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RESEARCH PAPERS

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Chief Editor Message

As SUMEDHA Journal of Management eighteenth issue, We look forward to the momentous growth of our Journal, increasing in their appeal, readership and relevance to the fast-changing world of Business Management. During these five years journey our journal has been critically evaluated by various institutions with similar line of interest and faculty fraternity. We have been consistently seeking advice from experts to continuously improve the quality of the journal. Our journal has got Impact Factor from Index Copernicus value 5.20, ISRA Journal Factor 2.318, Global Impact factor - 0.787. On behalf of the Management, Editorial Board and Editorial Team, I express my profound gratitude to all our authors, reviewers, readers and patrons for offering their overwhelming support and I anticipate a continued and lively partnership for years to come.

All of us recognize the necessity for change, which results in progress. It gives way to new ideas and perspectives reflecting the current and emerging environment, which builds on the solid foundations of the past.

Last but not least valuable would be your response and suggestions on this issue. Kindly send us your views so that we can keep on upgrading our journal.

Thanking you

Dr. A Kotishwar
Chief Editor

Impact of Knowledge Sharing On Project Management in IT Industry - An Empirical Investigation

– Mr. Manikantan P.*
– Dr. S. Gurusamy**

Abstract

Due to a changing business competitiveness and global competitiveness model organisations are confronted more and more with issues such fast technological changes and high market volatility. In order to cope with highly distributed diversified knowledge to be managed. Challenges rely on the identification of crucial knowledge that improves the business process. Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. This paper aims to measure the influence of personal and organization profile of the employee on their perception toward knowledge management process and project management process.Researcheremploys several statistical tools such as Cluster analysis, One way ANOVA and Non ParametricChisquare.Researcher finds thatthe creation of knowledge sharing culture and suitable reward system for the knowledge sharing of the employees are highly suitable for the organization to obtained best of potentialities of the employees. The holistic approach of competency mapping and the performance appraisal system determine the knowledge distribution among (top level, middle and operational level employees.

Keywords: Project management, Technology, Employee development, knowledge management process, IT Organisation employees

1.1 Introduction

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. Project management is accomplished through processes, using project management knowledge, skills, tools, and techniques that receive inputs and generate outputs.

In order for a project to be successful, the project team must:

- Select appropriate processes within the Project Management Process Groups (also known as Process Groups) that are required to meet the project objectives.

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- Use a defined approach to adapt the product specifications and plans to meet project and product requirements
- Comply with requirements to meet stakeholder needs, wants and expectations

Balance the competing demands of scope, time, cost, quality, resources, and risk to produce a quality product. This standard documents information needed to initiate, plan, execute, monitor and control, and close a single project, and identifies those project management processes that have been recognized as good practice on most projects most of the time. These processes apply globally and across industry groups. Good practice means there is general agreement that the application of those project management processes has been shown to enhance the chances of success over a wide range of projects. The project management processes are presented as discrete elements with well- defined interfaces. However, in practice they overlap and interact in ways that are not completely detailed here. Most experienced project management practitioners recognize there is more than one way to manage a project. The specifics for a project are defined as objectives that must be accomplished based on complexity, risk, size, time frame, project team's experience, access to resources, amount of historical information, the organization's project management maturity, and industry and application area. The required Process Groups and their constituent processes are guides to apply appropriate project management knowledge and skills during the project. In addition, the application of the project management processes to a project is iterative and many processes are repeated and revised during the project. The project manager and the project team are responsible for determining what processes from the Process Groups will be employed, by whom, and the degree of rigor that will be applied to the execution of those processes to achieve the desired project objective.

1.2 Review of Literature

Knowledge is an intangible resource that exists within the mind of the individual (Sveiby 1997)8. The recent explosion of interest surrounding KM has brought with it much confusion with critics arguing that knowledge in itself cannot be managed and that KM is just another management fad (Wilson 2002)9. Indeed, there is the view that knowledge management is, by definition, an oxymoron (Malhotra 2000)10. Hildreth and Kimble (2002)11 identify a lack of distinction between KM and information management. In order to clarify this distinction it is necessary to understand how information and knowledge relate to each other. Both information and knowledge are grounded on data. The two can be differentiated if we consider interpretation and meaning.

Information by definition is informative and, therefore, tells us something. It is data from which we can derive meaning. Knowledge is directly related to understanding and is gained through the interpretation of information. Knowledge enables us to interpret information i.e. derive meaning from data. The interpretation of meaning is framed by the perceiver's knowledge. So what one person perceives as information can equate to meaningless data to another. So information that is interpreted generates meaning and new knowledge. Thus, information can be added to knowledge to increase what is known. It is also valid to state that knowledge comes before both information and data since one need to know the context of data before it can be interpreted as information. Hence it can be seen that knowledge is subjective and can only reside within the mind of the individual. So what do we mean by sharing knowledge, if knowledge cannot exist outside the individual.The extensive review of previous literature on knowledge sharing recognizes the existence of different influences on employee knowledge sharing activities, such as individual, organizational, and technology factors(Lee and Choi, 200312; Connelly and Kelloway, 200313; Taylor and Wright, 200414). Referring to the individual dimension, most authors agree that knowledge sharing depends on individual characteristics, including experience, values, motivation, and beliefs. Wasko and Faraj (2005)15 suggested that individual motivators may enable employee willingness to share knowledge. Employees are motivated when they think that knowledge sharing behaviors will be worth the effort and able to help others. Therefore, the expectation of individual benefits can promote employees to share knowledge with colleagues. Furthermore, referring to the organizational dimension, organizational climate is usually made to capture efficiently the benefits of innovation-supportive culture (Saleh and Wang, 1993)16. In the context of knowledge sharing, the different aspects of organizational climate are critical drivers of knowledge sharing, such as reward systems linked toknowledge sharing (Bartol and Srivastava, 2002)17, open leadership climate (Taylor and Wright, 2004)14, and top management support (MacNeil, 2003; MacNeil, 2004).

1.3 Statement of the Problem

To study existence of the knowledge sharing process and effectiveness of knowledge sharing process and their impact on the project management with respect to organization elements.

1.4 Objective of Study

- To measure the influence of personal and organization profile of the employee on their perception toward knowledge management process and project management process.

1.5 Sample size

The following are the summary of the total population and sample size taken from each group.

Table 1 : Summary of the total population and sample size

Group	Total Population	Sample Size
Project Manager	400	115
Team Lead / Project Lead	265	70
Senior Software Engineer	425	160
Software Engineer	410	155
	1500	**500**

Source: Computed data

A sample of 500 respondents in total has been selected to conduct case study on managing global software projects through knowledge sharing.

1.6 Sample Justification

The next question arises at this preamble whether the 500 responses represent the population parameters. It is justified mathematically using the following formula.

$N=(Z^2 * P.Q)/C^2$

Where Z is the normal variant p and q are probability of success and probability of failure and C is the confidence limit. Based on the Likert's 5 point scale statements the probabilities are calculated from the research instrument. It comprises 25 statements in Likert's 5 point scale and all other remaining are optional type questions. Therefore the probability of success and failure can be considered equally as 0.5. The confidence limit is 0.95 and error limit is 0.05. Applying these values it is obtained that the normal variant for the 25 statements in Likert's 5 point scale obtained is 1.96/2.56=0.76 this value is known as derived normal variant value deviated from the ordinate as well as the skewness. Applying this formula it is found

N= (0.762*0.5*0.5) / (0.952) *1500

N= 232.81

But the collected sample size is 500 which are greater than the required sample size which justifies the sample size of the research at 5% level.

1.7 Collection of Primary Data

The primary data were collected through a survey conducted using questionnaire and interview methods.

1.8 Statistical Tools Employed

- Cluster analysis, One way ANOVA, Non Parametric Chisquare is employed by the researcher.

2.1 Data Analysis pertaining to Objective

There is no significant relationship between knowledge management process on project management process.

The global project management through knowledge sharing is not a unique phenomenal, it is a compositional of various aspects of relationship among the employees during offshore and onshore interaction process. The present study predominantly concentrate eleven factors of knowledge sharing namely internal team members uses, co-located team members, non team members, project goals and member responsibilities, specific requirement and technical difficulties, process techniques, resource problems and/or personal evaluations. The opinions of IT Organisation employees on these knowledge sharing aspects are obtained through Likert's five point scale which ranges from strongly agree to strongly disagree. In this contest the parametric t-test with hypothesized mean value 3 and the following results are obtained.

2.1.1 Influence of the project management budget on employee development:

In this section the researcher considers project management budget has independent variable and employee development factor has dependent variable. The influence of the independent variable on dependent factor is estimated through one-way analysis of variance.

Table 2 : One way ANNOVA between project management budgets on employee development

ANOVA						
Statements		Sum of Squares	df	Mean Square	F	Sig.
How significant is the role that effective KS can play in employee development w.r.t the following in Effective Project Management in IT Organization towards - **Career growth**	Between Groups	3.292	4	.823	.464	.762
	Within Groups	878.250	495	1.774		
	Total	881.542	499			
How significant is the role that effective KS can play in employee development w.r.t the following in Effective Project Management in IT Organization towards - **New learning**	Between Groups	6.835	4	1.709	.888	.471
	Within Groups	952.227	495	1.924		
	Total	959.062	499			
How significant is the role that effective KS can play in employee development w.r.t the following in Effective Project Management in IT Organization- **Financial rewards**	Between Groups	17.944	4	4.486	2.245	.063
	Within Groups	988.944	495	1.998		
	Total	1006.888	499			
How significant is the role that effective KS can play in employee development w.r.t the following in Effective Project Management in IT Organization- **Contribution to Organization**	Between Groups	20.661	4	5.165	2.579	.037
	Within Groups	991.547	495	2.003		
	Total	1012.208	499			
How significant is the role that effective KS can play in employee development w.r.t the following in Effective Project Management in IT Organization-**Benefit on Appraisal system**	Between Groups	14.242	4	3.560	1.759	.136
	Within Groups	1001.830	495	2.024		
	Total	1016.072	499			

Source: computed data

From the above table 2 it is found that contribution to organisation(F=2.579, P=0.037) is statically significant at 5% level. Therefore it can concluded through the mean analysis that the employees in the companies with project management budget $ Between 500000 to 1000000 (Mean = 4.00) strongly agree for contribution knowledge sharing and It usefulness contribute to very much to the organisation.

2.1.2 Influence of the project management budget on Agile Integrated SECI Process

Table 3 : One way ANNOVA between project budget and knowledge management-Knowledge sharing process

ANOVA						
Statements		Sum of Squares	df	Mean Square	F	Sig.
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization repository and reusability? - **Knowledge Bank Portal**	Between Groups	20.065	4	5.016	2.293	.058
	Within Groups	1082.853	495	2.188		
	Total	1102.918	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization repository and reusability? -**Organization Wiki**	Between Groups	20.065	4	5.016	2.293	.058
	Within Groups	1082.853	495	2.188		
	Total	1102.918	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization repository and reusability? -**Knowledge base reporting tools**	Between Groups	20.065	4	5.016	2.293	.058
	Within Groups	1082.853	495	2.188		
	Total	1102.918	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization repository and reusability? - **Knowledge governance**	Between Groups	14.190	4	3.548	1.717	.145
	Within Groups	1022.760	495	2.066		
	Total	1036.950	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization repository and reusability? -**Social Sharing**	Between Groups	15.739	4	3.935	1.860	.116
	Within Groups	1046.989	495	2.115		
	Total	1062.728	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization repository and reusability? -**Other Model**	Between Groups	10.901	4	2.725	1.302	.268
	Within Groups	1036.049	495	2.093		
	Total	1046.950	499			

Source: computed data

From the above table 3 it is found that statically significant at 5% level. This shows that the project management budget role of effective Knowledge management in IT organization.

