs over 6 years). These MFIs were the only ones that met the needed conditions in the sampling plan.

DATA ANALYSIS

The analysis was guided by the following hypotheses:

Hypothesis H1: There is a significant relationship between capital structure and outreach of MFIs.

The theoretical statement² of this model is that the performance of MFIs in terms of outreach (both breadth and depth) is influenced by debt and other funds used by MFIs. That is: Outreach, = f (Y[debt ratio, Subsidies/donations ratio, deposit ratio, equity ratio], X [firm size, funding costs, age, profitability,]), thus;

$$OUTREACH = \beta_0 + \sum_{i=1}^n \beta_i X + \sum_{j=1}^m \beta_j Y + LENMETDUM + \epsilon \dots \dots \dots (2)$$

β_0 represents intercept, X, represents MFIs characteristics control variables, ϵ = error term representing the residue of the disturbance in the model, β_i = Coefficients of the independent variables

This hypothesis was analysed using regression techniques of pooled ordinary least square, random -effect GLS, and fixed effect regressions

Hypothesis 2: There is a significant relationship between capital structure and efficiency of MFIs.

The theoretical statement³ of this hypothesis is that the performance of MFIs in terms of efficiency is influenced by debt and other funds used by MFIs. That is: Efficiency = f (Y[debt ratio, Subsidies/donations ratio, deposit ratio, equity ratio], X [firm size, funding costs, age, profitability,]), thus;

$$EFFICIENCY = \beta_3 + \sum_{i=1}^n \beta_i X + \sum_{j=1}^m \beta_j Y + \epsilon \dots \dots \dots (3)$$

This hypothesis was analysed using regressions (Pooled OLS, and GLS).

5.0 RESULTS AND DISCUSSIONS

Three regression techniques were used to test the effect of capital structure on outreach and efficiency of MFIs. Since the study uses panel data, the analyses could possibly be done using pooled OLS, fixed effect regression, or random effect (GLS) regression. The major concern was to test which regression type could produce consistent and unbiased coefficient estimates. The Breusch-Pagan Lagrange multiplier (LM) test is used to test random effects. The null hypothesis of the one way random group effect model is that individual-specific or time -series error variance are zero. If the null hypothesis is not rejected, then the pooled OLS regression model is appropriate. To test whether a fixed effect model or its counterpart random effect model is appropriate, the Hausman specification test is used. Normally these two test are available with STATA a statistical package used in this study. These two tests were used to identify the most appropriate regression model for each analysis of the model.

5.1 THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND OUTREACH OF MFIs

The outreach variables were regressed on capital structure variables together with MFIs characteristics variables as control variables. Table 1 presents the results of random -effect GLS (Generalized Least Square) regression, and the pooled OLS (Ordinary Least Squares). Three variables were used to measure outreach of MFIs. These are the natural log of number of borrowers (indicating breadth of outreach), percentage of women members (indicating depth of outreach) in MFIs, and log of loan sizes (depth of outreach). These three variables were regressed one at a time on capital structure variables together with the MFIs specific characteristics variables as control variables.

TABLE 1: COEFFICIENT ESTIMATES OF THE EFFECT OF CAPITAL STRUCTURE OF MFIs ON OUTREACH

Regressors	Dependant variables; N= 42					
	Eq.1 :LOGBORROWER (Random- effect GLS Regression)		Eq.2: %WOMENBORROWER (Random-effect GLS regression)		Eq.3: LOGLOANSIZE (Pooled OLS regression)	
	Coeff.	Z-values	Coeff.	Z-values	Coeff	T-values
Age	0.177	2.02**	-1.83	-1.66*	0.19	1.76*
Sze	0.010	0.25	1.28	1.52	0.20	2.46**
Tdr	1.903	2.08**	29.9	1.74*	-0.41	-0.40
Dr	-2.08	-0.61	123.9	3.29***	-4.90	-2.92***
Const.	7.455	6.50***	24.66	1.40	5.84	3.59***
R2	0.28		0.3035		0.4459	
Prob>F	0.003		0.000		0.000	

*, **, ***. Significant at the level of 10%; 5%; and 1% respectively.

Where:

Age= Age in years of MFIs since establishment

Sze= Size of MFIs in terms of log of total assets

Tdr= Total debt ratio (debt /total assets)

Dr= Donation ratio (total donation/total assets)

Loan size= Average loan per borrower in Tshs

Borrower= Outstanding total number of borrowers

Women= Percentage of women borrowers (Women/total borrowers)

² The study hypothesis that as funding cost increases outreach structure (depth of outreach) tend to change, MFIs are forced to drop small loan borrowers (the poor) who are costly to administer and tend to lend to well off customers-relatively less poor customers. Thus a negative relationship is expected between outreach variables and funding costs, (debt variables). However a positive relationship is expected between depth of outreach with Donations or subsidies.

³ The study hypothesis that as MFIs access more funds in terms of debt capital their scale of operations increases thus enjoy economies of large scale hence reduction in overall operating cost per unit. Thus a negative relationship is expected between efficiency variables and debt capital. However a positive relationship is expected with Donations or subsidies.

As shown in Table 1 the coefficient of the variable for log of number of borrowers is positively correlated with total debt ratio at a statistically significance of 5% ($Z = 2.08$; $p = 0.037$) in equation 1. The implication is that debt capital increases breadth of outreach by increasing the number of active borrowers. Similar results were reported by Kyereboah-Coleman (2007) in Ghana. Debt financed MFIs increased their client base significantly than donor dependant MFIs.

This paper results however show that debt capital marginally increases depth of outreach (outreach to the very poor) as measured by percentage of women members in MFIs as indicated in equation 2. The statistical strength of the influence is 10% level ($t = 1.74$; $p = 0.082$). However the influence of debt capital in relation to log of loan size is not statistically significant as shown in equation 3.

Results in Table 1 also show that donations increases depth of outreach (as measured by percentage of women and loan size) of MFIs. As indicated in equation 2 the effect of donations on percentage of women members is positive and statically significant at zero percent level ($t = 3.29$; $p = 0.001$). The implication is that MFIs with more donations have deep outreach (reach poor clients especially women) as measured by high percentage of women members. As shown in equation 3 the effect of donation on average loan size is negative and statistically significant at zero percent level ($t = -2.92$; $p = 0.006$). The implication is that more donations low average loan sizes, thus MFIs with more donation issue small loan sizes hence an indication of reaching poor clients. This finding conforms to welfarist theoretical expectations.

5.2 THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND EFFICIENCY OF MFIs

The hypothesis in the analysis was that capital structure affects MFIs efficiency. To test this hypothesis two pooled OLS regressions were run. Pooled OLS regressions were found producing unbiased and consistent coefficient estimates compared to fixed or random effect regression models. The first regression involved regressing natural logarithm of cost per borrower (LOGcpb) on capital structure variables of debt ratio (tdr) and donations ratio (dr) together with MFIs specific variables of age and size as control variables. The second regression was run on operating expenses per loan portfolio (opelp) as dependant variables on same regressors as the first equation.

TABLE 2: POOLED OLS COEFFICIENT ESTIMATES OF THE EFFECT OF CAPITAL STRUCTURE ON EFFICIENCY OF MFIs

Regressors	Dependant Variable; N= 44			
	Eq1: LOGcpb		Eq. 2: Opelp	
	Coeff.	T-values	Coeff.	T-values
Age	0.33	2.57***	0.505	0.45
Sze	0.40	5.75***	1.036	2.24**
Tdr	4.44	2.60***	29.86	1.60*
Dr	-9.10	-1.97**	-72.83	-1.68*
Pwb	-0.004	-0.30	0.224	1.04*
Const	-2.25	-1.94**	2.003	0.19
R2	0.6483		0.3788	
Prob> F	0.000		0.000	

*, **, ***. Significant at the level of 10%; 5%; and 1% respectively.

Where:

Pwb= Percentage of women borrowers

Opel= Annual Operating expenses per loan portfolio in Tshs

Cpb= Annual Cost per borrower in Tshs

Sze; Tdr; Dr; Age = As defined in Table 1.

Results in Table 2 show that the effect of total debt ratio on cost per borrower is positive and statistically significant at 1% level ($t = 2.60$; $p = 0.013$). The implication is that debt capital reduces efficiency of MFIs as indicated by increasing cost per borrower. The effect of debt capital on efficiency of MFIs as measured by operating expenses per loan portfolio (openlp) is also positive and marginally statistically significant at 10% level ($t = 1.60$; $p = 0.109$). The implication is that debt capital increases operating expenses on both loan portfolio and cost per borrower contrary to expectation. The expectation was that debt capital can make MFIs efficient through the agency theory. Intuitively the positive relationship found here shows debt funding expenses increases cost per borrower as well as operating expenses per loan portfolio, this is obvious. The reduction in cost arising from agency theory would depend on the trade-off between economies of large scale and the funding cost. Funding costs are likely to exceed the benefit from economies of scale at the early stages of debt utilization. However, in a long run a negative relationship between debt capital and cost per borrower or loan expenses may arise due to reduction in cost per unit as MFIs expands their operations.

The effect of donation on cost per borrower and loan expenses per portfolio is negative and statically significant at 5% and 10% level respectively. The interpretation is that MFIs with more donations in their capital structure have low cost per borrower or expenses ratio per loan portfolio compared to those with debt capital. The finding suggests that MFIs with more donations have low or no debt expenses and hence overall cost per borrower or loan expenses is low. However, this does not suggest efficiency. In the long run if donations stagnate economies of large scale cannot apply to such MFIs. They will have high cost per borrower compared to MFIs with expanded scale of operations arising from use of debt capital. Thus the observed relationship could be a temporary phenomenon. It is therefore not appropriate to refute the theoretical expectations underlying the study analysis.

6.0 CONCLUSION

The effect of debt capital on depth of outreach of MFIs is evident in this study. Highly leveraged MFIs issue large loans sizes and lend to less poor borrowers to mitigate loan losses and enhance interest income to increase their ability to meet debt interests. On the other hand MFIs with high donations ratio in the capital structure issue small loan size thus indicating deep outreach. The results of this study therefore support the welfarists theory on mission drift arising from commercialization of MFIs.

The agency theory suggests that debt capital exposes managers to external scrutiny and makes them use resources efficiently to minimize losses and wastes and be able to mitigate debt obligations. Results from this study indicate that MFIs managers reduces wastes buy including more clients some of which are non-poor clients in their clientele to reduce the agency problem with lenders and shareholders. Funding costs (interest on debt) seem to off-set the marginal benefits arising from large scale operations of debt –financed MFIs. Thus, operating cost per borrowers does not decline in the short run as expected. Therefore, the study fails to show that debt capital affects efficiency in MFIs as per theoretical expectations.

7.0 RECOMMENADATIONS

The poor in both urban and rural areas are not homogeneous. Some are less poor and others are desperate poor and all need financial services. To avoid mission drift among MFIs there is need for market segmentation among MFIs institutions. Clients of MFIs should be categorized according to their poverty levels. Each type of funds procured by MFIs should be closely aligned to a particular (purpose) type of clients to be served. Debt capital should be used by MFIs to lend and finance operations related to less poor clients while donations and grants be used to lend and finance operations associated with the very poor. Interest rates charged be adjusted accordingly. This may enhance access to all classes of the poor in Tanzania. Government subsidies and donations from donor community to MFIs should be sustained over the foreseeable future and MFIs should not be fully commercialized.