2.1.3 Influence of the project management budget on organisational strategies:

Table 4 : One way ANNOVA between project management and knowledge management

ANOVA						
Statements		Sum of Squares	df	Mean Square	F	Sig
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization?- **Cost reduction.**	Between Groups	14.120	4	3.530	1.714	.145
	Within Groups	1019.248	495	2.059		
	Total	1033.368	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization? - **Revenue growth**	Between Groups	14.190	4	3.548	1.717	.145
	Within Groups	1022.760	495	2.066		
	Total	1036.950	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization? - **Better decision-making on projects.**	Between Groups	15.102	4	3.775	1.881	.112
	Within Groups	993.448	495	2.007		
	Total	1008.550	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization? - **Improving quality**	Between Groups	20.023	4	5.006	2.296	.058
	Within Groups	1079.177	495	2.180		
	Total	1099.200	499			
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization? - **Improving delivery**	Between Groups	19.981	4	4.995	2.295	.058
	Within Groups	1077.497	495	2.177		
	Total	1097.478	499			

Source: computed data

From the above table 4 it is found that statically in-significant at 5% level. This shows that the project management budget role of effective Knowledge management in IT organization

2.1.4 Influence of the relationship with project management budget on knowledge management:

Table 5 : One way ANNOVA between project management and knowledge management

ANOVA						
Statements		Sum of Squares	df	Mean Square	F	Sig.
How significant is the role that effective KS after integration AISECI Framework can play in knowledge management after integration AISECI Framework w.r.t the following in Effective Project Management in IT Organization? Also indicate the relative imp	Between Groups	19.687	4	4.922	2.234	.064
	Within Groups	1090.335	495	2.203		
	Total	1110.022	499			
Kindly indicate how globally-distributed development teams can be motivated to introduce Knowledge Sharing practices.	Between Groups	19.749	4	4.937	2.266	.061
	Within Groups	1078.539	495	2.179		
	Total	1098.288	499			
Kindly indicate the steps, which a globally-distributed development teams should take for successfully implementing the Knowledge Sharing Practice. Also indicate the relative importance of IT in this context	Between Groups	24.509	4	6.127	2.939	.020
	Within Groups	1031.833	495	2.085		
	Total	1056.342	499			
Kindly indicate the impact of gain using SECI PROCESS and AISECI Framework on knowledge sharing on effective project management on organization elements and Knowledge Sharing Elements	Between Groups	13.048	4	3.262	1.732	.142
	Within Groups	932.430	495	1.884		
	Total	945.478	499			
Kindly indicate result AISECI Framework Knowledge governance is an effective managing the knowledge for effective project management in it industry towards the organization goal and customer focus.	Between Groups	18.353	4	4.588	2.707	.030
	Within Groups	838.885	495	1.695		
	Total	857.238	499			

ANOVA						
Statements		Sum of Squares	df	Mean Square	F	Sig.
In your views, how can the government institutions/industry associations help in enhancing the knowledge base of globally-distributed development teams?	Between Groups	13.282	4	3.320	1.739	.140
	Within Groups	945.246	495	1.910		
	Total	958.528	499			
Kindly indicate the steps, Social technology play vital role for successfully implementing the knowledge sharing practice. Also indicate the relative importance of IT in this context.	Between Groups	16.564	4	4.141	1.983	.096
	Within Groups	1033.548	495	2.088		
	Total	1050.112	499			
Kindly indicate Impact of increase on employee development, project outcomes and daily job execution, overall benefit based on integration AISECI Framework -knowledge sharing practice. Also indicate the relative importance of IT in this context.	Between Groups	18.557	4	4.639	2.216	.066
	Within Groups	1036.265	495	2.093		
	Total	1054.822	499			
In your views, AISECI Framework Create Intellectual Rights and Innovation Contribution for Organization Growth and New Business Development?	Between Groups	22.038	4	5.509	2.735	.028
	Within Groups	997.274	495	2.015		
	Total	1019.312	499			

Source: computed data

From the above table 5 it is found that indicate result AISECI Framework Knowledge governance is an effective managing the knowledge for effective project management in it industry towards the organization goal and customer focus (F=2.707, P=0.30), globally-distributed development teams should take for successfully implementing the Knowledge Sharing Practice. Also indicate the relative importance of IT in this context (F=2.939, P=0.20), AISECI Framework Create Intellectual Rights and Innovation Contribution for Organization Growth and New Business Development(F=2.735,P=0.28) is statically significant at 5% level. Therefore it can concluded through the mean analysis that the employees in the companies with project management budget $ Between 500000 to 1000000 (Mean = 4.00) strongly agree for contribution knowledge sharing and It usefulness contribute to very much to the organisation.

It is found that the IT employee in the organisation with 500000 to 1000000 budgeting strongly agree for contribution knowledge sharing and It usefulness contribute to very much to the organisation.

2.1.5 Influences of Designation of the employee on their perception towards knowledge management process

Classification of the IT Companies employees based on the perception towards knowledge management process, organisation strategies and project management factors.

After reviewing national and international literature, the researcher down sized the following factor pertaining to knowledge management, organization strategies and project management. These factor act as basis that classify the employees into heterogeneous group. The application K-Mean cluster analysis on these factor is clearly presented in the following table.

Table 6 : Cluster Analysis on Knowledge management and project Management

Final Cluster Centers			
Statements	Cluster		
	1	2	3
Knowledge Management Process	3.62	2.93	3.35
Organisational Strategies	3.37	3.15	3.25
Project Management Process	4.30	2.06	3.22
Employee development	4.26	1.98	3.17
Role of AISECI Framework on Knowledge Storage	4.67	1.63	3.08
Knowledge management Achievements	4.65	1.64	3.10
Impact of Knowledge Management	4.51	1.89	3.17

Source: computed data

Table 7 : Cluster Analysis on Knowledge management and project Management

Number of Cases in each Cluster		
Cluster	1	220.000
	2	156.000
	3	124.000
Valid		500.000
Missing		.000

Source: computed data

From the above table7 it found that the first cluster consist of 220(44%) of employee with strongly aggregate for project management process, employee development, role of AISECI framework and knowledge management achievement, Therefore this cluster of the employees can be named

"Achievers". The Second Cluster consists of 166(33.2%) employee with disagreement for knowledge management process, organization strategies, project management process. Therefore this group can be named "Detached employees". The Final and third cluster consist of the 124(24.8%) employee with moderate agreement for the knowledge management process, project management process and organization strategies. Therefore this group also named "unambitious employees"

Table 8 : Cluster Analysis on Knowledge management and project Management

Case Processing Summary						
Particulars	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
KMandPM Clusters * Age	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * Gender	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * Education	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * Designation	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * Experience	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * How much time does it take for an employee to get the relevant knowledge in globally-scaled project?	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * Which of the following best describes your mode sharing organization w. r. t new knowledge creation?	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * What do you think are the factors influencing Knowledge retention in your organization?	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * The organization structure on project management activities reporting structure ?	500	100.0%	0	0.0%	500	100.0%
KMandPM Clusters * Kindly indicate the total project budget worth in $ during bidding process?	500	100.0%	0	0.0%	500	100.0%

Source: computed data

2.1.6Association

The distribution of four different age group of the employee over their perceptual group with respective knowledge management and project management process is presented in the following non-parametric chi-square analysis of association.

Table 9 : Association of relationship on Knowledge management and project management with employee age

Crosstab							
Particulars			Age				Total
			Between 21– 30 Years	Between 31 – 40 Years	Between 41 – 50 Years	More than 50 Years	
KMand PM Clusters	1	Count	152	31	29	8	220
		% within KMandPM Clusters	69.1%	14.1%	13.2%	3.6%	100.0%
	2	Count	128	16	10	2	156
		% within KMandPM Clusters	82.1%	10.3%	6.4%	1.3%	100.0%
	3	Count	91	11	17	5	124
		% within KMandPM Clusters	73.4%	8.9%	13.7%	4.0%	100.0%
Total		Count	371	58	56	15	500
		% within KMandPM Clusters	74.2%	11.6%	11.2%	3.0%	100.0%

Source: computed data

From the above table 9 it is found that (69.1%) achievers are found in the age group 21 to 30, (10.3%) detached employee represent the age group 31 to 40 age and 3.7 % unambitious employee in IT Companies belong to the age group 40 years to 50 years only 4% unambitious employee are distributed over the age group more than 50 years. This leads to the computation of Chi-Square statistic as show in the table below.

Table 10: Chi-Square test on age group towards knowledge management and project management process

Chi-Square Tests			
Particulars	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.233[a]	6	.081
Likelihood Ratio	12.075	6	.060
Linear-by-Linear Association	.649	1	.421
N of Valid Cases	500		

Source: computed data

From the above table 10 it is found that (Pearson Chi-Square =11.233, P=0.081) are statistically in-significant at 5% level. Therefore it can conclude that there is no association between age group of the employee and the perception towards knowledge management and project management. This implies, the perception of knowledge management and project management are same among all the age group of employee.

2.1.7 Knowledge Management and Project Management Clusters * Gender

Table 11 : Association of relationship on Knowledge management and project management on gender

Crosstab					
			Gender		Total
			Male	Female	
KMandPM Clusters	1	Count	189	31	220
		% within KMandPM Clusters	85.9%	14.1%	100.0%
	2	Count	119	37	156
		% within KMandPM Clusters	76.3%	23.7%	100.0%
	3	Count	99	25	124
		% within KMandPM Clusters	79.8%	20.2%	100.0%
Total		Count	407	93	500
		% within KMandPM Clusters	81.4%	18.6%	100.0%

Source: computed data

From the above table 11 it is found that (85.9%) achievers are found in male gender, (23.7%) detached employee represent the female and (20.2) % This leads to the computation of Chi-Square statistic as show in the table below.

Table 12 : Chi-square test on Knowledge management and project management with employee gender

Chi-Square Tests			
Particulars	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.853[a]	2	.054
Likelihood Ratio	5.894	2	.052
Linear-by-Linear Association	2.846	1	.092
N of Valid Cases	500		

Source: computed data

From the above table 12 it is found that (Pearson Chi-Square =5.853,P=0.54) are statistically in-significant at 5% level. Therefore it can conclude that there is no association between gender group of the employee and the perception towards knowledge management and project management. This implies the perception of knowledge management and project management is same among all the gender group of employee.

2.1.8 Knowledge Management and Project Management Clusters * Education

Table 13 : Association of relationship on Knowledge management and project management with employee education

Crosstab							
Particulars			Education				Total
			Bachelor Degree	Master Degree	Diploma	Other	
KM and PM Clusters	1	Count	139	21	49	11	220
		% within KMandPM Clusters	63.2%	9.5%	22.3%	5.0%	100.0%
	2	Count	109	18	19	10	156
		% within KMandPM Clusters	69.9%	11.5%	12.2%	6.4%	100.0%
	3	Count	82	13	20	9	124
		% within KMandPM Clusters	66.1%	10.5%	16.1%	7.3%	100.0%
Total		Count	330	52	88	30	500
		% within KMandPM Clusters	66.0%	10.4%	17.6%	6.0%	100.0%

Source: computed data

From the above table 13 it is found that (63.2.%) achievers are found in the Bachelor degree holders, (11.5%) detached employee represent are Master Degree holders and (16.1) % unambitious employee in IT Companies belong to Diploma holder,7.3% unambitious. This leads to the computation of Chi-Square statistic as show in the table below.

Table 14 : Chi-square test on Knowledge management and project management with employee education

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.193[a]	6	.303
Likelihood Ratio	7.297	6	.294
Linear-by-Linear Association	.389	1	.533
N of Valid Cases	500		

Source: computed data

From the above table 14 it is found that (Pearson Chi-Square =7.193,P=0.303) are statistically in-significant at 5% level. Therefore it can conclude that there is no association between education of the employee and the perception towards knowledge management and project management. This implies the perception of knowledge management and project management are same among all education of the employee.

2.1.9 Knowledge Management and Project Management Clusters * Designation

Table 15 : Association of relationship on Knowledge management and project management with employee designation.

Crosstab							
			Designation				**Total**
			Software Engineer	Senior Software Engineer	Team Lead / Project Lead	Project Manager	
KM and PM Clusters	1	Count	74	67	25	54	220
		% within KM and PM Clusters	33.6%	30.5%	11.4%	24.5%	100.0%
	2	Count	47	47	25	37	156
		% within KM and PM Clusters	30.1%	30.1%	16.0%	23.7%	100.0%
	3	Count	34	46	20	24	124
		% within KM and PM Clusters	27.4%	37.1%	16.1%	19.4%	100.0%
Total		Count	155	160	70	115	500
		% within KM and PM Clusters	31.0%	32.0%	14.0%	23.0%	100.0%

Source: computed data

From the above table it is found that (33.6%) achievers are found in the Software Engineer, (30.1%) detached employee represent Senior Software Engineer and (16.1%) unambitious employee in IT Companies belong to Team Lead / Project Lead only (24.5%) unambitious employee are distributed in Project Manager designation. This led to the computation of Chi-Square statistic as show in the table below.