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RURAL CONSUMER ATTITUDE TOWARDS ONLINE SHOPPING: AN EMPIRICAL STUDY OF RURAL INDIA**MALLIKA A SHETTY****LECTURER****DEPARTMENT OF COMMERCE & MANAGEMENT****SMS COLLEGE****BRAHMAVAR****ABSTRACT**

This paper discuss the rural people behaviour towards online shopping, it also discuss why they prefer online shopping and why not. In recent years, rural markets have acquired significance, as the overall growth of the economy has resulted into substantial increase in the purchasing power of the rural communities. Rural Markets are defined as those segments of overall market of any economy, which are distinct from the other types of markets like stock market, commodity markets or Labor economics. Online shopping or e-shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser. Alternative names are: e-web-store, e-shop, e-store, Internet shop, web-shop, web-store, online store, online storefront and virtual store. The purpose of this study is to analyze the impact of consumer perceptions in regards to online shopping. A sample of 100 (63 males and 37 females) respondents were taken into consideration from Brahmapur.

KEYWORDS

rural area, online shopping, consumer behaviour, retail buying.

INTRODUCTION

Rural areas are also known as 'countryside' or a 'village' in India. It has a very low density of population. In rural areas, agriculture is the chief source of livelihood along with fishing, cottage industries, pottery etc. The quest to discover the real rural India still continues in great earnest. Almost every economic agency today has a definition of rural India. Here are a few definitions: According to the Planning Commission, a town with a maximum population of 15,000 is considered rural in nature. In these areas the panchayat takes all the decisions. There are five people in the panchayat. The National Sample Survey Organisation (NSSO) defines 'rural' as follows:

- An area with a population density of up to 400 per square kilometer,
- Villages with clear surveyed boundaries but no municipal board,
- A minimum of 75% of male working population involved in agriculture and allied activities.

RBI defines rural areas as those areas with a population of less than 49,000 (tier -3 to tier-6 cities). It is generally said that the rural areas house up to 70% of India's population. Rural India contributes a big chunk to India's GDP by way of agriculture, self-employment, services, construction etc. As per a strict measure used by the National Sample Survey in its 63rd round, called monthly per capita expenditure, rural expenditure accounts for 55% of total national monthly expenditure. The rural population currently accounts for one-third of the total Indian FMCG sales 742 million Indians constituting 138 million households reside in 6, 38,365 villages (Census, 2001). the size of rural market itself speaks of its potential. The current marketing environment and economic scenario have brought the corporate under contemporary roofs of modern India, which is challenging the current standards of segmenting, targeting and reaching the customers. Realistically, India as a nation has come a long way from the place where only urban population which constitutes 20 per cent of customer base for companies are responsible for 80 per cent of their profits. The companies are looking for new opportunities and avenues, as they are witnessing a decline in their growth rates in urban markets due to market saturation and they do have a huge, untouched and untapped rural Indian market. The driving force for this is rural youth who are educated, have access to technology and have openness to change. Also rural markets have acquired significance, as the overall growth of economy has resulted into substantial increase in the purchasing power of the rural communities. A survey by India's premier economic research entity, National Council for Applied Economic Research (NCAER) indicates that rise in rural incomes is keeping pace with the rise in urban incomes. The rural middle class is growing at 12 per cent, close to the urban middle class which is growing at 13 percent. Punjab, Kerala, Haryana, Rajasthan, Gujarat, Andhra Pradesh and Maharashtra are considered highly prosperous states

B.N. Garudachar, general manager, corporate communication and investor relations at Voltas, a Tata group company in air-conditioning and engineering services. "These are: low population numbers, low median income, poor infrastructure [roads, electricity, communications], and agrarian rather than industrial activity. Such rural areas are within the sphere of influence of neighboring cities and metros.

SALIENT FEATURES OF RURAL INDIA

Some common characteristics that do exist amongst most of the rural markets in India are as follows.

- Population: 83.3 per cent of the villages have a population of less than 2000 (Census of India 2001)
- Levels Of Education: Although the percentage of literates has increased from 36 in 1981 to 59 in 2001, there is still approximately 60 per cent of the rural population who lies below the middle education bracket. (Kashyap&Raut, 2010)
- Occupational Pattern: Almost 76 per cent of the rural population depends on cultivation or wages for their living (NCAER, 2002).
- Characteristics: in terms of occupation, consumption and buying behavior change prominently from urban to rural in locations with population more than 10000

Online shopping is a growing area of technology. Establishing a store on the Internet, allows for retailers to expand their market and reach out to consumers who may not otherwise visit the physical store. The convenience of online shopping is the main attraction for the consumers. Unique online payment systems offer easy and safe purchasing from other individuals. Electronic consumers exhibit different buying behaviors such as; cart abandonment. The benefits of shopping online also come with potential risks and dangers that consumers must be aware of. In the future, we can expect online stores to improve their technology tremendously, allowing for an easier and a more realistic shopping experience.

A company that wants to market their items online can establish an online store by developing a website. These stores usually consist of several department areas with the merchandize organized accordingly. The consumer may view the products' picture, item details, materials, sizing, etc. If the consumer chooses to add the item to his or her virtual shopping cart, they are usually given the option to continue shopping or proceed to checkout. Once the consumer proceeds to checkout, the credit card transaction is completed and the item is prepared and shipped from the retailer to the consumer.

Many physical retail stores have expanded their market by using the Internet. By having both a virtual store and a physical store, companies get the best of both worlds. Stores that are marketing their products in both areas can take advantage of the high demand for online shopping availability. The ability to shop for products online gives consumers the option to purchase goods off of the Internet with the convenience of not even leaving his or her home. Others; however, still enjoy and prefer to go into a physical store to make purchases. For some consumers their method of purchase is not because of a preference but because of generation gap.

FIG. 1

India Internet Users Urban India

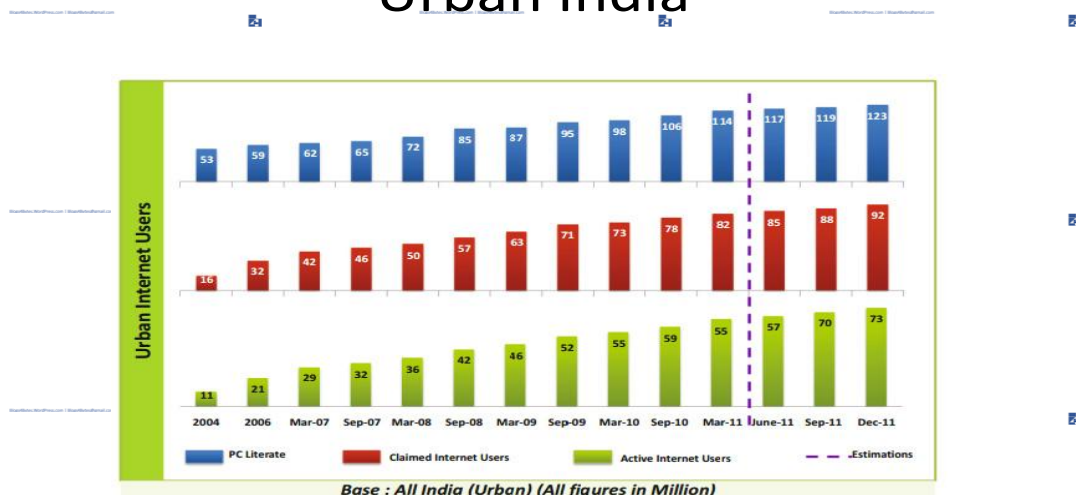
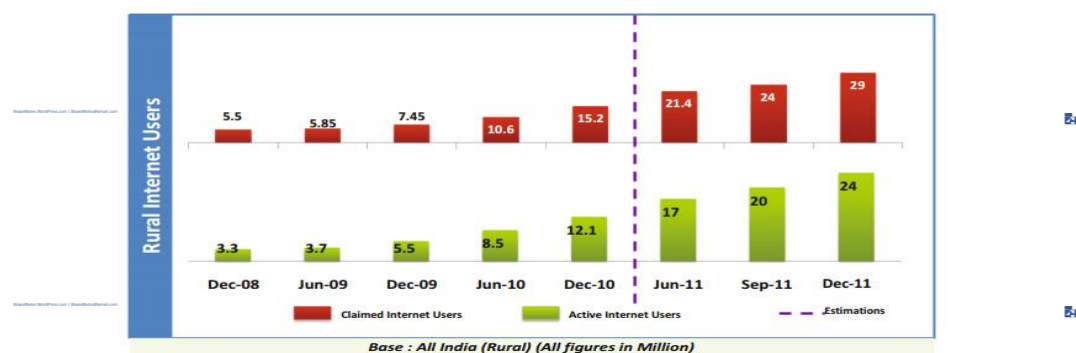


FIG. 2

India Internet Users Rural India



INDIAN INTERNET USERS

Total Users vs. Mobile Users vs. e-Commerce vs. Ads

Total Internet population to touch 180mm, 30 million new Internet users in 2013

20% growth in the Internet population. 38% are from Top 8 **Metro***, 12% from 5-10 **Small Metro***, and 29% from 2-5 **Non-Metro***

An Internet user in India on average is spending 13 hour per week, this number will likely reach 16 hours per week in 2013, 50 million or under 6% mobile users access Internet via mobile handsets. In 2013 mobile Internet penetration will go up from 6% to 10%. 2012 India E-Commerce reached \$550 million in gross revenue. E-Commerce to touch \$900 million in gross revenue by end of 2013. India Internet advertising generated \$300 million in revenue in 2012 and India Internet advertising can double in 2013 to reach \$600 million

India Internet Users:-Rural Internet Users

Rural India has 31 million Internet users & accessed at least once in the past month

38 million Internet users who have accessed Internet at least once in their lifetime

3.6 million Mobile Internet users, up by 7.2 times from 0.5 million users in 2010

75% of the rural Internet users access the Internet for Entertainment purposes

56% of the users make use of the Internet for communication purposes

50% of the users access educational services and online job sites

39% of the rural Internet users make use of social networking services

34% of the rural Internet users make use of e-commerce portals

Penetration of **claimed internet users*** in rural India grown from 2.6% in 2010 to 4.6% in 2012

***Claimed Internet User**: An individual who has used the Internet at any point in time in the past.

NEED FOR THE STUDY

Rural Markets are defined as those segments of overall market of any economy, which are distinct from the other types of markets like stock market, commodity markets or Labor economics. The so-called urban markets are crowded and saturated and the share of agriculture in GDP is going down but India still lives in her villages. Such a potential market was being ignored by corporate sector and small and medium industries. Hence it is proposed

to study the potentiality and problems of rural market with a special reference to Indian Rural Market. With the advent of information technologies and emergence of online stores, the online shopping has not been the same as it was in the past. Now in order to strive in this cut throat competition it is of vital importance for the organizations to understand the factors that matter for consumers when they shop online. As the competition in e-commerce is intensified, it becomes more important for online retailers to understand the antecedents of consumer acceptance of online shopping. Such knowledge is essential to customer relationship management, which has been recognized as an effective business strategy to achieve success in the electronic market. The current research study is an effort to understand the satisfaction and loyalty pattern for the rural consumers shopping online

OBJECTIVE OF THE STUDY

- To identify the rural consumers attitude towards e-Retailing in India.
- To determine the challenges in the way of e-Retailing in rural India.
- To suggest positive recommendations for successful advent of e-Retailing in rural India

RESEARCH METHODOLOGY

Both primary and secondary data has been used.

An exhaustive questionnaire was structured to gather as much primary information as possible and hence, the most common form of research, descriptive research was used. A preliminary study in the form of informal interviews with 107 persons was conducted.

Secondary data is one which is already collected by some other researcher on the same or some other field has been used.

Convenience sampling method is used .Brahmavar is considered as a universe .The final year students studying in a bachelor degree course in SMS college Brahmavar is taken as sample .

LIMITATIONS OF THE STUDY

Sample size is very small . Concentrated only on educated rural population with same age group .

LITERATURE REVIEW

The classic consumer purchasing decision-making theory can be characterized as a continuum extending from routine problem-solving behaviors, through to limited problem-solving behaviours and then towards extensive problem-solving behaviors [Schiffman et al.,2001]. The traditional framework for analysis of the buyer decision process is a five-step model. Given the model, the consumer progresses firstly from a state of felt deprivation (problem recognition), to the search for information on problem solutions. The information gathered provides the basis for the evaluation of alternatives. Finally, post-purchase behavior is critical in the marketing perspective, as it eventually affects consumers' perception of satisfaction/dissatisfaction with the product/service. This classic five stage model comprises the essence of consumer behaviour under most contexts. Nevertheless, the management of marketing issues at each stage in the virtual environment has to be resolved by individual E-marketers. Peterson et al. [1997] commented that it is an early stage in Internet development in terms of building an appropriate dedicated model of consumer buying behaviour. Decision sequences will be influenced by the starting point of the consumer, the relevant market structures and the characteristics of the product in question. Consumers' attitude towards online shopping is a prominent factor affecting actual buying behaviour. Source: Jarvenpaa Journal of Electronic Commerce Research, VOL. 6, NO.2, 2005 Todd [1997] proposed a model of attitudes and shopping intention towards Internet shopping in general. The model included several indicators, belonging to four major categories; the value of the product, the shopping experience, the quality of service offered by the website and the risk perceptions of Internet retail shopping. In the research conducted by Vellido et al. [2000], nine factors associated with users' perception of online shopping were extracted. Among those factors the risk perception of users was demonstrated to be the main discriminator between people buying online and people not buying online. Other discriminating factors were; control over, and convenience of, the shopping process, affordability of merchandise, customer service and ease of use of the shopping site. In another study, Jarvenpaa et al. [2000] tested a model of consumer attitude towards specific web base stores, in which perceptions of the store's reputation and size were assumed to affect consumer trust of the retailer. The level of trust was positively related to the attitude toward the store, and inversely related to the perception of the risks involved in buying from that store. Jarvenpaa et al. [2000] concluded that the attitude and the risk perception affected the consumer's intention to buy from the store. Consumer risk perceptions and concerns regarding online shopping are mainly related to aspects involving the privacy and security of personal information, the security of online transaction systems and the uncertainty of product quality. Trust is interwoven with risk [McAllister, 1995]. One of the consequences of trust is that it reduces the consumer's perception of risk associated with opportunistic behaviour by the seller [Ganesan, 1994]. Lack of trust is frequently reported as the reason for consumers not purchasing from Internet shops, as trust is regarded as an important factor under conditions of uncertainty and risk in traditional theories. Mayer et al. [1995] developed a model which combines traditional marketing philosophy on consumer motivation to buy and the trust model. In this model, trust propensity; which is a personality trait possessed by buyers; is an important antecedent of trust. In Internet shopping, there is not much information available to the buyer regarding the seller, prior to purchase. A buyer with a high propensity to trust will more likely be a potential customer than a buyer with a lower propensity. Mayer et al. [1995] proposed that ability, benevolence and integrity constitute the main elements of trustworthiness. Ability refers to skills, competencies and characteristics that a seller has in a specific domain. In this context, sellers need to convince buyers of the competence of their companies in the Internet shopping business. Benevolence is the extent to which the seller is perceived by the buyer as wanting to 'do good'. Sellers have to convince buyers that they genuinely want to do good things for buyers, rather than just maximize profit

FINDINGS & INTERPRETATIONS

DEMOGRAPHIC PROFILE OF RESPONDENTS

Details	Frequency (N)	Percentage (%)
Gender		
Male	50	50%
Female	50	50%
Age		
Between 20-30	100	100 %

ATTRIBUTES OF BRAND PREFERENCE

ATTRIBUTES OF BRAND PREFERENCE IN RURAL MARKET

Factors	Rank
Quality	1
Price	2
Easy availability	3
Family liking	4
Advertisement	5
Variety	6
Credit	7

INTERPRETATION

From the above table it is inferred that the respondents give 1 rank to Quality, 2nd to Price, 3rd to Easy Availability, 4th to Family Liking, 5th to Advertisement, 6th to Variety & 7th rank to Credit.

43 RESPONDENTS PREFER ONLINE TRADING

REASONS

- It is very easy.
- You will choose your favorite items from variety of online shopping sites comparing price and quality.
- No need to go physical shops. You will have more time for your family.
- Just need a computer and a payment sending option (like-net banking, credit card, ATM card).
- Almost all kinds of items can be brought through online shopping system.
- You can buy foreign goods from your bedroom.
- You will get your goods at your home.
- It is very secure.

25 DID NOT PREFER

REASONS

- To rural area delivery of goods is no possible
- Risky and misleading
- No guaranty of quality
- Can not exchange
- You can never verify your purchased goods using your own hands. Here you have to depend on picture, videos and descriptions. But the chance of defects is low.
- Sometime you will pay much higher price for a particular item.
- If you using ATM card, debit card, credit card, then there will be a question about your bank account security.
- Here is no guarantee that you will receive your goods at time. Shipping will be delayed.
- You have to pay a lot of extra if you buy form foreign shopping site.

32 respondents say that we are not familiar with online trading we are illiterate about it to use online trading we should be educated in banking transactions and computer usage also , we don't have computer or mobile with us .

RECOMMENDATIONS FOR EFFECTIVE RURAL MARKETING PRACTICES

- The Government has to develop infrastructure facilities like roadways, railways etc., in rural areas so as to reach large Indian rural market.
- The rural communication facilities like telecommunication systems, internet facilities, broadcasting systems etc., have to be improved so that there will not be anycommunication gap among players of the rural market segments.
- Effective Supply Chain Management practices can bring down the various costs associated with rural markets like distribution cost, cost of communication, customer cost, cost of sale etc.
- Educating rural consumers is the key to successful rural marketing. Rural consumers need to be educated in all aspects like usage of the products, gathering product information, consumer rights, laws and regulations, getting the right product at right place at right cost in right time.
- The efficient marketing is predominantly influenced by efficient distribution system it means products such ultimate consumer in the quickest time possible at minimum cost.
- The state marketing board or federation or market committees also the producers, traders and sellers have necessarily to be consulted as they have the principle interest towards its use.
- Suitable structure of support prices for various farm commodities adjusted from time-to-time. Adequate arrangement of agricultural produce on support price, if the price falls below the level.
- Rural marketing is the nerve center of a rural economy; rural markets are the channels for the movements of goods and services as well as to promote cultural integration.
- Greater Need for Strategic Rural Marketing Practices Which includes-Client and location specific promotion -Joint or cooperative promotion-Bundling of inputs-Developmental marketing -Unique selling proposition (USP) -Extension services -Business ethics -Partnership for sustainability -Management of demand.

Companies need to promise through understandable language to the rural consumers and it is needed to fastening the distribution services to rural areas which are far away from towns or cities. Companies should think and compete with labelled products which are local made and develop the interest in rural consumers' by highlighting the manufacturing date and expire date. Companies' supervision is highly required wherever outdated products are selling, companies should seize them. Moreover companies' should develop the brand trust in rural consumers'. For this they need to be in touch with rural consumers in either way of promoting their good to rural consumers.

CONCLUSION

There were almost twice as many "lower income households" in rural areas as in urban areas. There were 2.3 million "highest income" households in urban areas as against 1.6 million in rural areas. NCAER projections indicated that the number of "middle income and above" households was expected to grow to 111 million in rural India by 2007, compared to 59 million in urban India. Gone were the days when a rural consumer had to go to a nearby town or city to buy a branded product. The growing power of the rural consumer was forcing big companies to flock to rural markets. At the same time, they also threw up major challenges for marketers. In rural markets, customs and beliefs play important role in success or failure of any product. Therefore every marketer has to concentrate on rural markets apart from the matured urban markets. The role of government is very vital in solving the problems of rural markets. Development of infrastructure and effective implementation of laws, rules and regulations will protect of interest of rural consumers. The companies need to reduce the risks related to consumer incompetence by tactics such as making purchase websites easier to navigate, and introducing Internet kiosks, computers and other aids in stores. The goal is not to convert all shoppers to online purchasing, but to show them it's an option.

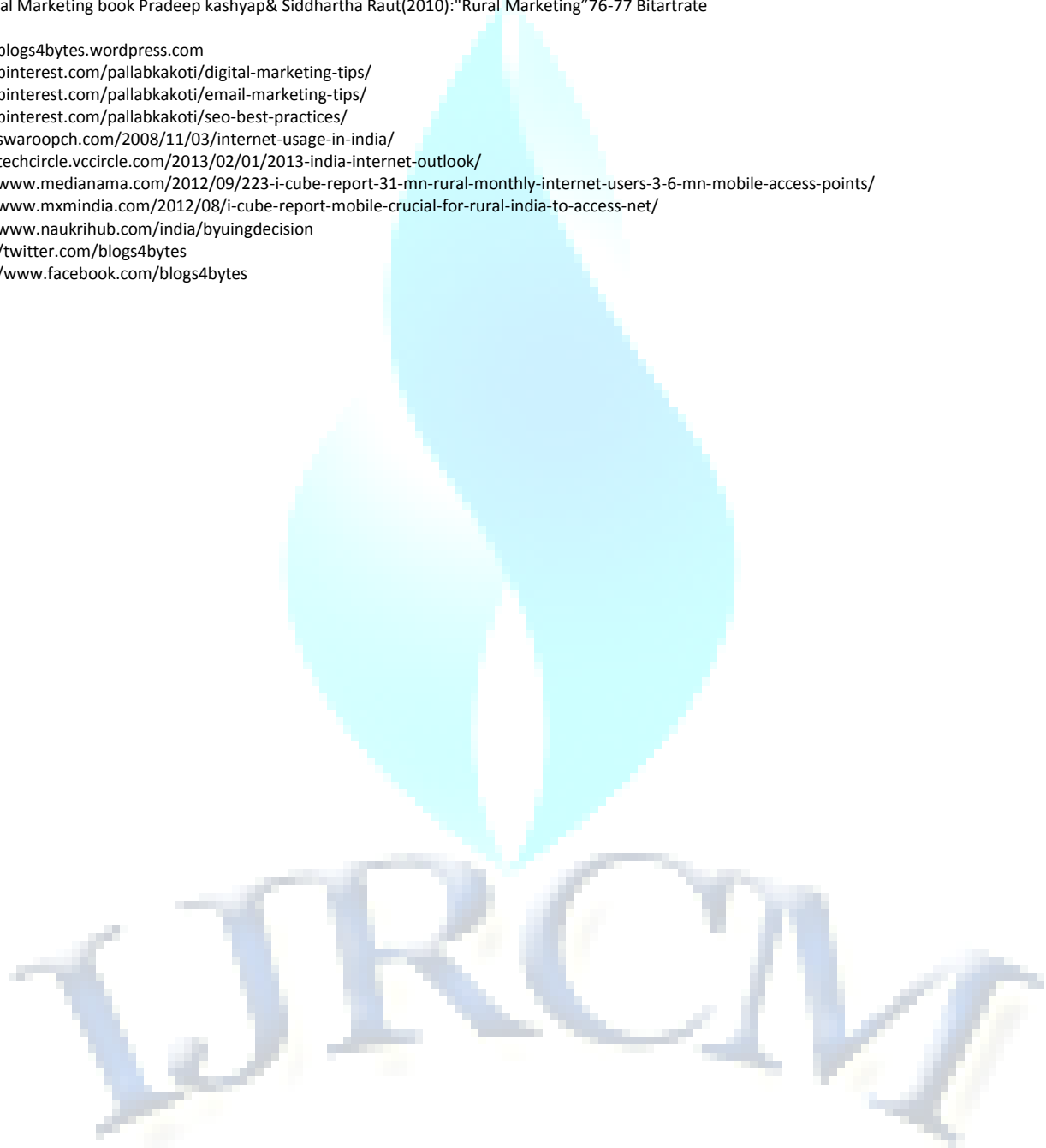
In addition to above, efforts need to be taken to educate the online buyers on the steps that need to be undertaken while making an online purchase. Moreover, the feedback of an online buyer should be captured to identify flaws in service delivery. This can be done through online communities and blogs that serve as advertising and marketing tools and a source of feedback for enterprises. We found that it is a challenge for E-marketers to convert low frequency online buyers into regular buyers through successful website design and by addressing concerns about reliable performance. Thus, the online retailing raises more issues than the benefits it currently offers. The quality of products offered online and procedures for service delivery are yet to be standardized. Till the same is done, the buyer is at a higher risk of frauds.