Table 16 : Chi-square test on Knowledge management and project management with employee designation

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.317[a]	6	.504
Likelihood Ratio	5.353	6	.499
Linear-by-Linear Association	.019	1	.890
N of Valid Cases	500		

Source: computed data

From the above table 16 it is found that (Pearson Chi-Square =5.317, P=0.504) are statistically in-significant at 5% level. Therefore it can conclude that there is no association between designation of the employee and the perception towards knowledge management and project management. This implies the perception of knowledge management and project management are same among all the designation of employee.

2.1.10 Knowledge Management and Project Management Clusters * Experience

Table 17: Association of relationship on Knowledge management and project management with employee experience.

Crosstab								
			Experience					Total
			Fresher	Between 1 –5 Years	Between 6 – 10 Years	Between 11 – 15 Years	Between 16 – 20 Years	
KM and PM Clusters	1	Count	42	81	51	43	3	220
		% within KMandPM Clusters	19.1%	36.8%	23.2%	19.5%	1.4%	100.0%
	2	Count	38	54	31	29	4	156
		% within KMandPM Clusters	24.4%	34.6%	19.9%	18.6%	2.6%	100.0%
	3	Count	24	49	33	16	2	124
		% within KMandPM Clusters	19.4%	39.5%	26.6%	12.9%	1.6%	100.0%
Total		Count	104	184	115	88	9	500
		% within KMandPM Clusters	20.8%	36.8%	23.0%	17.6%	1.8%	100.0%

Source: computed data

From the above table it is found that (19.1%) achievers are found in Fresher group, (34.6%) detached employee represent the Between 1 -5 Yearand(26.6%)unambitious employee in IT Companies belong to the Between 6 - 10 Years and (19.5%) Between 11 - 15 Years and only 2.6% unambitious employee are distributed between 16 - 20 Years. This led to the computation of Chi-Square statistic as show in the table below.

Table 18 :Chi-square test on Knowledge management and project management on experience

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.082[a]	8	.638
Likelihood Ratio	6.145	8	.631
Linear-by-Linear Association	.692	1	.405
N of Valid Cases	500		

Source: computed data

From the above table 18 it is found that (Pearson Chi-Square =6.082,P=0.638) are statistically in-significant at 5% level. Therefore it can conclude that there is no association between experience the employee and the perception towards knowledge management and project management. This implies the perception of knowledge management and project management are same among experience of employee.

3.1 Findings and Conclusion

Cluster Analysis of knowledge sharing elements and effectiveness of knowledge sharing it is found that the first cluster consist of 44% of employee with strongly aggregate for project management process, employee development, role of AISECI framework and knowledge management achievement, Therefore this cluster of the employees can be named "Achievers". The Second Cluster consists of 33.2% employee with disagreement for knowledge management process, organization strategies, project management process. Therefore this group can be named "Detached employees". The Final and third cluster consist of the 24.8% employee with moderate agreement for the knowledge management process, project management process and organization strategies. Therefore this group also named "unambitious employees"

It is found that 69% achievers are found in the age group 21 to 30, 10.3% detached employee represent the age group 31 to 40 age and 3.7 % unambitious employee in IT Companies belong to the age group 40 years to 50 years only 4% unambitious employee are distributed over the age group more than 50 years.

Association of relationship on Knowledge management and project management on gender it is found that 85.9% achievers are found in male gender, 23.7% detached employee represent the female and 20.2%

It is found that 63.2.% achievers are found in the Bachelor degree holders, 11.5% detached employee represent are Master Degree holders and 16.1% unambitious employee in IT Companies belong to Diploma holder,7.3% unambitious.

It is found that 33.6% achievers are found in the Software Engineer, 30.1% detached employee represent Senior Software Engineer and 16.1% unambitious employee in IT Companies belong to Team Lead / Project Lead only 24.5%unambitious employee are distributed in Project Manager designation.

It is found that 19.1% achievers are found in Fresher group, 34.6% detached employee represent the Between 1 -5 Year and 26.6% unambitious employee in IT Companies belong to the Between 6 - 10 Years and 19.5% Between 11 - 15 Years and only 2.6% unambitious employee are distributed between 16 - 20 Years.

4.1 Conclusion

The creation of knowledge sharing culture and suitable reward system for the knowledge sharing of the employees are highly suitable for the organization to obtained best of potentialities of the employees. The holistic approach of competency mapping and the performance appraisal system determine the knowledge distribution among (top level, middle and operational level employees. The continuous training process and motivating the employing to overcome the problems help employees to share their views and experience of knowledge with fellow employees. Knowledge management AISECI framework makes good impact in organisation strategies, project management.

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A Study on Customer Satisfaction at Ramkay TVS Motors

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Abstract

A study on customer satisfaction is a term frequently used in marketing is a measure of how products and services Supplied by a company meet or surpass customer expectations its seen that Key Performance indicator within business and is often part of a balanced scorecard. In a competitive market place where business competes for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategyWithin organization customer satisfaction ratings can have powerful effects they focus on employees on the importance of fulfilling customer expectations, when the ratings dip they warn of problems that can affect sales and profitability, these metrics quantify an important dynamics, when a brand loyal customer it gains positive word of mouth communication which is absolutely free and effective

Keyterms: Customer satisfaction, two wheeler, TVS Motors, performance indicators.

1. Introduction

A study on customer satisfaction is a term frequently used in marketing is a measure of how products and services Supplied by a company meet or surpass customer expectations its seen that Key Performance indicator within business and is often part of a balanced scorecard. In a competitive market place where business competes for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy.Within organization customer satisfaction ratings can have powerful effects they focus on employees on the importance of fulfilling customer expectations, when the ratings dip they warn of problems that can affect sales and profitability, these metrics quantify an important dynamics, when a brand loyal customer it gains positive word of mouth communication which is absolutely free and effective.

2. Two wheelers Segment in India

Innocenti of Italy were the original owners of Lambretta brand of scooters. In 1975, the company was bought by Indian government and Scooters India Limited was set up near Lucknow. The company manufactured the first scooter of India with the brand name of Vijai Super.The scooter and the scooterette share in the Indian two wheeler market is 13.4%. The exports in this segment are mainly South East

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Asian countries and occupy a one-fourth share in the total two wheeler exports from India.It has been more than 50 years now that bikes have been ruling the Indian automobile sector. In 1955, the Indian government needed sturdy and reliable motorcycles for its Army and police to patrol the rugged border highways.The first batch of 350cc Bullet - the superbike in India of all times, from the Royal Enfield Company of UK were received and assembled at Chennai. Since then, bikes in India have been flourishing as a two wheelers segment, and Indian bikes gaining on popularity all across the world.

3. Mopeds in India

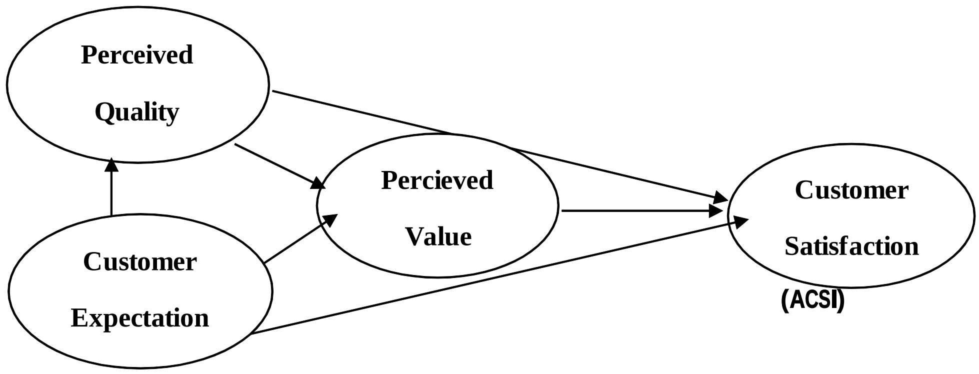
Automobile Products of India was the only company in India that started manufacturing mopeds from 1955. TVS Motors launched India's first 50cc, 2 seater moped: TVS Moped 50. TVS also launched India's first indigenous scooterette: Scooty in 1994.This segment has about one-fourth share in the Indian two wheeler industry. The moped exports account for about 8.4% of the total two wheeler exports from India.Yamaha Motors India Ltd (Yamaha), Majestic Auto Ltd (Majestic Auto), Royal Enfield Ltd (REL) and Honda Motorcycle & Scooter India (P) Ltd (HMSI).Although the three players have dominated the market for a relative long period of time, their individual market shares have undergone a major change. Bajaj Auto was the undisputed market leader till FY2000, accounting for 32% of the two-wheeler industry volumes in the country that year. Bajaj Auto dominance arose from its complete hold over the scooter market.

4. Review of Literature

- Customer satisfaction, as a construct, has been fundamental to marketing for over three decades. As early as 1960, Keith (1960) defined marketing as "satisfying the needs and desires of the consumer". Hunt (1982) reported that by the 1970s, interest in customer satisfaction had increase to such an extent that over 500 studies were published. This trend continued and by 1992, Peterson and Wilson estimated the amount of academic and trade articles on customer satisfaction to be over 15,000.Several studies have shown that it costs about five times to gain a new customer as it does to keep an existing customer (Naumann, 1995) and this results into more interest in customer relationships.
- Thus, several companies are adopting customer satisfaction as their operational goal with a carefully designed framework. Hill and Alexander (2000) wrote in their book that "companies now have big investment in database marketing, relationship management and customer planning to move closer to their customers". Jones and Sasser (1995) wrote that "achieving customer satisfaction is the main goal for most service firms today".
- Increasing customer satisfaction has been shown to directly affect companies' market share, which leads to improved profits, positive recommendation, lower marketing expenditures (Reichheld, 1996; Heskett et al., 1997), and greatly impact the corporate image and survival (Pizam and Ellis, 1999).

American Customer Satisfaction Model (ACSM) method of customer satisfaction measurement (ACSM) method is a set of causal equations that link:

- customer expectations
- perceived quality,
- and perceived value to customer satisfaction (ACSI).



The ACSM model of customer satisfaction measurement by Fornell et al.1996

5. Objectives of the Study

- To Know about the Overall customer satisfaction
- To study the post sales service performance.
- To analyse the Factors influencing customer satisfaction.
- To identify Competitive advantage over their Competitors
- To provide suggestions, in improving the customer satisfaction

6. Need for the Study

- To understand the satisfaction level of the customer regarding the service provided.
- To understand what are the customer requirement and improvement required by them in service
- To knows the problems presently faced by the customers
- To study the post sales service performance.
- Measurement of plans to improve customer Satisfaction.

7. Scope of study

- The main Purpose of this study is to analyse the satisfactory level of the customer towards the Services Provided.
- Every research study should be limited to a specific clear and well defined scope. The study is confined to the Customers and studying about the Customer Satisfaction towards.

8. Analysis of the Study

Age of the Respondent Vs Feature Should be Developed

H0- There is no significant difference between age and their opinion on Features to be developed in TVS Vehicle

H1 - There is significant difference between age and their opinion on Features to be developed in TVS Vehicle

		EMI option availability			**Total**
		Neutral	**Satisfied**	**Highly Satisfied**	
Annual Income of the Family	<1 Lakh	20	3	2	25
	1-2 Lakh	30	1	3	34
	2-4 Lakh	25	2	0	27
	>4 Lakh	12	1	1	14
Total		87	7	6	100

Chi-Square Tests

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	3.540	9	.939
Likelihood Ratio	3.501	9	.941
Linear-by-Linear Association	.264	1	.607
No of Valid Cases	100		

Inference : From the above chi square table it is identified that Pearson Chi square value P= 3.540. As their significance value is 0.939 which is Greater than 0.05 the null hypothesis (H0) is Accepted. Therefore there is no significance difference between age and opinion on features to be developed in the TVS Vehicle.

Annual Income of the Family Vs EMI option Availability

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	4.215	6	.648
Likelihood Ratio	5.828	6	.443
Linear-by-Linear Association	.806	1	.369
N of Valid Cases	100		
H_1 - There is significant difference between Annual Income and EMI option availability			

Inference : From the above chi square table it is identified that Pearson Chi square value P= 4.125. The significant value= 0.648. As their significance value is 0.648 which is Greater than 0.05 the null hypothesis (H0) is Accepted. Therefore there is no significance difference between Annual Income and EMI option availability

Educational Qualification Vs Opinion about feature should be developed in TVS vehicle to make it as best two wheeler brand in country.