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MICRO INSURANCE: A PRODUCT COMPARISON OF LIC & SBI LIFE INSURANCE

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ABSTRACT

Micro insurance is the new buzzword in Indian insurance industry. It leads to have a 'policy in every pocket'. In India there is existence of vicious circle of poverty. Poverty makes poorer, to the poor people. So, in this scenario micro insurance is the emerging instrument to breaking this vicious circle of poverty and insured them from the specific perils which make them more vulnerable and deprived. This paper seeks to provide information about the micro insurance, its origin, products. It provides a individual products comparison of two products namely, Jeevan Madhur of LIC and Grameen Bima of SBI Life. Micro Insurance products have been made to compare various benefits and features.

KEYWORDS

Micro Insurance, Policies, Product Comparison.

INTRODUCTION

Low-income persons live in risky environments, vulnerable to numerous perils, including illness, accidental death and disability, loss of property due to theft or fire, agricultural losses, and disasters of both the natural and manmade varieties and they are unable to cope up when a crisis occurs. Government of India enacted a number of schemes for the development of the rural people. Micro insurance is one of the key elements in the financial service package introduced by the Government of India for the upliftment of rural people under the financial inclusion scheme. Micro Insurance Regulations were issued by IRDA in November 2005. The main purpose of giving prime importance to micro insurance and opening a separate vertical for this channel was that, it is through only micro insurance i.e. small ticket policies, that the most vulnerable sections of society can be given the risk cover which has eluded them so far. Now, the insurable perils that should be insured are:-

The insurable perils would be:

1. **Loss of life:-**Most household members contribute to household income, except those too old, young or infirm to work.
2. **Critical illness:-**This has the dual impact of loss earnings/household labour as well as treatment expenses.
3. **Sickness:-**Reduces the working days, and thus productivity, and also generates expenses, though at a smaller level than critical illness.
4. **Old age:-**There are few income options for the elderly. In addition, there is some evidence of emerging social trends in which the obligation of the young to take care of the old is weakening

MICRO INSURANCE- CONCEPTUAL FRAMEWORK

Micro insurance is insurance with low premiums and low coverage. In this "micro" refers to the small financial transaction that each insurance policy generates. Micro insurance commonly called as insurance for the poor. The draft paper prepared by the Consultative Group to Assist the Poor (CGAP) working group on micro-insurance defines micro-insurance as "the protection of low income households against specific perils in exchange for premium payments proportionate to the likelihood and cost of the risk involved."

OBJECTIVES

1. To understand the life micro insurance products of LIC and SBI life insurance in India.
2. To compare life micro insurance products of LIC and SBI life insurance in India.

METHODOLOGY

Individual Life Micro Insurance products; Jeevan Madhur of LIC and Grameen Bima of SBI Life are the samples selected under the study. The study is based on secondary data. Data have been extracted from Annual Reports of IRDA, LIC and SBI websites, journals etc.

LIFE MICRO INSURANCE PRODUCTS OF LIC**I. INDIVIDUAL CATEGORY****1. Jeevan Madhur**

It was introduced by LIC as the first initiative in this field as a simple savings related life insurance plan. Minimum installment premium is Rs.25 for weekly terms. On surviving the date of maturity, the maturity sum is paid along with vested bonus, if any. On the death of the policyholder, an amount equal to total premiums payable during the entire term of the policy will be paid along with vested bonus, if any. On death arising as a result of an accident during the term of the policy, an additional amount equal to the sum assured shall be payable.

2. Jeevan Mangal

It is a term assurance plan with return of premiums on maturity, where the premium may be paid either in lump sum or regularly at yearly, half- yearly, quarterly, monthly, fortnightly, or weekly intervals over the term of the policy. Minimum installment premium is Rs. 15/- per week. By taking a Jeevan Mangal policy together with earlier Jeevan Madhur policy, low income policyholder can now avail the life coverage benefit of up to Rs.80,000/-.

3. Jeevan Deep

It is a simple savings related life insurance plan with Guaranteed Additions where premiums are paid either in lump sum or regularly at monthly, quarterly, half- yearly or yearly intervals over the term of the policy. No loan facility is available under this plan. The policy provides for Guaranteed Addition of Rs.20/- per Rs.1000/- Basic Sum Assured per year during the term of the policy. Depending upon the Corporation experience, the policy shall be eligible for Loyalty Addition during the last year of the policy at such rate and on such terms as may be declared by the Corporation.

II. GROUP CATEGORY

Janashree Bima Yojana and Aam Aadmi Bima Yojana are the schemes of Government of India and are administered all over the country by LIC.

4. Janashree Bima Yojana

It is to provide life insurance protection to the rural and urban poor persons below poverty line and marginally above the poverty line. The premium under the scheme is Rs.200/- per annum per member. 50% of the premium i.e.Rs.100/- will be contributed by the member and/or Nodal Agency/ State Government. Balance 50% will be borne by the Social Security Fund.

5. Aam Aadmi Bima Yojana (AABY)

AABY cover death and disability insurance for the benefit of rural landless households in the country. This Scheme would extend the benefit of life insurance coverage as well as coverage of partial and permanent disability to the head of the family or an earning member of the family of rural landless households in the

States and also educational assistance to their children studying from 9th to 12th standard as an extended benefit. The premium under the scheme shall be Rs.200/- out of which 50% shall be subsidized from the Fund created for this purpose by the Central Government and the remaining 50% shall be contributed by the State Government.

Note: Janashree Bima Yojana and Aam Aadmi Bima Yojana are the schemes of Government of India and are administered all over the country by LIC.

LIFE MICRO INSURANCE PRODUCTS OF SBI LIFE INSURANCE

1. INDIVIDUAL CATEGORY

1. Grameen Bima

It is a simple, hassle-free, non-participating pure term life insurance plan, it provides financial security for family in case of unfortunate death. There is no maturity benefit and loan facility is available under this product.

II. Group Category

Group Micro Insurance Plans are meant for section of the society with small savings and low household incomes. SBI Life presents affordable Group Micro Insurance Plans providing customers with peace of mind, protection and financial support to their families in case of any unforeseen events.

1. Grameen Super Suraksha

It is a low cost group term assurance plan. SBI Life - Grameen Super Suraksha is a group term assurance plan for rural people as well as for the economically vulnerable sections of the society who seek life insurance protection without maturity benefit. The purpose of this product is to provide insurance cover at affordable cost to economically weaker sections of society, such as group of individuals funded by Micro Finance Institutions or NGOs or individuals availing credit facilities from Bank/ Financial Institutions.

2. Grameen Shakti

This product has been specially designed taking into consideration the insurance needs of such sections of the society. The purpose of this product is to provide life insurance protection to the weaker sections of the society, like people who are funded by Micro Financial Institutions or NGO's or avail loan from Bank/ Financial Institutions through SHG.

PRODUCT COMPARISON OF LIC AND SBI LIFE INSURANCE

COMPANY NAME	LIC	SBI LIFE
Product Name	Jeevan Madhur	Grameen Bima
Type of Plan	Saving related life insurance plan.	Term life insurance plan
Death Benefit	Payment of an amount equal to total premiums payable during the entire term of the policy along with vested bonuses, if any.	In the unfortunate event of death of the life insured during the policy term, the nominee will receive the sum assured.
Maturity Benefit	On beneficiaries surviving to the date of maturity, payment of the maturity sum assured along with vested bonuses, if any.	There is no maturity benefit.
Mini. And Maxi. Sum Assured	Rs.5000- Rs.30000	Rs.10000- Rs.50000
Min. and Maxi. Term of Policy	5- 15 Years	5 Years
Mini. And Maxi. Entry Age	18 Years- 60 Years	18 Years- 50 Years
Surrender Value	You may surrender the policy for cash after at least two full years' premiums have been paid. The Guaranteed Surrender Value is equal to 30 per cent of the total amount of premiums paid. Corporation may, however, pay special surrender value as the discounted value of Paid up sum assured and vested bonus, if any, as applicable on date of surrender, provided the same is higher than guaranteed surrender value.	Surrender is allowed from second year onwards. The surrender value paid will be: <ul style="list-style-type: none"> Single premium (exclusive of service tax), 50%, unexpired policy term/ total term. No surrender benefit would be payable in the last year of policy. <ol style="list-style-type: none"> Term is measured in completed months. Unexpired term would be the total policy term in months less the completed number of months as on date of surrender.
Grace Period	A grace period of one calendar month but not less than 30 days will be allowed for payment of yearly or half-yearly or quarterly premiums and 15 days for monthly or fortnightly or weekly premiums.	Not Applicable
Revival	Subject to production of satisfactory evidence of continued insurability, a lapsed policy can be revived by paying arrears of premium together with interest within a period of five years but before maturity from the due date of first unpaid premium. The rate of interest applicable will be as fixed by the Corporation from time to time.	Not Applicable
Cooling-off period	If you are not satisfied with the "Terms and Conditions" of the policy you may return the policy to us within 15 days.	In case you disagree with the terms and conditions, you have the option to return the policy within 15 days of receipt for policies sourced through any channel other than Distance Marketing and 30 days for policies sourced through Distance Marketing along with a letter requesting for cancellation. Premium paid by you will be refunded after deducting the proportionate risk premium for the period of cover, corresponding service tax, cess and stamp duty.
Loan Facility	No loan facility is available under this product	No loan facility is available under this product
Premium Paying Method	Weekly, Fortnightly, Monthly, Quarterly, Half-Yearly, Yearly	Yearly, Single Premium
Mini. and Maxi. Amount of Premium	Rs.100 (Monthly)- Rs.500 (Monthly)	Rs. 300- Rs. 2000 (Premium amounts will be in multiples of Rs. 100)
Exclusions	Suicide	Not applicable

LIMITATIONS AND FUTURE SCOPE OF THE STUDY

The study is limited to Life micro insurance of LIC and SBI life. There is a scope for studying the life micro insurance products comparison of LIC and other private sectors and comparison within the products of LIC.

COMMENTS

Life Insurance Corporation of India (LIC) is the largest insurance company in India with an estimated asset value of ₹1560482 crore. LIC's Micro Insurance Plans are not plans but opportunities that knock on your door once in a lifetime. These plans are a perfect blend of insurance, investment and a lifetime of happiness. SBI Life Insurance is a joint venture between State Bank of India and BNP Paribas Cardif. SBI owns 74% of the total capital and BNP Paribas Cardif remaining 26%. On the basis of the comparison made between the products of LIC and SBI Life the Jeevan Madhur of LIC has provided monthly lower premium. Only LIC is offered the maturity benefits. The higher sum assured are provided by the SBI Life and lower provided by LIC. The maximum period of policy are provided only by LIC. SBI Life states that Grameen Bima is not applicable in the case of grace period and revival of policy. Cooling- off period offered by the two companies are same in case of both products. Loan facility is not available by the two companies. In the case of premium payment amount and method is different from one company to another. As per these comparisons, the life micro insurance product namely Jeevan Madhur shows positive way in most of the cases. So it is to be concluded that Jeevan Madhur of LIC is more attractive than Grameen Bima of SBI Life.

CONCLUSION

Life micro insurance product must be simple, if they have to succeed. Micro insurance business is in its starting stage in India. A low progress is made in the growth and development of this business. In common parlance, micro insurance is the provision of insurance services to low-income households, which serves as an important tool to reduce risks for the already vulnerable population. Regulations on micro insurance were officially gazetted by the IRDA on 30 November 2005. IRDA regulations impose obligation on insurers towards the rural population. So many companies are launching micro insurance product to fulfill their social obligation and they are design more products suitable to the poor sections. They are more concentrated to design and develop newer products to the sections. Moreover the role of micro insurance scheme for the upliftment of the poor and how far this scheme can provide the social and economic development for the poor living in the section of the pyramid. As a result of these tremendous changes, the Indian consumers are witnessing sophistication in the insurance market, which has never been experienced before.

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AN INTERDISCIPLINARY APPROACH TO EMPLOYABILITY IN INDIA

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ABSTRACT

The study is to analyse the interdisciplinary approach to employability in Indian scenario. Due to severe competition and more, skilled rather multi talented availability in the market, employability perceptions has under gone a sea change. In this context, the study has been undertaken based on the industrial outlook and demand regarding the job aspirants as well as the employees. The objective of the study is to understand the disciplinarian approach to employability in the current scenario by the responses of the working group among various industries in India. Obviously, with the growing demand for multifunctional and multitalented persons for the Indian industries, this study is highly significant and prominent. The study has been undertaken based on the primary data collected through survey by framing a questionnaire and data has been taken from persons working across various industries. Sample size is 200 and Simple random sampling is used for the survey. From the study it is inferred that the person's response to five point scales rating to Multidiscipline approach/knowledge has no significance to their educational discipline. The person's response to five point scales rating to Multidiscipline approach/knowledge has significance to their educational level. There is significance between the years of experience of the person/official position of the person with their response to five-point scale rating to Multidiscipline approach/knowledge. The industrial outlook on employability aspect is multidiscipline one and in congruence with the response of the persons on employability. The responses of the study are in accord with the industrial perspective on employability. Thus, the objective of the study proved to be true and vital in current scenario.

KEYWORDS

Employability, interdisciplinary.

INTRODUCTION



Employability which we assimilate as been construed to a particular discipline is no more exists or meaningful in this current scenario.

"Be employable rather than employed"

The quote clearly elaborates the vast and deep meaning of employability and various levels also. If we focus it from a different angle, our perspective of it being a single discipline oriented will get changed. Need of the hour is to gauge with various skill sets and abilities the situation demands and not the other way. Various roles and responsibilities a person has to execute in course of his /her career cycle authenticating the phenomenal change in the perspective of employability. A maths/science/commerce/law/management/technical or any other graduate is expected to have knowledge or understanding about the concerned discipline is true in the pre employment scenario as far as employability is concerned. But to have long, glorious, successful career and to excel on it, naturally it demands other skills which is not the cup of tea related to his discipline. Multitalented and multitasked individuals are seems to be more demanding and opportunistic. In the nascent stage, a basic knowledge in the related subject and discipline are most sought after by the industries. However, during career progression, it is been widely acknowledged that a person with diversified academic as well as industrial experience will be given a preference compared to the competitors. The reason is such a person will be much logical and analytical while crucial decision making situations. Creative thoughts, Novel ideas are believed to be, brainchild of those who travels through less trodden path. Quite often this being executed and implemented by the people having diversified academic as well as industrial background.

Seamless integration and delivery of multiple skills is the need of the hour.

When we look at the skill sets available at the market, we are at crossroads regarding selection and rejection. Like all the flavours in a single cup, persons who are octogenarians we find across.

Different permutations and combinations have been tried out in the pre employment stage by the students and by the employees in the post employment stage to mould them more employable. A science graduate choosing management for his post graduation, an engineer choosing computational biology for his post graduation and many more. After getting employment also, people are finding ways and means to try for distinct ones which have not been tried by many and to master the same as to retain top position in the list in future also.

When the supply itself is a heterogeneous one, how one can expect demand is of homogeneous one.

Employability has been transformed rather transitioned to a multidiscipline one by exceptionally talented and brilliant ones with revolutionary attitude.

This topic has been studied based on the surveys and responses from the people working across various industries.

OBJECTIVE OF THE STUDY

The objective of the study is to understand the disciplinarian approach to employability in the current scenario by the responses of the working group among various industries in India.

SCOPE AND SIGNIFICANCE OF STUDY

Obviously, with the growing demand for multifunctional and multitalented persons for the Indian industries, this study is highly significant and prominent.

RESEARCH METHODOLOGY

The study has been undertaken based on the primary data collected through survey by framing a questionnaire and data has been taken from persons working across various industries. Sample size is 200 and Simple random sampling is used for the survey.

TABULAR AND PICTORIAL REPRESENTATION OF DATA

1. NUMBER OF MALES AND FEMALES PARTICIPATED IN THE SURVEY

Male	Female
96	104

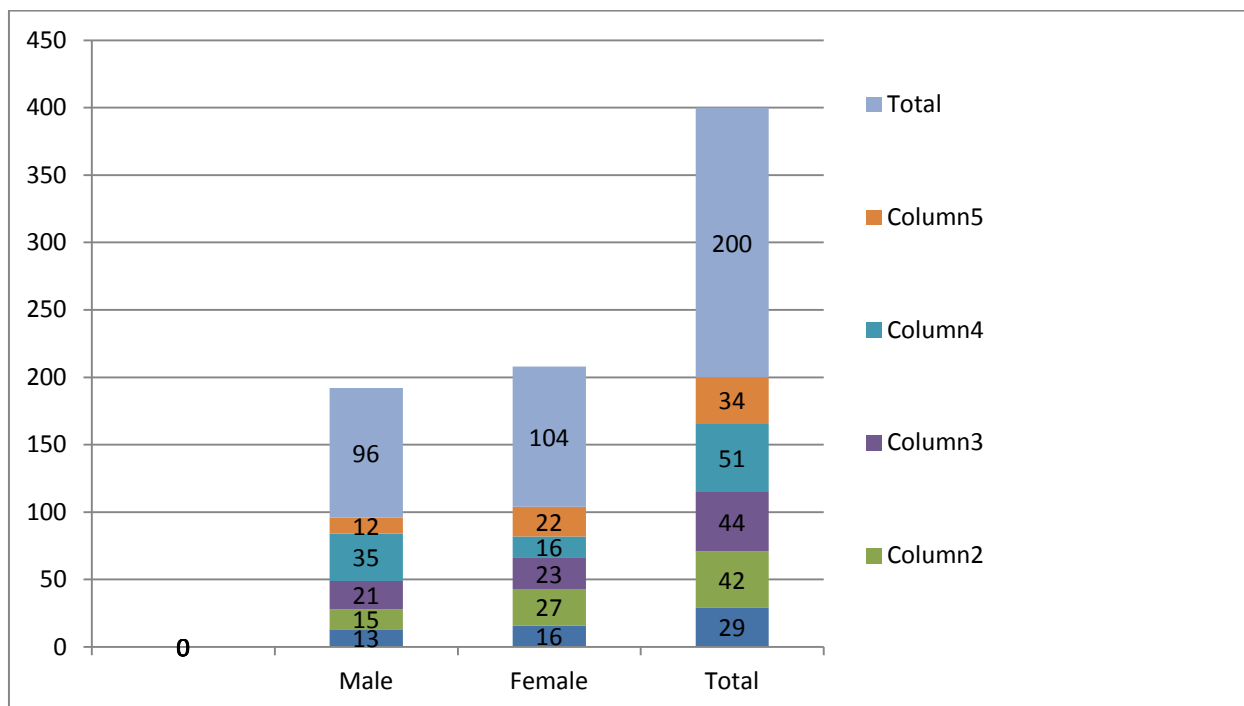
Pictorial gender representation

104 96

■ Male
■ female

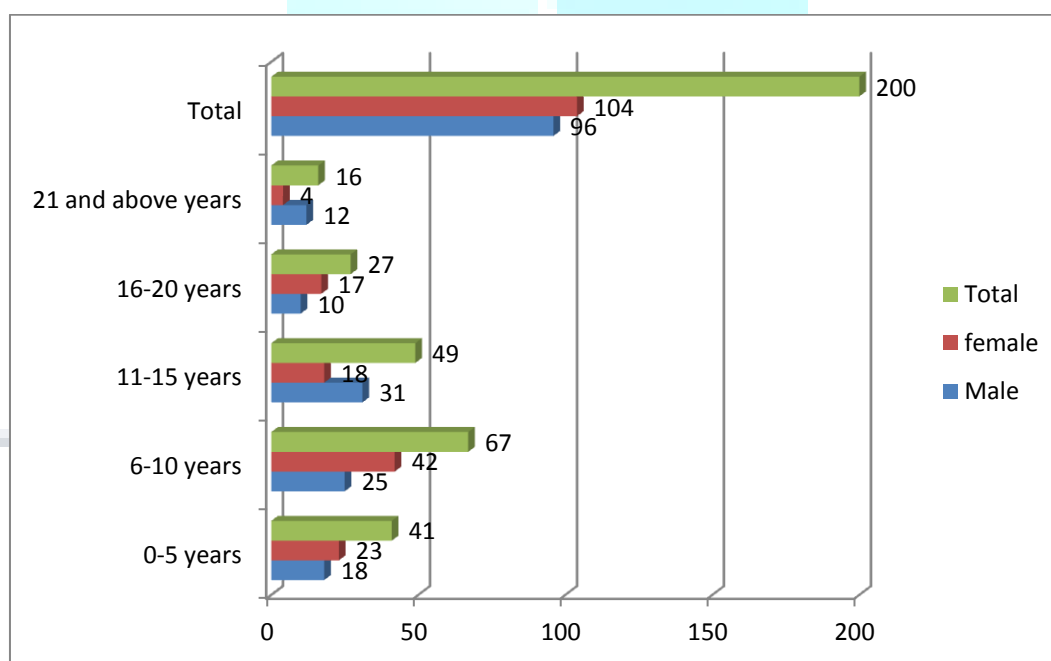
2. EDUCATIONAL BACKGROUND OF THE COLLECTED SAMPLE WITH RESPECT OF MALE AND FEMALE

	Arts	Science	Commerce	Technical	Others	Total
Male	13	15	21	35	12	96
female	16	27	23	16	22	104
Total	29	42	44	51	34	200