Cross tabulation						
		Which Feature did you think should be developed in order to make the TVS the best two wheeler brand in our country				**Total**
		Improve Service Facilities	**Brand Awareness**	**Decrease Vehicle Price**	**More Range of Vehicles**	
Educational Qualification	Schooling	3	3	4	5	15
	Graduation	6	15	8	25	54
	Post Graduation	1	6	2	0	9
	Others	2	7	3	10	22
Total		12	31	17	40	100
H_1 - There is significant difference between Educational Qualification and their opinion on feature should be developed						

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	11.193	9	.263
Likelihood Ratio	13.700	9	.133
Linear-by-Linear Association	.001	1	.978
N of Valid Cases	100		

Inference : From the above chi square table it is identified that Pearson Chi square value P= 11.193. The significant value= 0.263.As their significance value is 0.263 which is Greater than 0.05 the null hypothesis (H0) is Accepted. Therefore there is no significance difference between Educational

Qualification and their opinion on feature should be developed in order to make the TVS best two wheeler brand in India.

Cross tabulation						
		According to you Which is the best Two Wheeler Brand in India				Total
		Bajaj	Hero	TVS	Others	
Annual Income of the Family	<1 Lakh	5	9	7	4	25
	1-2 Lakh	9	13	8	4	34
	2-4 Lakh	6	9	10	2	27
	>4 Lakh	2	8	2	2	14
Total		22	39	27	12	100
H_1 - There is significant difference between Annual Income of the family and their opinion on best two wheeler brand in India						

Annual Income Vs Best two wheeler brand in India

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	5.077[a]	9	.828
Likelihood Ratio	5.094	9	.826
Linear-by-Linear Association	.082	1	.774
N of Valid Cases	100		

Inference : From the above chi square table it is identified that Pearson Chi square value P= 5.077. The significant value= 0.828. As their significance value is 0.828 which is Greater than 0.05 the null hypothesis (H0) is Accepted. There is no significant difference between Annual Income of the family and best two wheeler brand in India.

Regression

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321	.103	.045	.77044

Regression analysis for Overall Experience Vs Ambience, Staff Knowledge and Helpfulness, Vehicle Display, Customer Relationship during enquiry,sales and after sales, Feeling about after sale service, How do you know about RAMKAY TVS

R is the correlation its value is 0.321 and R square is the degree of determination and its value is 0.103 .The degree of determination shows the Ambience, Staff Knowledge and Helpfulness, Vehicle

Display, Customer Relationship during enquiry ,sales and after sales, Feeling about after sale service, How do you know about RAMKAY TVS has influence Overall Experience. Here the overall satisfaction is determined to the extent 99.9% of other independent variables.

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.357	6	1.060	1.785	.111
	Residual	55.203	93	.594		
	Total	61.560	99			

ANOVA table shows that the significant value is 0.111 which is Greater than 0.05 which means dependent variable Overall Experience and independent variables namely ambience, staff Knowledge and helpfulness, display of vechiles,Mode of Knowing about RAMKAY TVS ,Customer Relationship during enquiry, sales and after sales and After sale service does not have 99% of confidence level.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.730	.801		4.656	.000
	Ambience	.020	.085	.024	.237	.813
	Staff Knowledge and Helpfulness	.118	.094	.130	1.249	.215
	Display of Vehicles	.057	.099	.059	.574	.568
	Where did you Hear about RAMKAY TVS	.046	.083	.057	.554	.581
	Customer Relationship during Enquiry,Salesand,AfterSales	-.249	.106	-.243	-2.354	.021
	How do you feel After sale Service Provided at RAMKAY TVS	-.012	.109	-.011	-.107	.915

The common regression equation is y=a+bx. The effect of overall experience and customer relationship during enquiry, sales, after sales =3.730(constant)-0.249(and customer relationship during enquiry, sales, after sales.

Statistics

	CRM at RAMKAY TVS	Delivery Time of Vehicle	Motor Insurance	Safety Measure Available	Model	Availability of Spares	Mileage
N	100	100	100	100	100	100	100
Mean	2.4600	2.0500	2.8300	3.6300	3.2500	1.5100	1.7200

Ranking based on lowest Mean Highest Rank

Rank 1	Availability of Spares
Rank 2	Mileage
Rank 3	Delivery Time of Vehicle
Rank 4	CRM
Rank 5	Motor Insurance
Rank 6	Model
Rank 7	Safety Measure Available

Interpretation : From the above table it is evident that the lowest mean value has higher rank. So availability of spares has rank 1,Mileage has rank 2,delivery time of vehicle has rank 3,CRM has rank4 and Motor Insurance has Rank 5

Independent Sample T Test
Gender Vs Ergonomics/Comfortness of TVS vehicle

Null Hypothesis (H0): The means of the Ergonomics and Gender are not significantly different

Alternate Hypothesis (H1): The means of the Ergonomics and Gender are significantly different

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
How is the Ergonomics/Comfortness of TVS Vehicle	Male	53	3.2830	.94822	.13025
	Female	47	3.5532	.90430	.13191

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
How is the Ergonomics /Comfortness of TVS Vehicle	Equal variances assumed	.413	.522	-1.453	98	.149		.18591	-.63910	.09876
	Equal variances not assumed			-1.457	97.466	.148	-.27017	.18537	-.63807	.09772

Test for equality of variances result shows that value is 0.522 which means both groups are homogeneous group so t test for equal variance not assumed considered

Here the mean value of Ergonomics/Comfortness of male is 328.30 and female is 355.32 and the difference between the two is 7 which is insignificant based on the result generated by SPSS the significant value is 0.148 and it is greater than 0.05 so accept null hypothesis.

9. Summary of Findings

- Majority of the Respondents (53%) are male.
- Majority of Customers are Graduated
- 56% of the Respondents bought TVS Vehicle for its Brand Name
- Only 13% of the Respondents avail EMI option
- 87% of the Respondents felt Neutral about the EMI option available at RAMKAY TVS
- 39% of the Respondents felt Hero Motor Corp is the Best Two wheeler brand in India
- 54% of the respondents satisfied with the overall satisfaction
- 42% of the Respondents felt satisfied with the Ergonomics of the Vehicle
- 40% of the Respondents felt that has to come with more range of vehicle to be number 1 brand in India
- 69% of the respondents felt satisfied with after sale service
- 64% of the Respondents felt Satisfied about Customer Relationship during Enquiry, Sales and, After Sales
- 53% of the Respondents Came to Know by Advertisement.
- 60% of the Respondents Felt Satisfied about the Display of Vehicles.
- 46% of the Respondents felt Satisfied with the Staff Knowledge and Helpfulness.
- 45% of the Respondents are Satisfied with the Ambience of the Showroom
- 34% of the Respondents family income is 1-2 lakh Per Annum.
- 36% of the Respondents are working in Private companies
- Majority of the Respondents 35% are in the age group of 25-30 years of Age.
- From the Chi-Square it is significantly known that there is no significant difference between age and feature should be developed in order to make the best two wheeler brand in India.
- There is no significant difference between occupation and ergonomics/comfortness of Vehicle.
- There is no significant difference between annual income of the family and he EMI option availability at motors.
- There is no significant difference between Educational Qualification and opinion about feature should be developed in vehicles
- There is no significant difference between annual income and the Best two wheeler brand in India
- From the Mean Ranking it is Significant that the Availability of Spares of vehicles is Ranked first and the Safety measure Availability is the least.

10. Suggestions

- To know the problems faced by the customers at the time of post sale service should conduct free check up camps and collect the feedback of at the time of service.
- From the findings only 13% of the Respondents are availing EMI option the Company has to give more promotional schemes like giving one EMI option free for those who buy vehicles through EMI option or Reduce the EMI interest rate so that many other people would consider buying of Vehicles through EMI option irrespective of Income.
- From the findings People are not satisfied with the safety measure availability with the; respondents give least Rank to this category. Customers felt that the wear and tear of vehicles is more than any other Vehicles available in the country and the Quality of Products is not credible. So in order to gain customer credibility the Company has to produce more quality products in order to survive in the competitive two wheeler market segment.
- has to come up with more range of vehicles because 40% of the Respondents are said that they need to come up with new designs to have a strong hold in the Two wheeler segment.
- has to concentrate more on after sale service because the level of dissatisfaction has increased to 13%. So they need to improve after sale service.
- 64% of the Respondents feel satisfied about the Customer Relationship During enquiry, sales and after sales so they have a strong hold in Customer Relationship if they improve the Customer Relationship they have the high chances of attaining maximum customer satisfaction which leads to customer Retention.

11. Conclusion

Customer satisfaction is found to be very important for any type of organization. Though customer satisfaction does not guarantee repurchase on the part of the customers but stills it plays a very important part in ensuring customer retention and loyalty. Customer satisfaction is a direct determining factor in customer loyalty which in turn is a central determinant of customer retention.The Research is focused on Customer Satisfaction. As a two wheeler company the satisfaction of customer is utmost importance because the company is facing increasing competition from domestic and foreign brands with Quality Products, so the greater attention must be given to customer Satisfaction. Companies use various approaches to customer Satisfaction monitoring Product/Service in order to improve customer Relationships and quality.

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Impact of Microfinance on Tribal Development in Telangana

– Dr. I. Anand Pawar*

Abstract

The existing rural credit system in India has failed to live up to the expectations and development of the poorer sections of the society. Many empirical evidences bear sufficient testimony to this. Further, the banking system too has failed to deliver when it comes to meeting the needs of the weaker sections of the society especially the women. Therefore, an effective credit delivery mechanism, which could ensure credit delivery in a sustainable manner, has become a necessity. The tribal population in the State of Telangana and in the country as a whole is the most deprived and vulnerable community that faces severe economic exclusion. Although certain constitutional safeguards are provided, there has been no economic, Social and political mobility across these communities. Contrary to Scheduled Castes and other Backward Castes who witnessed certain degrees of progress because of protective discrimination policies of the government, the Scheduled Tribes remain abysmally backward and socially excluded, still living in harsh environs.In this paper an attempt has been made to analyze the impact of microfinance on Tribal Development in Telangana State in terms of household income; assets acquired and employment generation before and after joining SHG and availing micro credit.

Keywords: Microfinance, Self Help Groups, Bank linkage model, Tribal Development.

Introduction

Micro Finance (MF) as a financial service innovation and is emerging as an important method of bettering the lot of the poor and downtrodden. In fact, micro-finance has become a subject of interest in the recent past especially in the context of reaching the unreached. For a country like India, where substantial number of population is poor, access to credit facility is not only necessary but also an indispensible for optimizing their per capita income in contribution to the growth of national economy. The Planning Commission of India has estimated that 27.5% of the population was living below the poverty line in 2004-05. The criterion used was monthly per capita consumption expenditure below Rs 356.35 for rural areas and below Rs 538.60 for urban areas. 75% of the poor are in rural areas, most of them are daily wagers, self-employed, house-holders and landless labourers (en.wikipedia.org/ wiki/poverty_in_India). The impact and implication of this position poses a great challenge for the country to overcome the poverty and to have an equitable distribution of the national income to uplift the poor.

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The existing rural credit system in India has failed to live up to the expectations and development of the poorer sections of the society. Many empirical evidences bear sufficient testimony to this. Further, the banking system too has failed to deliver when it comes to meeting the needs of the weaker sections of the society especially the women. Therefore, an effective credit delivery mechanism, which could ensure credit delivery in a sustainable manner, has become a necessity. Such aninitiative would certainly work for the removal of poverty, unemployment and the development of women in the society. The liberalization and globalization policies of the Indian Government have opened up new vistas in the realm of credit delivery system in the country. For instance, there has been more emphasis on empowering the hitherto powerless rural women. Micro-financing aims at improving the lot of the rural women by effectively organizing women to work for women. Micro-financing underlines the need for active and committed participation of women, not just as recipients of loan but as integral partners in credit programmes through formation of groups, involvement in designing and operating the programmes essentially aim at unleashing new opportunities for rural women.

Review of the Literature

Nelly, M.K & McCord (2001),found that microfinance has a positive effect depends on individual women success full use of the services, her family dynamics, her groups internal rolls of conduct. Authors identified six major dimensions of women empowerment in the impact assessment study of credit with education on empowerment of women in Ghana, Bolivia, Burkina Faso and Thailand. Rajesh Kumar Shastry (2009) in his article on "Microfinance and poverty reduction in India: A Comparative Study with Asian Countries". Though poverty reduction has long been a high priority for the Government of India, microfinance is a still experimental tool in its overall strategies. India's microfinance experiments are much differ from the more substantial microfinance institutions and programmes of its neighbors countries. The United Nations system was perhaps the first international partner to India's new experiments with small scale credit schemes. Mahendra Varman (2005),studied, "Impact of Self-Help Groups on FormalBanking Habits", makes a modest attempt to examine whether there is any, associationbetween the growth of SHGs and the increase in female bank deposit accounts and whetherSHGs have a tendency to influence account holding in formal banks.