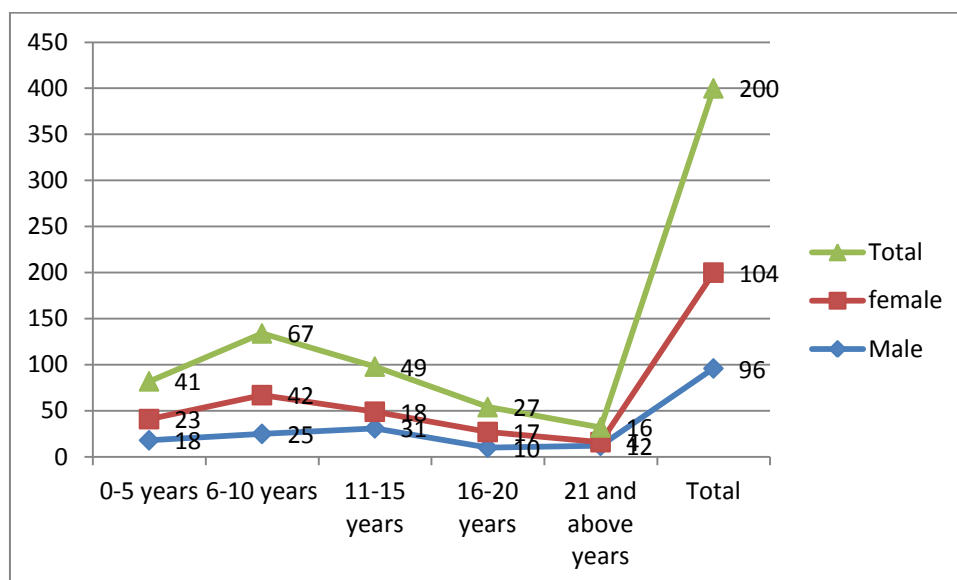
3. LEVEL OF EDUCATION GENDER WISE

	Below graduation	Graduation	Post graduation	Doctoral	Post doctoral	Total
Male	5	40	36	13	2	96
female	6	26	57	10	5	104
Total	11	66	93	23	7	200



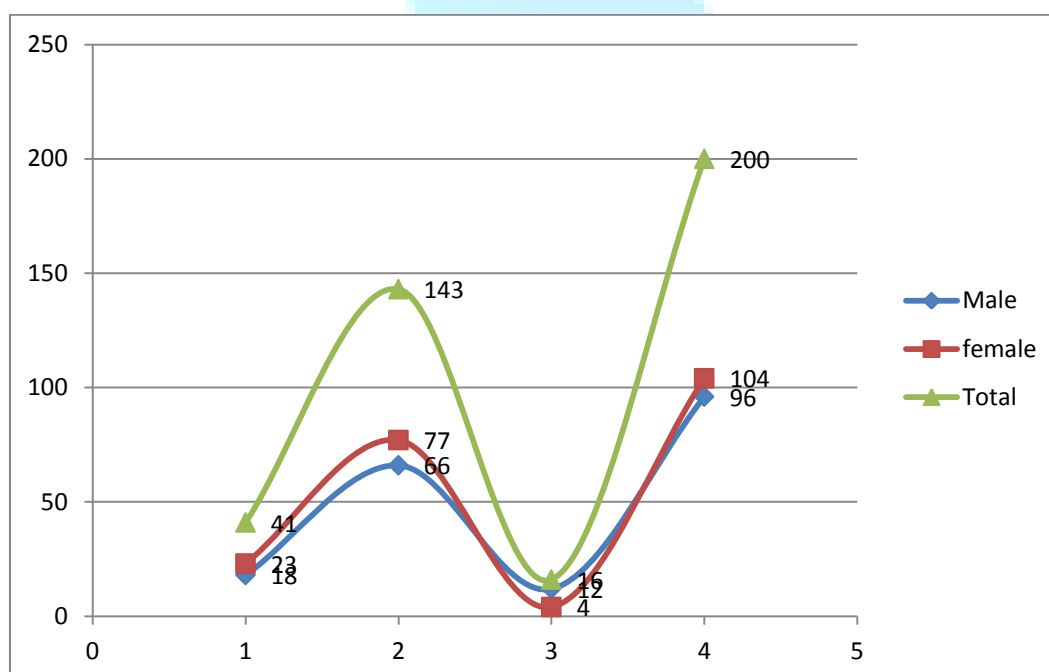
4. GENDER WISE YEARS OF EXPERIENCE

	0-5 years	6-10 years	11-15 years	16-20 years	21 and above years	Total
Male	18	25	31	10	12	96
female	23	42	18	17	4	104
Total	41	67	49	27	16	200



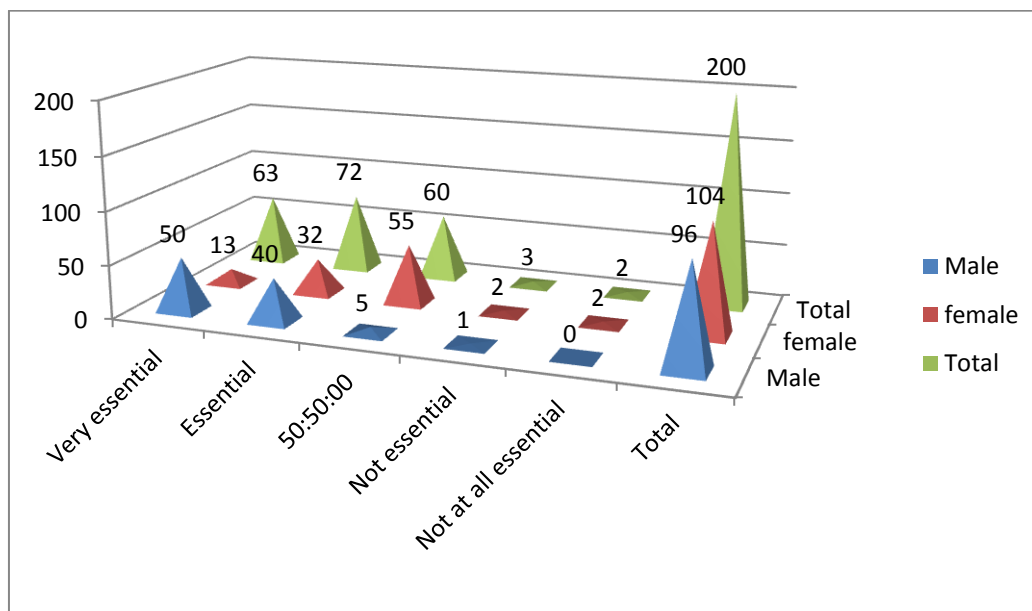
5. LEVEL OF EMPLOYMENT GENDER WISE

	Entry level	Middle level	Senior level	Total
Male	18	66	12	96
female	23	77	4	104
Total	41	143	16	200



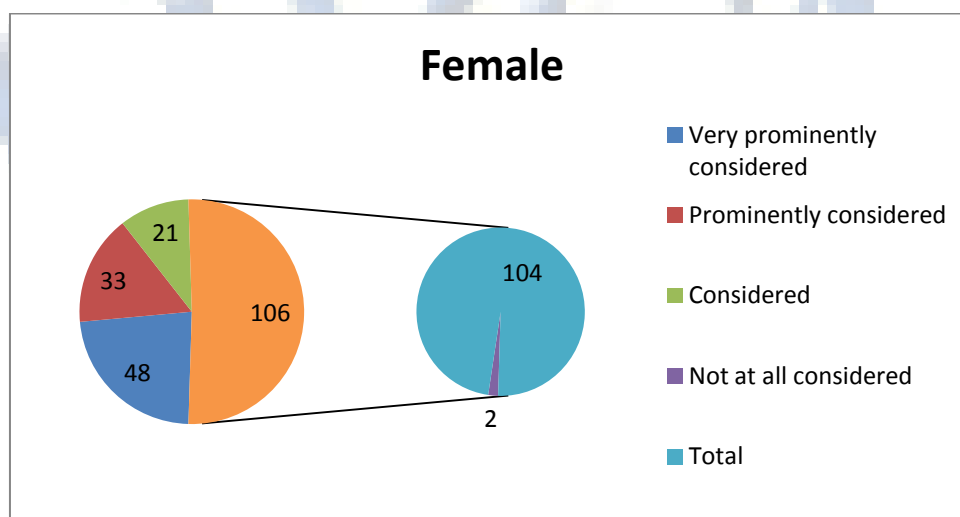
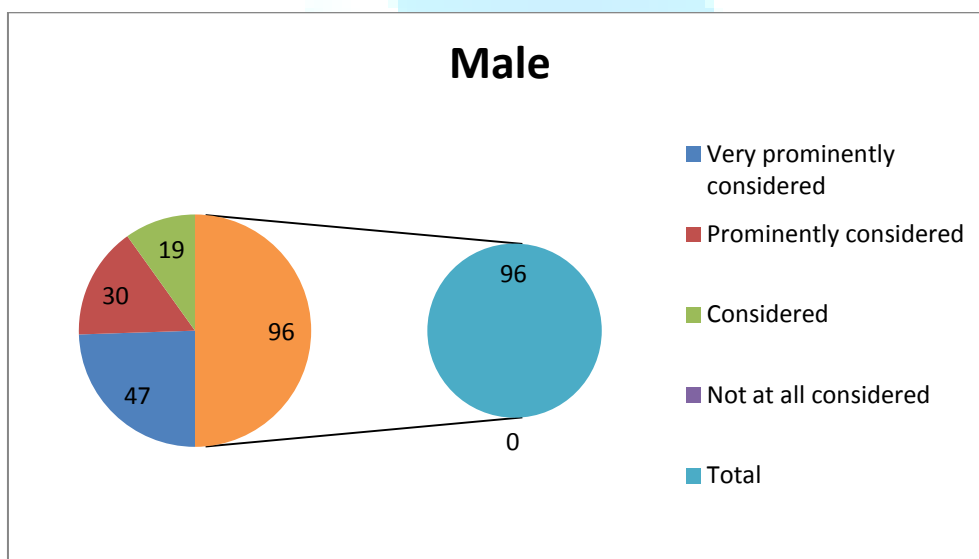
6. MALE AND FEMALE RESPONSE TO FIVE POINT SCALE RATING TO MULTIDISCIPLINE APPROACH/KNOWLEDGE IS REQUIRED FOR BECOMING EMPLOYABLE

	Very essential	Essential	50:50	Not essential	Not at all essential	Total
Male	50	40	5	1	0	96
female	13	32	55	2	2	104
Total	63	72	60	3	2	200



7. MALE AND FEMALE RESPONSE TO INDUSTRIAL OUTLOOK ON EMPLOYABILITY AS MULTIDISCIPLINE ONE

	Very prominently considered	Prominently considered	Considered	Not at all considered	Total
Male	47	30	19	-	96
Female	48	33	21	2	104
Total	95	63	40	2	200



HYPOTHESIS TESTING AND ANALYSIS

1. Hypothesis to test whether there is any correlation between educational discipline of the persons to their response to five point scale rating to Multidiscipline approach/knowledge is required for becoming employable.

Let us take educational discipline of the persons as variable X and their response to five point scale rating to Multidiscipline approach/knowledge is required for becoming employable as variable Y

We have calculated the regression coefficient of X on Y and regression coefficient of Y on X.

Regression coefficient of X on Y = -0.06

Regression coefficient of Y on X = -0.96

Karl Pearson's coefficient of correlation between variable X and Y = -0.24

Since the value of Karl Pearson's coefficient of correlation between variable X and Y is negative, the person's response to five point scales rating to Multidiscipline approach/knowledge has no significance to their educational discipline. Hence we reject the hypothesis and accepting the alternate hypothesis. Also it reveals the fact that the response hold good and reliable.

2. The hypothesis to test whether there is any correlation between the person's responses to five-point scale rating to Multidiscipline approach/knowledge has significance to their educational level.

Let us assume the data on educational level of the person's as X and their response to five point scale rating to Multidiscipline approach/knowledge is required for becoming employable as variable Y.

We have calculated the regression coefficient of X on Y and regression coefficient of Y on X.

Regression coefficient of X on Y = +0.65

Regression coefficient of Y on X = +0.54

Karl Pearson's coefficient of correlation between variable X and Y = +0.59.