Priya Basu and Pradeep Srivastava (2005), in their paper titled, "Exploring PossibilitiesMicro finance and Rural Credit Access for the Poor in India", empirically analyze the reachof the most dominant micro finance initiative, the SHG-bank linkage model. The paper drawslessons for exploiting the potential of micro finance in India, outlines areas of concern forgovernment policy towards this important sector and suggests ways to scale up access tofinance for the poor.Jaya S. Anand (2002), in her discussion paper titled "SHGs in EmpoweringWomen: Case Study of Selected SHGs and NHGs", gives a review of progress of SHGs. She has attempted to examine the performance of selected SHGs and NHGs and toassess its impact, especially the impact of micro credit programme on empowering women. Ithas been clearly established that delivering credit alone may not produce the desired impact.The supporting services and structures through which credit is delivered, ranging from groupformation and training to awareness-raising and a wide range of other supporting measuresare critical to make the impact of group activity strong and sustainable.Jerinabi, U. & Kanniammal, K. (2009)Micro finance interventions are well - recognized world over, as an effective tool for poverty alleviation and improving socio economic conditions of the poor. In India too, micro finance is making head way in its efforts for reducing poverty and empowering rural and underprivileged women. Micro finance through the network of cooperatives, commercial banks, RRBs, NABARD and NGO's has also been largely supply - driven and a recent approach.

Sita Devi, K., Ponnarasi & Tamilselvi (2010)In the light of the importance of microfinance in pushing back rural poverty, through the formation of SHGs. This study has been undertaken in Cuddalore district of Tamil Nadu with the objective of studying the impact of microfinance on the socio-economic status of the rural poor. The results of the study revealed that the SHGs have had greater impact on both economic and social aspects of the beneficiaries. Thus it could be inferred that the SHGs have succeeded in their role of change agents which could help in pushing back rural poverty. Pradeep Kumar Singh(2004) critically examined that the reasons for tribal development in India. He advocated that the biggest mistake in tribal development planning in India has been the clubbing together of all the tribes, as if they constitute a homogeneous cultured group. It is negative to think that they all have similar problems and that same or similar welfare schemes will be useful to them all equally. These two cannot be equated in socio-cultural terms and failure of all developmental programmes meant for tribal development in the country. He concluded that in order to make tribal development programme more viable, an urgent need to be the reclassify the Indian tribes. This new classification should be based on the techno-economic parameters and relative advancements already achieved in the last fifty years. The programmes should be prepared for each of the class separately. Further, these programmes should aim at achieving 'affluence' rather than 'development'.

Nishankar Panda (2006) in his paper he outlined the imperatives and compulsions of Tribal Development in India. The need for tribal development in India hardly needs any justification. Their primitive way of life, economic and social backwardness, low level of literacy, hackneyed system of production, absence of value system, sparse physical infrastructure in backward tribal areas and demographic quality of tribal areas coupled together make it imperative for a systematic process of development of tribals and tribal areas. Gopinath Reddy & Anil Kumar (2010) examined in their study "Political Economy of Tribal Development as a case study of Andhra Pradesh". The problem of tribal development have long baffled the policy makers, administrators and social scientists in India, and the debate on meaning, character and direction of their socio-economic transformation continuous. Further it is based on various committees' reports and studies on tribal development that, efforts have been subsequently made to improve the tribal situation by providing various kinds of provision and schemes. However, unfortunately, the tribals have not been able to derive sufficient benefits from this process of planned development. They concluded that since independence, the Government of India has initiated several five year plans, programmes, policies and laws and has made efforts for gradual socio-economic development of Schedule Tribes, there has been a considerable increase in the fund allocation for the tribal areas but they still remain the weakest sections of the society. The reasons are:

(i) Most of the tribals were not able to draw benefits from the facilities provided by government because of large-scale corruption among officials and improper implementation of tribal development schemes;

(ii) The majority of the tribal people are not even aware of the development schemes implemented by government agencies;

(iii) Agriculture is mostly primitive and there is very little irrigation facility;

(iv) Though there are many safeguards to protect tribals from outsiders and non-tribals, their exploitation continues unabated.

(v) Inadequate monitoring of development programmes going on in tribal areas and therefore, most of them are poorly implemented, etc.

The review of literature discussed above provides the deep insights of the work done by the experts and researchers on some aspects of the micro finance. However, no studies have been taken up to analyze the impact of micro finance on tribal development in Telangana.

Need for the Study

The tribal population in the State of Telangana and in the country as a whole is the most deprived and vulnerable community that faces severe economic exclusion. Although certain constitutional safeguards are provided, there has been no economic, Social and political mobility across these communities. Contrary to Scheduled Castes and other Backward Castes who witnessed certain degrees of progress because of protective discrimination policies of the government, the Scheduled Tribes remain abysmally backward and socially excluded, still living in harsh environs. Hence, an attempt has been made to study "Micro Finance and its Impact on Tribal Development in Telangana", delineates the situation of Scheduled Tribes in the background of various policies of the state during the successive plan periods and its impact on their socio-economic mobility.

Objectives of the Study

The objective of this study is to assess the impact of micro finance on socio -economic status of the Tribalsin Telangana in terms of household income; assets acquired and employment generation before and after joining SHG and availing micro credit.

Scope and Period of the Study

The present study is confined to analyze the Impact of Micro Finance (through SHGs) on Tribal Development in Telangana for the period of one decade i.e., 2002-03 to 2013-2014.

Research Methodology

The study is undertaken to analyze the role of micro finance in empowering tribal communities in the state of Telangana. In order to realize the objectives stated, the data has collected by adopting both primary and secondary sources. There are about 9, 95,000 Self-Help Groups are in operation in the state of Telangana. Out of which about 300 SHGs and an average 3300 members from the study area are included in the sample size based on both convenience and representative sampling methods. The required data has been collected from the SHG members (Tribal women's) from three districts viz., Adilabad, Khammam and Mahabubnagar. From each district five mandals and from each mandal five revenue villages were taken into consideration based on convenience and representative sampling methods. The data collected has been analyzed by using Statistical Package for Social Science (SPSS). Chi-square and other suitable (like, factor analysis, cluster analysis) tests depending upon the suitability of the data used in order to find out the relationship between the use of microfinance and the development of tribal communities in the study area.

Results and Discussion

Changes in the Household Income: Income is the major determinant of the standard of living of the people. One of the reasons for joining in SHG is to avail credit and increase their well-being. The SHGs member income has been increased after joining the SHGs. Hence women members of the groups are independent to meet their personal expenditure, and they contribute more to their household income. To find the whether any quantitative change in income levels of the beneficiaries among the Tribals due to MF services are analyzed hereunder.

Table 1: Household Income Before and After Joining SHG

Income (in Rs.)	Before Joining SHG		After Joining SHG		Change (%) Percent
	Frequency	Percent	Frequency	Percent	
Below 24,000	1697	51.42	1309	39.67	11.75
24,000 – 36,000	703	21.30	917	27.79	6.49
36,000 – 48,000	481	14.58	521	15.79	1.21
Above 48,000	419	12.70	553	16.76	4.06
Total	**3300**	**100**	**3300**	**100**	

Source: Field data

The percentage of respondents whose annual income is below 24,000 has come down to 39.67percent after joining SHG as compared to 51.42 percent of them falling under 24,000 brackets before joining SHG. Nearly 11.75 percent of the respondents were able to raise their annual income to 24,000 after joining SHGs. This indicates that there has been some improvement in the financial status of those who have opted to become member of SHG. The percentage of respondents whose annual income is between 24,000 - 36,000 has increased to 27.79 percent after joining SHG as compared to

21.30 percent before joining SHG. There is an increase of 6.49 percent of the respondents who were able to benefit by joining SHGs. This indicates that there has been some improvement in the financial status of those who have opted to become member of SHG. The percentage of respondents whose annual income is between 36,000 - 48,000 has increased to 15.79 percent after joining SHG as compared to 14.58 percent before joining SHG.

But there is not much increase in the number of respondents who benefitted financially after joining SHG as the rate of improvement is just 1.21 percent. This indicates that there has been any significant improvement in the financial status of those who have opted to become member of SHG. The percentage of respondents whose annual income is above 48,000 has increased to 16.76 percent after joining SHG as compared to 12.70 percent before joining SHG. Many housewives did not earn anything before joining SHGs, but after as a member of the SHGs, they are also earning reasonably. There is an increase of 4.06 percent of the respondents who were able to benefit by joining SHGs. This increases the willingness to participate in the SHGs' activities. Many women members independently involve in the economic activities individually and with other group members after joining SHGs. This indicates that there has not been any significant improvement in the financial status of those who have opted to become member of SHG. But they are now economically independent and contribute to increase their household income.

H0: There is no change in the household income of beneficiaries before and after joining in SHG-BLP.

Kolmogorov-Smirnov test (K-S test)

F	**CF**	**$F_0(X)$**	**E**	**CE**	**$F_e(X)$**	**$F_0(X)$- $F_e(X)$ Dmax)**
3259.00	3259.00	1.00	815.96	815.96	0.294118	0.70
2.49	3261.49	1.00	652.77	1468.73	0.529412	0.47
1.19	3262.68	1.00	652.77	2121.50	0.764706	0.23
1.16	3263.84	1.00	652.77	2774.26	1	0.00
3263.84			**2774.26**			

Result: Calculated value of Dmax (0.070) is greater than the table value (0.02). Hence, H0 is rejected and it is concluded that there is a significant change in the household income of beneficiaries before and after joining in SHG-BLP.

Household Assets Acquired: The table 2 depicts the type of household assets acquired by the members after joining SHGs. Out of 3300 sample Beneficiaries, there is a 6 percent increase in increase of agriculture land which was acquired after joining SHG. 9 percent of increase in case of construction of toilets, more than 17 percent of increase in getting Gas, Electricity and water tap connection. Further it is also observed that there is more than 4 percent and 2 percent increase in acquiring vehicles 4 percent and establishment of small business units 2 percent respectively particularly after joining SHGs and utilizing micro finance through SBLP.

Table 2 : Type of Household Assets Acquiredby the Beneficiaries

Set of Assets	Before Joining SHG		After Joining SHG		Change Percent
	Frequency	Percent	Frequency	Percent	
Agriculture land	917	27.79	1131	34.27	6.48
Consumer durables	308	9.33	209	6.33	-3
Construction of Toilets	112	3.39	416	12.61	9.22
Gas, Electricity and Water tap connection	301	9.12	913	27.67	18.55
Material assets	434	13.15	41	1.24	-11.91
Gold & Silver	55	1.67	10	0.30	1.37
Farm animals	663	20.09	17	0.52	-19.57
Business establishments	32	0.97	91	2.76	1.79
Vehicles	164	4.97	317	9.61	4.64
Others (if, any)	314	9.52	155	4.70	-4.82
Total	**3300**	**100**	**3300**	**100**	**2.75%**

Source: Field data

Therefore, it concluded that the acquisition of an asset is an indication of capital formation and also improvement in the living standards of beneficiaries. Availability of credit played an important role in the acquisition of assets. The portion of sample client household acquiring assets with micro credit support rose to 2.75 percent after joining SHG and availing micro credit.

Employment Generation: Economic independence smoothens the way towards tribal development through SHGs however; it is also through women empowerment. Microfinance helps women to engage themselves in more self -employment opportunities and other livelihood related works. Poverty and unemployment are the major problems of any under developed countries to which India is no exception.

Table 3 : Employment generation

Employment to	Before Joining SHG		After Joining SHG		Change
	Frequency	Percent	Frequency	Percent	Percent
Spouses	2356	71.39	2306	69.88	1.52
Family members	736	22.30	598	18.12	4.18
Hired labourers	208	6.30	396	12.00	-5.70
Total	**3300**	**100**	**3300**	**100**	**0.00**

Source: Field data

It is observed from the table 3 that SHG members provided highest number of employment opportunities to their spouses which accounted for 76.06 percent, family members 26.52 percent and only 6.30 percent is hired labourers. Further it is also observed that with help of SBLP, the members were able to generate employment opportunities to their spouses has been net increased to 8.88 percent after joining SHG when compared to 5.24 percent before joining the group. They could also generate employment opportunity to their family members to the extent of 8 percent during the study period. It is very interesting point to note here is that after joining in SHG and availing micro credit through SBLP, the members have raised to the level that they are also providing employment opportunities to others in the form of hired labourers and which is accounted for 1.06 percent. Therefore, it can be inferred that the SHG members are successfully utilizing the micro credit through SHG-LBP of microfinance for generating employment opportunities and will provide greater scope for achieving income and more economic benefits to the rural poor. Moreover, SHG members not only to providing employment opportunities to their family members but also to others and helping them to reduce the poverty and improve their standard of living.