Since the value of Karl Pearson's coefficient of correlation between variable X and Y is positive, the person's response to five point scales rating to Multidiscipline approach/knowledge has significance to their educational level. Therefore, we accept the hypothesis.

3. The hypothesis to test whether there is no significance between the years of experience of the person/official position of the person with their response to five point scale rating to Multidiscipline approach/knowledge.

We are applying Chi-square test to two set of data to observed and expected frequency.

Calculated value = 55.81

Table value = 26.29

Since calculated value is greater than table value, we are rejecting the hypothesis and accepting the alternate hypothesis. Hence, we conclude that there is significance between the years of experience of the person/official position of the person with their response to five-point scale rating to Multidiscipline approach/knowledge.

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- The person's response to five point scales rating to Multidiscipline approach/knowledge has no significance to their educational discipline.
- The person's response to five point scales rating to Multidiscipline approach/knowledge has significance to their educational level.
- There is significance between the years of experience of the person/official position of the person with their response to five-point scale rating to Multidiscipline approach/knowledge.
- The industrial outlook on employability aspect is multidiscipline one and in congruence with the response of the persons on employability.

CONCLUSION

The study cementing the fact that employability is multidiscipline one and not single disciplined. The responses of the study are in accord with the industrial perspective on employability. Thus, the objective of the study proved to be true and vital in current scenario.

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AN OPINION-STUDY ABOUT 5-S PRACTICES TOWARDS IMPROVING QUALITY & SAFETY AND MAINTAINING SIMPLIFIED WORK ENVIRONMENT

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ABSTRACT

Alvin Toffler identifies three stages of economic evolution- the Agrarian age, Industrial age and the Information age. At present we are in the information age commonly referred to as the information economy. Information technology and knowledge workers drive this information economy. Further, in the global business environment many new manufacturing approaches have emerged in achieving manufacturing excellence. In order to achieve this, the manufacturers of the present contemporary times adopt value-added manufacturing, continuous improvement manufacturing and JIT-Just-In-Time approaches. The continuous improvement manufacturing approach emphasises on improving the quality of goods and services involving the employees of all levels and functions of the organisation. The continuous improvement approach of manufacturing adopts quality planning, quality control, quality improvement, (JURAN TRILOGY) PDCA cycle (Plan, Do, Study and Act), 5S PRACTICES and Kaizen. Among them, this article attempts to study the effectiveness of 5-S practices in improving quality & safety and maintaining simplified work environment in the organisation that practises 5-S.

KEYWORDS

SEIRI (sorting), SEITON (arranging), SEISO (sweeping), SEIKETSU (standardising), SHITSUKE (discipline).

INTRODUCTION

Henry Ford was one of the pioneers in developing the idea of *Lean Manufacturing*. He maintained high production standards to fit together each stage of the production process in a perfect fashion with an ultimate intention to *reduce waste*. To implement this, he used the idea of “continuous flow” on the assembly line for his **MODEL-T** automobile manufacture. However, his process was not flexible and was a “push” process instead of a “pull” process led by consumer demand. As a result, it led to large inventories of unsold automobiles resulting in waste of money. Then **TAIICHI OHNO** of TOYOTA formulated the Toyota Production System (TPS) that used JIT (Just-In-Time) manufacturing methods to improve efficiency. Toyota successfully used this process to make the company become one of the most profitable manufacturing companies in the world. Lean Manufacturing technology identifies efficiencies in manufacturing and removes wasteful steps that do not add value to the final product. Waste reduction, however is not at the cost of reduced quality. To identify efficiencies, lean manufacturing focuses on customer-value. Customers want value and they will not pay for the defects in the product i.e., they shall not pay for the waste. Waste is anything that does not add value to the final product. In lean manufacturing, there are eight categories of waste – overproduction, waiting, inventory, transportation, over-processing, motion, defects and work force. TPS (Toyota Production System) involved the first seven categories of waste and called them as “MUDA” which means ‘waste’. Lean Manufacturing uses the eighth category “workforce”. Hence, lean manufacturing philosophy strongly believes that there is always existence of wastes, no matter how good the process is. Lean Manufacturing process has three stages. They are waste identification, waste analysis and finding the root cause of it and apply relevant tools to reduce waste. After identifying waste and analysing the root cause of it, the lean technology applies as a third step, a set of tools to reduce such wastes. The tools to reduce waste include Just-In-Time (JIT), Single Minute Exchange of Die (SMED) and the **5-S philosophy**. This article attempts to make an opinion-study about the 5-S practices in improving the quality of products and services of the organisation and providing safety and simplified work environment.

REVIEW OF LITERATURE

Womack & others (1990) in their book “The Machine that changed the World” discussed the significant performance gap between the Western and Japanese automotive industries. In the course of the exercise, they observed the reason for the superior performance of Japanese companies to be the adoption of “Lean Technology”. The term “Lean” denotes the use of less human efforts, capital investment, floor space, materials and time in all aspects of Japanese business methods of operations. **Ohno (1995)** recognises the term JIT (Just-In-Time) as the core idea of lean manufacturing based on the “pull” model. JIT model encourages purchase of materials that is required for production based on the orders received from the customers. JIT application makes the manufacturer produce small, continuous batches of products to help production run smoothly and efficiently. **Fredrick .W. Taylor** looked at individual workers and work methods. This resulted in time study and standardised work. He called his ideas Scientific Management. This theory was sound enough to apply science to management but failed to recognise behavioural sciences. **Frank Gilbert (1948)** in his *Ancestors of the Dozen added motion study and invented process charts*. These charts focussed attention on all work elements including *non-value added elements*. “The Psychology of Management: The Function of the Mind in Determining, Teaching, and Installing Methods of Least Waste” introduced psychology into the blend and studied how motivation and attitudes affect the outcome of a process. Therefore, there were many contributors, who originated the idea of ‘eliminating waste’- a key concept of JIT and Lean Manufacturing.

IMPORTANCE OF THE STUDY

The 5-S philosophy concentrates on simplifying the work environment, reducing waste and improving quality and safety. The five terms used to create a workplace suited for visual control and lean production. **SEIRI** means *sorting* denoting an action to identify and sort out all items necessary and unnecessary and then discard (clear) all the unnecessary items. **SEITON** means *arranging* everything in proper order for an easy retrieval. **SEISO** means *sweeping* the workplace thoroughly to make it dust-free. **SEIKETSU** means *standardising* i.e. maintaining a high standard workplace at all times. **SHITSUKE** means *self-discipline* especially with regard to safety rules and punctuality. The 5-S system is a systematic method for organising and standardising the workplace. This is one of the simplest lean tools to implement. It provides immediate return on investment crosses all boundaries and applies to all functions within the organisation. The benefits of lean manufacturing cannot succeed in a workplace that is disorganised, clumsy and dirty. Poor workplace conditions lead to wastes such as extra motion to avoid obstacles, time spent for searching things and delays due to defects, machine failures or accidents. Establishing basic workplace conditions becomes imperative in creating a manufacturing cell. For this purpose in many manufacturing companies, employee-teams use the **5S system** to improve and standardise workplace conditions for safe and effective operations. Therefore, 5S practice is a house keeping technique used to establish and maintain a productive and quality environment in an organisation which in turn boosts the morale of the employees, promoting a sense of belonging and pride in their work and responsibilities. The 5-S system creates a neat and clean workplace, systematises the day-to-day working, improve work efficiency, standardise work practices, improve work discipline, improve the product quality and work quality. Hence, this situation reveals the significance of study.

STATEMENT OF THE RESEARCH PROBLEM

The study of 5-S practices is a significant issue of research in the domain of *Lean Manufacturing* under *operations management* field of study. Many research contributions in this area show that 5-S system establish and maintain a productive and quality environment in an organisation. These contributions observed that adoption of 5-S system makes the workplace clean and better organised, generates more business, boosts the image of the company, makes office and

shop floor operations easier and safer, ensures employee-discipline, contribute to employee morale and productivity. These contributions also reveal that 5-S practice provide for better quality awareness, more usable floor space, low cost of production, better preventive maintenance, lesser accidents and high employee-involvement. Hence, it is an empirical challenge to observe whether 5-S practices improve the quality of workplace, provide safety at the workplace, and maintain simplified work environment. A large number of literature-review reveals the fact that 5-S practice is a house keeping technique to establish and maintain a well-organised workplace results in a safer, more efficient and more productive operation. The review identifies the fact- effective 5-S practices improve the quality and safety of the workplace and maintains a simplified work environment leading to a research question - whether 5-S practices improve the quality and safety of the workplace and create a simplified work environment. In order to find a solution, the researcher conducted a study in an automotive manufacturing company in Chennai to find the effectiveness of 5-S practices.

OBJECTIVES OF THE STUDY

The study has the following objectives:

- To understand the involvement of the employees towards 5-S practices
- To study the implementation of 5-S practices towards maintaining a productive and quality environment
- To study the effectiveness of 5-S implementation

HYPOTHESES

- There is no involvement of the employees towards 5-S practices
- The implementation of 5-S practices do not maintain a productive and quality work environment
- The 5-S implementations are not effective

METHODOLOGY

RESEARCH DESIGN

The research design is the blue print of a research and concerned with turning a research question into testing project. This study uses an empirical research design and involves both analytical and descriptive type of methodology. The study mainly depends on primary data.

STUDY AREA

Tiruvallur district is an administrative district in the South Indian state of Tamil Nadu. The town of Tiruvallur is the district headquarters. The district has a mixture of urban and rural characteristics. The Eastern part of Tiruvallur district is dominated by urban characteristics while the Southern and Northern part of the district has influence of Andhra culture due to its position. As of 2011, the district had a population of 3,728,104 with a sex ratio of 987 females for every 1,000 males. The district has been divided into three revenue divisions viz, Tiruvallur, Tiruttani and Ponneri. There are three taluks under Tiruvallur division, two taluks under Tiruttani divisions and four taluks under Ponneri division. There are 46 firkas and 820 revenue villages. Likewise, there are 14 blocks, 12 Municipalities and 13 town panchayats, which implement rural development activities. There are 178 Large and 21 Medium Scale Enterprises, 27319 Micro, and Small Enterprises engaged in the manufacturing of various products like Leather/Textiles/Chemical/Engineering. Some of the economic activities undertaken by the rural artisans are manufacturing of jute, coconut shell products, and palm leaf based products, paper cups, leather, rexin works etc.

SAMPLING SIZE AND DESIGN

The research study uses survey method to collect primary data. The survey method employs well-formulated questionnaire and applies multi-range sampling method for generating data. The study adopts a systematic method of selecting samples. The researcher distributed 120 questionnaires to the employees of a medium enterprise (the name of the company not mentioned in the article for the purposes of maintaining confidentiality) situated 40 kilometres away from Chennai in THIRUVALLUR district. It is an engineering company involving high technology dealing with the production of automotive parts. Out of 120 questionnaires, the researcher collected back 106 questionnaires. Out of these 106 questionnaires, 100 questionnaires were usable, rejecting the rest of them.

QUESTIONNAIRE DESIGN

The research study involved questionnaires as the instrument to collect primary data and divided into three parts. The respondents shared their opinions pertaining to the application and utility of 5-S practices. The first part of the questionnaire includes **demographic profile** with optional questions. The second part of the questionnaire uses optional questions relating to the **employees' opinion, employee-involvement and effectiveness of implementing 5-S practices** in the engineering unit selected for the study. The third part contains questions to understand the views of the employees pertaining to the **safety measures provided to them by adopting 5-S practices in the organisation** with Likert 5-point scale.

SCALING TECHNIQUE IN QUESTIONNAIRE

The questionnaire uses both optional type statements and statements in LIKERT 5-iespoint scale. The response from the employees of the selected engineering company, rated in 5-point scale, as: 5- Strongly Agree 4 – Agree 3 – Neutral 2 – Disagree 1 – Strongly disagree

FRAMEWORK OF THE ANALYSIS

The following are the statistical tools used in the study:

1. **t-test** to ascertain the nature of responses of employees about various labour incentive schemes and significant differences among various factors of labour incentives and job satisfaction

RESULTS AND DISCUSSION

The researcher distributed the questionnaires to the employees of the organisation of the sample unit and collected the filled-in questionnaires from the respondents for analyses and interpretation. The summary of the results is analysed under three parts.

PART – I DEMOGRAPHY

Thirty percent of the employees of the sample unit lie in the age group 18-20 years followed by 63% in the age group of 21-30 years and 7% in the age group of 31-40 years. All the respondents of the sample unit are males (100%). Seventy five percent of the employees in the sample unit belong to the staff level while 25% belong to the executive level 88% of the employees in the sample unit are single and 12% of the employees are married. Forty seven percent of the respondents in the sample unit have higher secondary qualification and 4% have SSLC qualification while 25% of the employees are technically qualified and 24% of the respondents are graduates. Fifty four percent of the employees of the sample unit have 0-1 year experience and 33% of the employees have 2-3 years experience. Only 8% of the employees of sample unit have 4-5 years experience and 5% percentage of employees have > 6 years experience. Seventy percent of the employees of the sample unit get a gross salary ranging between RS 6500-7500 and 14% in the salary group RS 7501-10000 and 9% in the salary group between RS 10001-15000 and 7% in the salary group greater than RS 15000.

PART-II – EMPLOYEES' OPINION ABOUT 5-S PRACTICES, EMPLOYEE-INVOLVEMENT TOWARDS 5-S PRACTICES AND EFFECTIVENESS OF IMPLEMENTING 5-S PRACTICES

Ninety-three percent employees of the sample unit agree (out of which 59% strongly agree) that they are **aware** of the 5-S practices adhered to in the organisation. Twenty six percent of the employees of the sample unit strongly agree that they are **familiar** with the sorting out practices (**SEIRI**), 19% with systematic arrangement (**SEITON**), 13% with maintaining the place spic & span (**SEISO**), 21% with standardising (**SEIKETSU**) and 21% of the employees of the sample unit familiar with sustaining efforts through self-discipline (**SHITSUKE**). Ninety-five percent of the employees of the sample unit agree (out of which 67% strongly agree) that their organisation gives proper **training** for implementing 5-S practices. Ninety-two percent employees of the sample unit agree (out of which 48% strongly agree) that training for implementing 5-S practices provided by their organisation is quite helpful in understanding the job towards a better **performance**. Eighty-seven percent employees of the sample unit agree that (out of which 47% strongly agree) implementation of 5-S practices **reduces** the

work pressure largely. Ninety-two percent of the employees agree (out of which 46% strongly agree) that **awareness** about the implementation of 5-S program is necessary. Ninety percent employees in the sample unit agree (out of which 47% strongly agree) that the concept lying behind the implementation of 5-S program is easy to **understand** for its efficient implementation. Eighty-one percent employees of the sample unit agree (out of which 45% strongly agree) that the employees of the organisation show **voluntary involvement** in the implementation of the 5-S program. Eighty-four percent of the employees agree that the employees use **audit score sheet** on a regular basis towards implementing 5-S program. Eighty-five percent agree (out of which 38% strongly agree) that implementation of 5-S practices are quite effective. Eighty-eight percent employees of the sample unit agree (out of which 38% strongly agree) that 5-S practices, when adhered to, **improve strong relation** between physical environment at **work places**. 86% employees of the sample unit agree (out of which 45% strongly agree) that adopting 5-S practices implementation in organisations **improve work efficiency, quality and productivity**. Eighty-nine percent employees of the sample unit agree (out of which 57% strongly agree) that 5-S practices implementation **encourage** orderliness in organisations. Seventy-six percent employees of the sample unit agree (out of which 49% strongly agree) that by adopting 5-S practices implementation, the work place becomes **clean and better organised**. 86% percent employees of the sample unit agree (out of which 40% strongly agree) that production operations **become easier and safer** on adoption of 5-S practices implementation in organisations. Eighty-five percent employees of the sample unit (out of which 43% strongly agree) that 5-S practices, when implemented in organisations, **improve housekeeping, environmental performance, health and safety standards**. Eighty-three percent employees of the sample unit agree (out of which 37% strongly agree) that it is possible to **measure the progress** in implementing 5-S system in their organisation regularly. Ninety percent employees of the sample unit agree (out of which 42% strongly agree) that 5-S implementing program **creates knowledge** and **energises** employees with **zero-tolerance for dirt and disorder**. 86% employees of the sample unit agree (out of which 54% strongly agree) that management gets proper **feedback** from the employees about information pertaining to implementing 5-S practices. Twenty-one percent employees of the sample unit are of the **opinion** that 5-S system implementation helps in **waste reduction**, 15% employees are of the **opinion** that 5-S implementation practices helps in **understanding** the **duties and responsibilities easily**, 8% employees are of the **opinion** that 5-S practices help in **quick retrieval of documents**. 15% of the employees are of the **opinion** that 5-S practices, when adopted facilitates in maintaining a **clean and organised work place**, while 34% employees of the sample unit are of the **opinion** that 5-S practices implementation helps in **maintaining discipline** in work place. Seven percent of the employees of the sample unit are of the **opinion** that 5-S implementation system helps in **eliminating unwanted practices**.

PART-III- IMPLEMENTATION OF 5-S PRACTICES TOWARDS IMPROVING QUALITY & SAFETY AND MAINTAINING SIMPLIFIED WORK- ENVIRONMENT

Fifty nine percent of the respondents strongly agree that **5-S practice**, when adopted **promotes better living and improve work-life**. Fifty percent of the respondents strongly agree that 5-S practice help employees of the organisation to **undertake job responsibilities**. Fifty-four percent of the respondents strongly agree that **co-workers give tips to each other on how to work safely**. Forty-four percent of the respondents strongly agree that the organisations **encourage employees to report on unsafe conditions**. Forty-five percent of the respondents strongly agree that employees are quite clear about the responsibilities towards maintaining **health and a safety** work environment. Fifty percent of the respondents are of the opinion that workplace changes **promote self-confidence and self-discipline** among employees when the organisation adopts 5-S practices.

FINDINGS

The overall study reveals that the employees are aware of 5-S practices in their organisation and trained up in 5-S practices implementations. The training helps to understand the implementations of 5-S practices and helps them to perform the jobs better. 5-S practices reduce the employees' work burden. The employees are also of the notion that awareness about 5-S concept amongst employees is essential to implement 5-S practices effectively and the concept involved in 5-S practices implementation is easy to understand.

Further, the study also shows that the employees of the organisation consciously and voluntarily involve themselves in the implementation of 5-S practices and use **audit score** on a regular basis.

5-S implementation programs improve strong relation between physical environment at workplace and productivity in the organisation. It also improves the work efficiency and quality. It encourages orderliness in the organisation and helps maintaining the workplace clean and better organised.

The factory operations become easier and safer after adopting 5-S practices implementations in the organisation. It improves housekeeping, environmental performance health and safety standards in the organisation.

5-S practice, when adopted promotes better living and improves work life. 5-S practices help employees of the organisation to undertake job responsibilities. Co-workers give tips to each other on how to work safely. Organisations encourage employees to report on unsafe conditions. The employees are quite clear about the responsibilities towards maintaining healthy and a safety work environment. Employees are of the opinion that workplace changes promote self-confidence and self-discipline among employees when the organisation adopts 5-S practices.

SUGGESTIONS

All the employees of the country, nation-wide need training in the 5-S practices implementation towards a better operational performance for enhancing its productivity and work efficiency.

LIMITATIONS OF THE STUDY

Considering the time and cost factor the study is limited only to Chennai region. The study domain confines only to manufacturing companies and therefore the findings through analyses need not be the same for other industrial organisations. The study is only with reference to **ONE** selected manufacturing company in Chennai and does not include all the manufacturing companies located in Chennai. The study is limited only to 100 responses from the employees of manufacturing company in Chennai and hence the views of these respondents need not be the views of the employees of the entire manufacturing companies of the country. The researcher circulated questionnaires only to respondents who know to read and write. Thus the study confines its circulation of questionnaires only to literate group and ignores illiterate group who do not know to read and write.

CONCLUSION

The study suggests that the manufacturing companies, in order to enhance the level of productivity, must make the employees understand the concepts involved in 5-S practices and encourage them to practise the implementation of 5-S programs towards maintaining a productive and quality environment

SCOPE FOR FUTURE RESEARCH

The researcher, in this paper considers only the meaning and significance of the 5-S practices implementation and **how** to carry about its implementation is left as a topic in the agenda for future research.

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ANNEXURE

TABLE 1: RESPONDENTS' PERSONAL PROFILE

age	frequency	total
18-20	30	
21-30	63	
31-40	7	
41-50	0	100
gender		
male	100	
female	0	100
Marital status		
single	88	
married	12	100
education		
<SSLC	4	
PLUS 2	47	
DIPLOMA	25	
GRADUATE	24	
OTHERS	0	100
designation		
staff	75	
executive	25	100
experience		
0-1	54	
2 &3	33	
4 & 5	8	
>6	5	100
salary		
6500-7500	70	
7501-10000	14	
10001-15000	9	
>15000	7	100

Source: Primary data

TABLE 2: SUMMARY OF t – TEST

SL.NO	VARIABLES	MEAN	S.D	t - value	Standard error	sig
1	awareness	4.52	0.6242	24.35	.06242	0.00
2	training	4.60	0.6633	24.12	0.0663	0.00
3	performance	4.52	0.7163	19.13	0.0716	0.00
4	reduction	4.29	0.8282	15.58	0.0828	0.00
5	essential	4.36	0.6859	19.85	0.0685	0.00
6	Easy understanding	4.30	0.8660	15.01	0.0866	0.00
7	involvement	4.15	0.8874	12.97	0.0887	0.00
8	Voluntary involvement	4.18	0.9527	12.38	0.0953	0.00
9	audit	4.10	0.8888	12.39	0.0888	0.00
10	effectiveness	4.20	0.7746	15.48	0.0775	0.00
11	Physical environment	4.34	0.8028	16.69	0.0803	0.00
12	Improve productivity	4.28	0.7756	16.50	0.0776	0.00
13	orderliness	4.45	0.6712	21.61	0.0671	0.00
14	Clean & tidy	4.26	0.9552	13.19	0.0955	0.00
15	safety	4.17	0.9062	12.91	0.0906	0.00
16	housekeeping	4.17	0.9493	12.33	0.0949	0.00
17	Communication gap	4.13	1.0359	10.90	0.1036	0.00
18	Regular progress	4.09	0.9705	11.23	0.0971	0.00
19	Knowledge creation	4.22	0.9119	13.38	0.0912	0.00
20	feedback	4.31	0.9455	13.85	0.0946	0.00
21	Improved work life	4.39	0.9154	15.19	0.0915	0.00
22	Job responsibilities	4.39	0.7334	18.96	0.0733	0.00
23	Safety tips	4.38	0.8340	16.55	0.0834	0.00
24	Report unsafe	4.23	0.8349	14.73	0.0834	0.00
24	Health & safety	4.21	0.9622	12.86	0.0962	0.00
26	Self confidence	4.29	0.9622	13.41	0.0962	0.00
27	corrections	4.36	0.7003	19.42	0.0700	0.00
28	Managers involvement	4.44	0.7768	18.49	0.0778	0.00

Source: Primary data

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