Ho: There is no change in the employment of beneficiaries before and after joining in SHG-BLP.

Kolmogorov-Smirnov test (K-S test)

F	CF	$F_0(X)$	E	$F_e(X)$	$F_0(X)-F_e(X)$
1.59	1.59	0.38	1.41	0.33	0.04
1.34	2.93	0.69	1.41	0.33	0.36
1.31	4.24	1.00	1.41	0.33	0.67(D_{max})
4.24			**4.24**		

Calculated value of Dmax = 0.67

Table value @ 5% level of significance =1.36/?n =1.36/?3300 = 0.02.

Result: Calculated value of Dmax (0.67) is greater than the table value (0.02), Hence H0 is rejected and concluded that there is a significant change in the employment of beneficiaries before and after joining in SHG-BLP.

Micro Finance and Tribal Development

Women empowerment is a multi dimensional concept. The major objective of the study is to disembark at a finale about the role of microfinance on Tribal Development. So factor analysis is used to reduce its different dimensions and to derive the important meaning full factors. About 10 variables are outlined, as they found to be influencing Tribal Development. They are education, occupation, marital status, religion and caste, nature of the family, head of the household ,ownership of the house, asset possessed by Beneficiaries, family income, change in the personal income, savings, occupation, loan availability after joining the group, poverty score, and scores of economic, knowledge, decision making and self worthiness indices.

Suggestions

1. The role NGOs should be encouraged in taking all the Government welfare programmes and more particularly microfinance through SHG-BLP in bettering the living standards of Tribal's - the most deprived sections of the society otherwise the macro objective behind the microfinance programme would not be fulfilled.

2. An inclusive growth of Tribal development through SHG- BLP of microfinance has to be achieved. It means whatever, growth achieved so far is only nominal and empowerment should be in terms of gender equity, poverty reduction, growth in human development index (HDI) among the rural and Tribal population in India. It is in terms of per capita income and change in living standards. It is possible through involvement of cent percent women in formation SHGs and utilization of micro credit.

3. Tribals should be educated about the issues right from the formation of SHGs to an effective utilization of microfinance through SHG-BLP. In addition to this the Government of Telangana should plan for training cum-basic educational programme through Open University system may be extended to the major portion of illiterate women SHG members. Further, this approach would be more beneficial for not only educating them but also creating awareness and utilization of various Governmental schemes that are in vogue.

4. The family size of Tribals is still large in number. Suitable measure should be taken in this direction at the Government level. A separate family planning incentives has to be evolved and sensitize them with the benefits out of small family concept among the Tribes. All necessary steps should be initiated to this effect. In addition, all welfare measures and subsidized schemes may be linked with the small family norm.

5. The Government of Telangana should initiate further necessary steps to increase the sum of micro credit through SHG-BLP up to Rs. 1 lakh to each SHG member. Special financial assistance may be extended for construction of a PUCCA house and toilet, acquiring agricultural land other productive purposes.

6. The government should identify the schemes which boost up the income levels of the tribal families in small hamlets in various districts of Telangana.

7. The SC/ST Sub-plan should implemented without delay and the funds allocated for this purpose should be divided into two separately among the Schedule Casts and Schedule Tribes and immediately implemented through respective Social/Tribal welfare departments to reach target group.

8. It is vital to ensure that there is proper regulatory mechanism to monitor and expand the schemes at the larger interest of the beneficiaries. Whatever changes took place in the lives of Tribal through SGH-BLP of microfinance is very little or insignificant. The, other issues like basic amenities, approach roads to Tribal hamlets for which suitable policy decisions from the Government side assumes greater significance.

9. The high level sensitization about microfinance and its benefits such as 'pavala vaddi' to SHG members should be promoted in rural and Tribal areas. Further, it is also suggested to the Government authorities to encourage the savings and investment habits among the Tribal poor up to the expected/possible extent.

10. There is no relationship between increase of assets and increase in income of beneficiaries before and after joining in SHG-BLP which means the increases assets have nothing to do with income enhancement. Most of the assets owned by the SHG members might be non-performing assets. The revenue agencies of the GoTS have to activate the increased assets, so that they become income generators.

11. The SHG members' dependency on money lenders should be reduced. For achieving the same the Government should give necessary guidelines to both commercial banks as well as RRBs to extend the financial support and also for meeting other requirements.

12. The Government should take necessary steps to increase the banking habits among the Tribal households who are inaccessible to banking system. Further, it should be made mandatory to have a bank account and all the financial transactions should be made through in order to ensure the transparency and accountability. It will be helpful in ensuring the extended benefits may be reaching the unreached-the ultimate beneficiary.

13. A remarkable change in the women empowerment is possible only when (i) financial discipline among the indiscipline family members; (ii) Government should link all schemes funded by the GoI and benefits in the name of women and see that the ratio and source of earning power among the rural and Tribal poor should be raised.

Conclusion

The study tries to find the marginal impact of joining in SHGs on their annual income by comparing their financial position before and after joining in SHGs. It is observed that, most of the respondents were able to raise their annual income after joining SHGs. This indicates that there has been some improvement in the financial status of those who have opted to become member of SHG. This indicates that there has been some improvement in the financial status of members of SHGs. Majority of respondents (63%) were daily labors before joining SHG but it has come down to 56 percent after availing micro credit. It is also observed that there is more than 4 percent and 2 percent increase in acquiring vehicles 4 percent and establishment of small business units 2 percent respectively particularly after joining SHGs and utilizing micro finance through SHG-BLP. It is evident from the study that most of the SHG members who availed the credit have their repayment track record was satisfactory. Communication skills has been improved while participating official discussion with other people such as Bank officials, representatives of NGOs, peer groups, etc could give improvement in their communication skills. Survey results found to be proving the argument that microfinance activities help to boost financial inclusion process. The results of the study indicate that microfinance loan and its productive utilization improved the economic condition of the participants of SHG-BLP.

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A Study of Rural Nonfarm Sector among the Indian States between Pre and Post Liberalisation Era

– M. Suresh.M *

Abstract

The role of nonfarm sector is increasing in the role areas and role of the agriculture sector is decline in the country

There has been change in factor influencing the rural nonfarm sector among the various regions.There has attempt to the understand the pattern of the growth rural nonfarm sector among major Indian states and factors influencing the growth of rural nonfarm sector using cluster and discriminate analysis between 1983 to 2009-10.

Keywords :

1.1 Introduction

In the most part of the developing world, urban industrial and service sector failed to absorb the labour force. The nonfarm activity in rural areas provides a source of employment for 25 to 50 percent of the rural labour force in the developing countries.(Anderson and Leiserson (1978),Chuta and leidholm(1979) and Hazell and stevenHaggblade(1991The rural nonfarm sector lies between urban-industrial sector and rural sector is missing link between them(Hazell and Haggblade,1991) .Rural nonfarm sector through backward and forward linkage with agriculture(Mellor 1976,Hazell and Haggblade 1991) .It acts dynamic transformation of farm sector through linkages with rural economy. In India there has been increasing share of income and employment of rural nonfarm activities (vaidyanathan 1986,Mahendra dev 1993,,Manoj jatav and suchritasen 2013).r. Within the rural non-agricultural sector there is increase in share of services sector exceeds the secondary sector.(vaidyanathan 1986,_Hans_P_Binswanger 2013). There has been attempt to analysis the cluster or grouping among the Indian states .The multiplicity of rural -urban linkages and other variables influencing the agro-economy of the region ,exert their impact in influencing the agro-economy of the RNFE in a given area.All the major states of the country is considered all the major states our country .There is need government intervention particular through make in India policy in favour of rural nonfarm sector which can absorb the Labour in the Rural India.

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1.2 Objectives and Methodology

The objective of the study

1) To examine whether there is group exist between the Indian States

2) To examine the factors influence the growth of the Rural nonfarm sector among the Indian states

The determinants for the study of rural nonfarm sector taken for NSSO Reports final report on employment and unemployment1983 and 2009-10 ,land statistics reports and sarveskhana. Hierarchial Cluster analysis is used for grouping the rural nonfarm sector.Inhierarchial cluster analysis the vectors(case) are groups together on the basis of their mutual distances.AHierarchial cluster analysis is visualized through a hierarchial tree called Dendogram.SPSS 20 Version has used for analysis the data.

1.3 The main variables for the cluster analysis for 1983 and 2010

1. **Area under the food crops-** food crops supplies raw material for many agro-processing industries.food crop sector is related to rural non-farm sector by consumption and investment linkages(John Mellor 1976,Hazell and stevenHaggblade(1991).The specification is total food crops under total cropped area.Food crops is considered as a vital determinant of Rural nonfarm employment among the states

2. **Area under the non-food crops :** farm and non-farm linkages have shown that the degree of commercialisation of agriculture influences the shares and growth of Rural nonfarm economy .Empirical studies have use the percentage of area under non-food crops as an index of commercialisation (Basant and Parthasarathy 1991,Murty and Durga 1992). It shows the commercialisation of the agriculture (Vaidyanathan 1986).It also show the urban linkages and growth of the modern nonfarm sector (Ranis and stewart 1993).The specification Non-foodcrops includes sugarcane and cotton under total cropped area.

3. **Irrigation :** Agro economy is directly influenced by irrigation. Irrigation increases the land productivity and uses of modern inputs (Hazell and Haggblade 1991).It changes the agriculture through changing the cropping pattern, extension of cultivation and increases the cropping intensity (Vaidyanathan 1986).It is reason for commercialisation and mechanisation of farm(Peter Hazell and C.Ramasamy 1973).The variable is explained net irrigated area (by govt, private, tanks, tubewells and others)

4. **Household income :** Household patterns classified as cultivators,agricultural labourers, self employment in agriculture (cultivators), self employed in non-agriculture and others Households according to their major share of the income.Household groups helps in understanding the growth of the rural nonfarm sector among the different states.The specification is Cultivators,self employed in non-agriculture, agricultural labour, other labour (non-agricultural labour), others etc.

5. **Unemployment rate in rural areas :** It helps in understanding the distress in rural areas.Unemployment rate show number of persons who unemployed in the rural areas show the distress led rural nonfarm sector growth in rural India.The specification is unemployment rate(15-59 years) in percent in rural areas for both male and female

1.4 Cluster between states during 1983

It is proposed to group the states .It is considered all the major states of the our country

Table 1.1. cluster membership

Cluster Membership	
Case	2 Clusters
1:Andhra Pradesh	1
2:Bihar	1
3:Gujarat	1
4:Haryana	1
5:Karnataka	1
6:Kerala	1
7:madhya Pradesh	2
8:Maharashtra	2
9:Orissa	1
10:Punjab	1
11:Rajasthan	2
12:Tamilnadu	1
13:Uttar Pradesh	1
14:West Bengal	1

We can find some justification for the partition into 2 clusters from throughout that the states. The states within each reveals quite a bit of homogeneity with respect to the variable considered.

Majority of states coming under cluster 1 Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Orissa, Punjab, Tamilnadu and West Bengal groups.MadhyaPradesh,Maharastra,Rajasthan, show cluster under group 2. Further reasons have to be probed to know the reason behind the grouping of the different states together

1.5 Dendogram

Dendogram is tree structured graph to visual the results of the Hierarchical clustering.ward method is used which joins clusters based on minimizing the within-group sum of squares and will tend to produce compact clusters.x-axis is shows some measure of the similarity or distance at which clusters join.

Figure 1.1

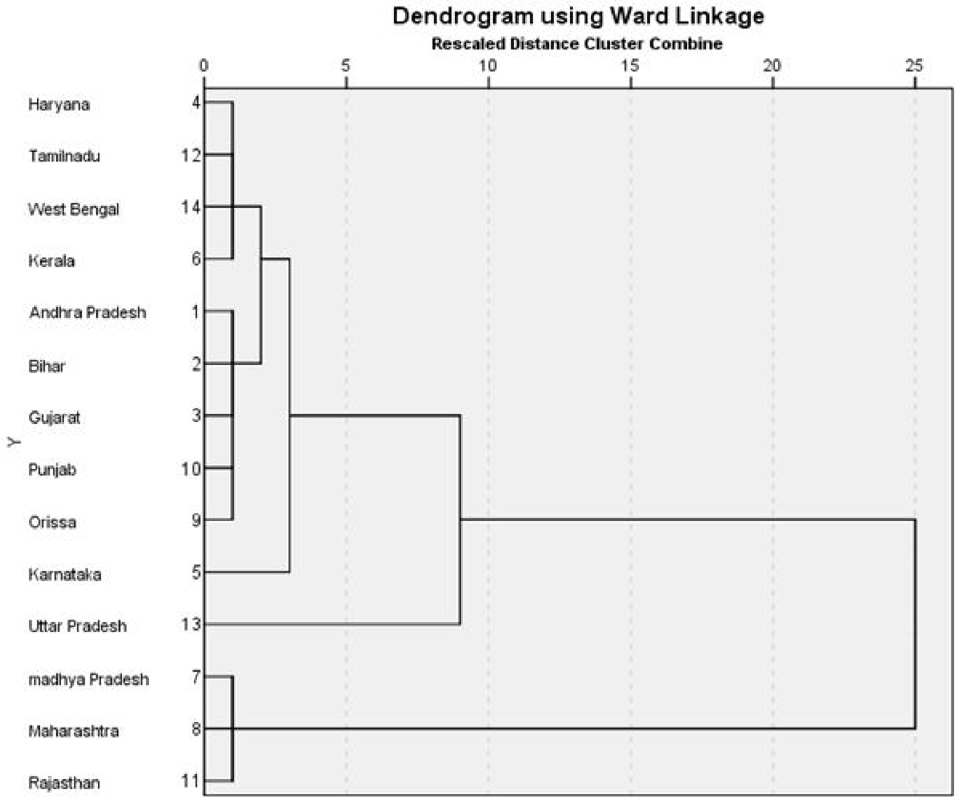


Figure 1.1 shows that Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Orissa, Punjab, Tamilnadu and West Bengal forming under 1stcluster. Similarly 2nd cluster shows that Madhya Pradesh, Maharastra and Rajasthan .

1.6 Cluster membership among the states during period 2009-10

The major clusters exist among the indian states during 2009-10

We can find some justification for the partition into 2 clusters from throughout that the states. The states within each reveals quite a bit of homogeneity with respect to the variable considered.

Majority of states coming under cluster 1 Andhra Pradesh, Gujarat, Haryana, Karnataka, Kerala, Orissa, Punjab, Tamilnadu, Madhya Pradesh and West Bengal groups. Bihar, Maharastra, Rajasthan, Uttar Pradesh show some form of cluster. Further reasons have to be probed to know the reason behind the grouping of the different states together

Table 1.2 : Cluster Membership

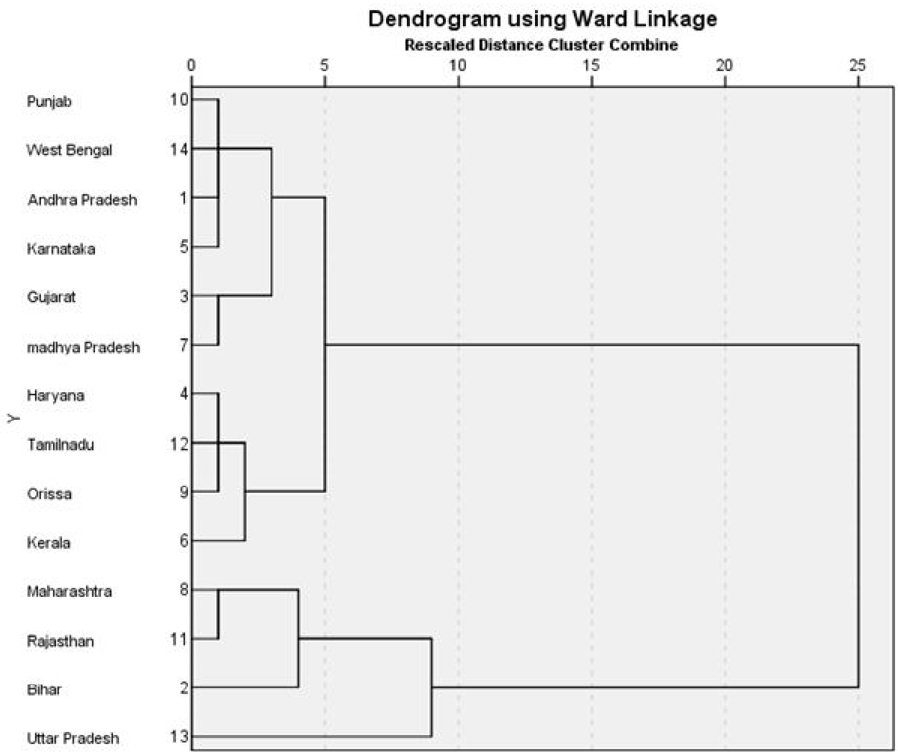
Cluster Membership	
Case	2 Clusters
1:Andhra Pradesh	1
2:Bihar	2
3:Gujarat	1
4:Haryana	1
5:Karnataka	1
6:Kerala	1
7:madhya Pradesh	1
8:Maharashtra	2
9:Orissa	1
10:Punjab	1
11:Rajasthan	2
12:Tamilnadu	1
13:Uttar Pradesh	2
14:West Bengal	1

1.7 Dendogram

Dendogram is tree structured graph to visual the results of the Hierarchical clustering.

Figure 1.2 shows that under AndhraPradesh, Madhya Pradesh, Gujarat, Haryana, Karnataka, Kerala, Orissa, Punjab, Tamilnadu and West Bengal forming under 1st cluster. Similarly 2nd cluster shows that Bihar,Maharastra,Rajasthan and Uttar Pradesh.

Figure 1.2



1.8 Discriminant 1983 for the two groups

To identify the characterisitics of the states which are grouped as the highest level group and the lowest level group based on which states has highest growth in nonfarm sector based on various factors,using discriminate analysis is used.keeping the discriminating variables in each groups there are two discriminant functions as follows:

$D_1 = a_1 + A_1X_1 + A_2X_2 + A_3X_3 \ldots\ldots\ldots\ldots\ldots A_nX_n$

$D_2 = b_1 + A_1X_1 + A_2X_2 + A_3X_3 \ldots\ldots\ldots\ldots\ldots A_nX_n$

Where in $X_1, X_2, X_3 \ldots\ldots\ldots\ldots X_n$ represent the discriminating variables and D_1 and D_2 are the highest level group and the lowest level groups respectively in rural nonfarm employment among the states. a_1, b_1 are constant.

1.9 Discriminating analysis in the understanding rural nonfarm sector

The multiplicity of rural-urban linkages and a host of other variables influencing the agro-economy of the region,exert their impact in influencing the pattern and pace of Rural nonfarm employment in a given area.The variables selected for the discriminant functions for estimating the determinants of employment in rural manufacturing are;

1. Area under the food crops
2. Area under the non-food crops
3. Irrigation
4. occupational pattern(cultivators,self employment in non-agriculture,agriculturallabour,others,non-agricultural labour(other labour) etc
5. unemployment rate in rural areas(both male and female)

1.10 Group statistics

In discriminant analysis we are trying to predict a group membership so firstly, we examine whether there are any significant differences between groups on each of the independent variables using group means and ANOVA results data.The idea of variables that may be important can be obtained by inspecting the groups means and standard deviations.

Table 1.3 : Group Statistics

Group Statistics			
states		Mean	Std. Deviation
1	cultivators	332.20	70.563
	agrilabour	322.20	83.196
	SEinagri	125.00	21.396
	otherlabour	79.90	42.070
	others	120.20	23.994
	unmale	1.90	1.524
	unfemale	.60	1.265
	irrigate	2080.70	1034.066
	foodcrops	5820.30	2465.506
	nonfood	504.40	499.203
2	cultivators	524.50	117.174
	agrilabour	244.25	122.358
	SEinagri	94.75	28.860
	otherlabour	51.75	17.193
	others	82.50	14.083
	unmale	.50	.577
	unfemale	.00	.000
	irrigate	4173.75	3546.279
	foodcrops	16662.75	3433.368
	nonfood	1450.50	1158.613

Group Statistics			
states		Mean	Std. Deviation
Total	cultivators	387.14	121.420
	agrilabour	299.93	97.889
	SEinagri	116.36	26.650
	otherlabour	71.86	38.310
	others	109.43	27.509
	unmale	1.50	1.454
	unfemale	.43	1.089
	irrigate	2678.71	2145.992
	foodcrops	8918.14	5724.136
	nonfood	774.71	824.034

Note : Area under the food crops(foodcrop), Area under the non-foodcrops (non-food), Irrigation (irrigate), occupation pattern (cultivators, SEinNonagri, agrilabour, other labour, others), unemployment rate in rural areas (unmale, unfemale),

From this output we can find among variables (cultivators, agrilabour, seinagri, otherlabour, others, unmale, unfemale, irrigate, foodcrops, nonfood) etc in group1 states differ noticeable from group1 states to group2 states.

1.10 Test of Equality of Group Means

Table 1.4 : Tests of Equality of Group Means

Tests of Equality of Group Means					
	Wilks' Lambda	F	df1	df2	Sig.
cultivators	.449	14.742	1	12	.002
agrilabour	.861	1.943	1	12	.189
SEinagri	.717	4.740	1	12	.050
otherlabour	.881	1.616	1	12	.228
others	.587	8.436	1	12	.013
unmale	.796	3.068	1	12	.105
unfemale	.933	.857	1	12	.373
irrigate	.791	3.172	1	12	.100
foodcrops	.211	44.748	1	12	.000
nonfood	.710	4.895	1	12	.047

Wilk's lambda is used to test for significant difference between groups.Wilk'slambdo is between 0 and 1.wilk's lambda shows that variable which has highest importance in discrimination function as follows food crops (.211), cultivators (.449), others (.587), non-foods (.710), SEinagri (.717), irrigate

(.791), unmale (.796), agrilabour (.861), otherlabour (.881) and unfemale.Wilks's lamba ,is significant by F test for all independent variables.foodcrops(44.74),cultivators(14.74),others(8.34) are high values the F tests.

1.11 Fisher linear discriminating functions

Table 1.5 : Classification Function Coefficients

	States	
	1	2
cultivators	.814	.967
agrilabour	.405	.320
SEinagri	2.256	3.106
otherlabour	2.095	3.481
others	1.847	2.371
unmale	-60.174	-107.914
unfemale	64.896	109.029
irrigate	-.035	-.054
foodcrops	.038	.060
nonfood	.037	.063
(Constant)	-580.850	-1033.820

Fisher's linear discriminant functions

Fisher's linear discriminant functions

Fisher's classification coefficients are used to classify the cases between the group.fisher's linear discriminant functions variable which has importance in each groups.Group 1unemployment rate among the female rural areas, Self employment in non-agriculture,otherlabour ,others has greater in group 1.Similarly in group also shows same variable have importance in group 2 also.

1.12 ClassificationResults

Table 1.6 : Classification Results[a,c]

		states	Predicted Group Membership		Total
			1	2	
Original	Count	1	10	0	10
		2	0	4	4
	%	1	100.0	.0	100.0
		2	.0	100.0	100.0
Cross-validated[b]	Count	1	8	2	10
		2	2	2	4
	%	1	80.0	20.0	100.0
		2	50.0	50.0	100.0

a. *100.0% of original grouped cases correctly classified.*

b. *Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.*

c. *71.4% of cross-validated grouped cases correctly classi*fied.

Classification results is a simple summary of number and percent of subjects classified correctly and incorrectly.The leave-one-out classification is a cross-validation method of which the results are also presented.The 'leave -one -out classification 'is a cross -validiationmethod,of which the results are also presented.

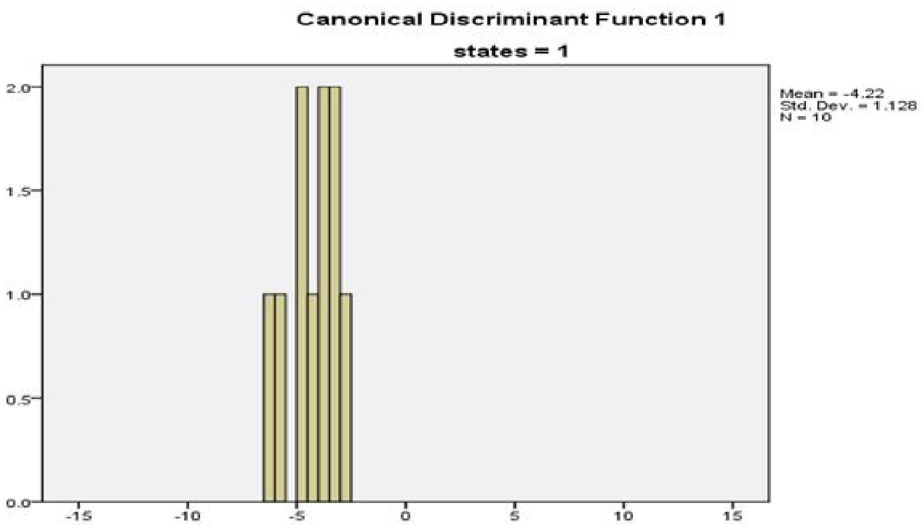
This table is used to identify how well the discriminant function works and if its work equally well for each group of the dependant variables.Here it correctly classifies more than 100 % of the cases making about the same proportion.Overall ,100% of the cases are correctly classified.

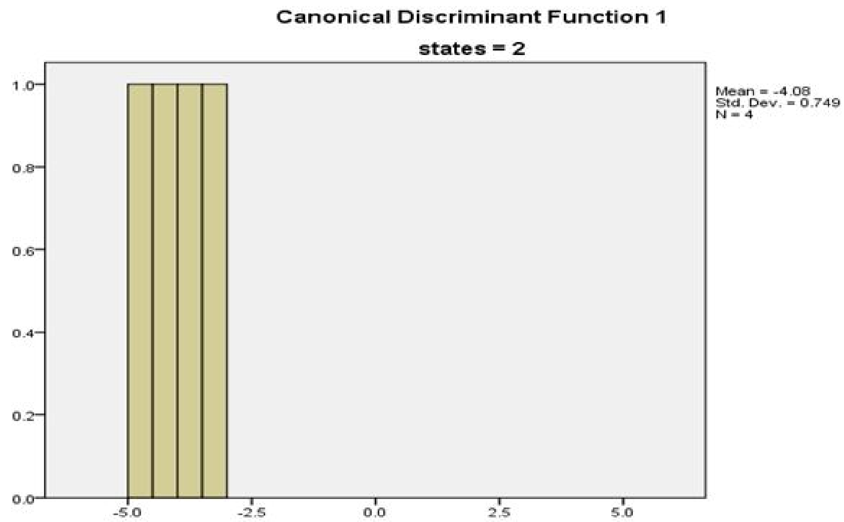
1.13 The Territorial Map

The territorial map provides a nice picture of the relationship between predicted group and two discriminant functions.It helps you to study the relationship between the groups and discriminant functions.If the two distributions chart overlap too much it means they don't discrimate too(poor discriminate function.)

The Figure 1.4 shows that two groups don't overall each other it means they do discrimate each other. The discrimination function is good.

Figure 1.4





1.14 Discriminant 2009-10 for the two groups

There are multiciplicity of factors influence the growth of the Rural nonfarm sector among the states.To identify the characterisitics of the states which are grouped as the highest level group and the lowest level group based on which states has highest growth in nonfarm sector based on various factors,using discriminate analysis is used.keeping the discriminating variables in each groups there are two discriminant functions as follows:

$D_1= a_1+A_1X_1+A_2X_2+A_3X_3$…………..AnXn

$D_2= b_1+A_1X_1+A_2X_2+A_3X_3$…………..AnXn

Where in X_1, X_2, X_3…………Xnrepresent the discriminating variables and D1 and D2 are the highest level group and the lowest level groups respectively in rural nonfarm employment among the states a_1, b_1 are constant.

1.15 Discriminating analysis in the understanding rural nonfarm sector

The multiplicity of rural-urban linkages and a host of other variables influencing the agro-economy of the region,exert their impact in influencing the pattern and pace of Rural nonfarm employment in a given area.The variables selected for the discriminant functions for estimating the determinants of employment in rural manufacturing are;

1. Area under the food crops
2. Area under the non-food crops
3. Irrigation
4. occupational pattern (cultivators, self employment in non-agriculture, agricultural labour, others, non-agricultural labour (other labour) etc.
5. unemployment rate in rural areas(both male and female)

1.16 Group statistics

In discriminant analysis we are trying to predict a group membership so firstly, we examine whether there are any significant differences between groups on each of the independent variables using group means and ANOVA results data.The idea of variables that may be important can be obtained by inspecting the groups means and standard deviations.

Table 1.7 : Group Statistics

Group Statistics			
states		Mean	Std. Deviation
1	cultivators	244.9000000	90.1029658
	agrilabour	149.2000000	40.9438640
	SEinagri	244.9000000	93.4017012
	otherlabour	185.3000000	62.3057871
	others	175.7000000	60.4373873
	unmale	2.1500000	1.0309111
	unfemale	4.9400000	6.3697549
	irrigate	2977.3000000	1239.5643545
	foodcrops	5039.8000000	2241.0232683
	nonfood	699.6000000	872.0350656
2	cultivators	345.7500000	68.6506858
	agrilabour	122.7500000	21.7006144
	SEinagri	199.2500000	78.5466952
	otherlabour	184.2500000	81.6144391
	others	148.0000000	23.3951562
	unmale	1.2000000	.4690416
	unfemale	1.0250000	.6075909
	irrigate	7344.7500000	4306.3503012
	foodcrops	14503.000000	3706.4303582
	nonfood	1843.5000000	1720.1330375
Total	cultivators	273.7142286	94.5698184
	agrilabour	141.6428857	37.7228907
	SEinagri	231.8571143	89.0020373
	otherlabour	185.0000000	64.9994083
	others	167.7857714	53.1386844
	unmale	1.8785571	.9924163
	unfemale	3.8214429	5.6163468
	irrigate	4225.1428857	3087.9611112
	foodcrops	7743.5714429	5131.1705324
	nonfood	1026.4285571	1223.4620307

Note : Area under the food crops(foodcrop), Area under the non-foodcrops(non-food), Irrigation (irrigate), occupation pattern (cultivators, SEinNonagri, agrilabour, otherlabour, others), unemployment rate in rural areas (unmale, unfemale),

From this output we can find among variables (cultivators, agrilabour, seinagri, other labour, others, unmale,unfemale, irrigate, foodcrops, nonfood) etc. in group1 states differ noticeable from group1 states to group 2 states.

1.17 Tests of Equality of Group Means

Table 1.8 : Tests of Equality of Group Means

Tests of Equality of Group Means					
	Wilks' Lambda	F	df1	df2	Sig.
cultivators	.750	3.999	1	12	.069
agrilabour	.892	1.454	1	12	.251
SEinagri	.942	.736	1	12	.408
otherlabour	1.000	.001	1	12	.980
others	.940	.762	1	12	.400
unmale	.799	3.026	1	12	.107
unfemale	.893	1.435	1	12	.254
irrigate	.560	9.415	1	12	.010
foodcrops	.252	35.531	1	12	.000
nonfood	.808	2.854	1	12	.117

Wilk's lambda is used to test for significant difference between groups.Wilk'slambdo is between 0 and 1.wilk's lambda shows that variable which has highest importance in discrimination function as follows foodcrops (.252), irrigate (.560),cultivators (.750), unmale(.799), non-food (.808), agrilabour (.892), unfemale (.893), others (.940), SEinagri (.942), other labours (1.000).Wilks's lamba ,is significant by F test for all independent variables.foodcrops(35.53), irrigate(9.4) has the high f value.

1.18 Fisher linear discriminating functions

Table 1.9 : Classification Function Coefficients

Classification Function Coefficients		
	states	
	1	2
cultivators	1.587	1.471
agrilabour	2.165	2.002
SEinagri	1.472	1.348
otherlabour	2.591	2.386
unmale	18.465	13.387
unfemale	4.831	5.279
irrigate	-.003	-.005
foodcrops	-.016	-.012
nonfood	.049	.046
(Constant)	-779.947	-682.578
Fisher's linear discriminant functions		

Fisher's linear discriminant functions

Fisher's classification coefficients are used to classify the cases between the groups.The coefficients of the independent variables which are shown.In the group 1 shows Unemployment rate among the rural male,unemployment rate among rural female,otherlabour,agricultural labour ,cultivators and self employment in non-agriculture.Similarly in the group 2 shows that unemployment rate among the rural male,unemployment rate among female in ruralarea ,other labour,agriculturallabour,cultivators and self employment in non-agriculture.

1.19 Classification Results

Table 1.10 : Classification Results[a,c]

Classification Results[a,c]					
		states	Predicted Group Membership		Total
			1	2	
Original	Count	1	10	0	10
		2	0	4	4
	%	1	100.0	.0	100.0
		2	.0	100.0	100.0
Cross-validated[b]	Count	1	8	2	10
		2	1	3	4
	%	1	80.0	20.0	100.0
		2	25.0	75.0	100.0

a. *100.0% of original grouped cases correctly classified.*

b. *Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.*

c. *78.6% of cross-validated grouped cases correctly classified.*

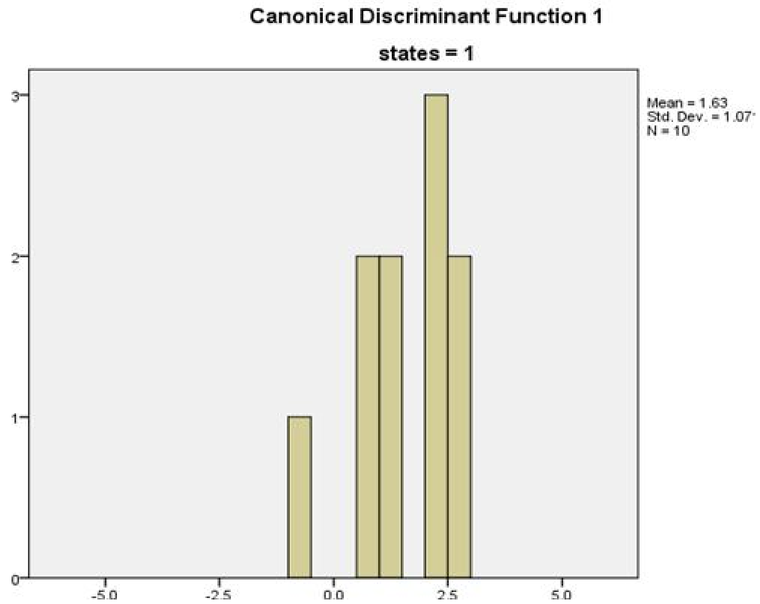
Classification results is a simple summary of number and percent of subjects classified correctly and incorrectly.The leave-one-out classification is a cross-validation method of which the results are also presented.The 'leave -one -out classification 'is a cross -validiationmethod,of which the results are also presented.This table is used to assess how well the discriminant function works and if it works equally well for each group of the dependant variable.Here it correctly classifies more than 100 % of the cases making about the same proportion of mistakes for both categories.overall 100 % of the cases are correctly classified.

1.20The Territorial Map

The territorial map provides a nice picture of the relationship between predicted group and two discriminate functions.It helps you to study the relationship between the groups and discriminate functions. The charts shows whether graphs is overlapping each other it means that they discriminate each other.

In the two distribution charts shows that graphs don't overall each other, it means they do discriminate each other. The discriminate function is good.

Figure 1.4



1.21 Summary and Conclusion

There thas been growth of the rural nonfarm sector from 1983 to 2009-10

There is change in states which were in group 1983 to 2009-10.Durning 1983 Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala,Orissa,Punjab,Tamilnadu,Uttar Pradesh and West Bengal are group 1 states while Madhya Pradesh, Maharastra and Rajasthan in group 2 states while durning 2009-10 States (AndhraPradesh, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Punjab, Rajasthan states were in cluster 1 while Bihar, Rajasthan,Uttar Pradesh and Maharastra states under cluster 2.

There has been Bihar which was cluster 1 during 1983 moved to cluster 2 in 2009-10 while Madhya Pradesh which was cluster 2 during 1983 moved to cluster 2 in 2009-10 similarly Uttar Pradesh was cluster 1 durning 1983 moved to cluster 2 in 2009-10.

Wilk's lambda shows thatdurning 1983 variables which has highest importance in discrimination function as firstly as area under nonfoodcrops, self employment in non-agriculture, Area under foodgrains, Others,Unemployment among the males in rural areas, croppingintensity, agriculturallabour, Unemployment among the females in rural areas, Other labour and irrigation.While during 2009-10 wilk's lambda shows that variable which has highest importance in discrimination function as follows firstly follows area under the foodgrains, net irrigation, unemployment rate among ruralfemales, Unemployment among the males in the rural area. Agricultural labour, cultivators, self employed among the non-agriculture, area under non-foods ,other labours,crop intensity and others.

The both distress factors such unemployment among the males in rural areas,unemployment among the females in rural areas,self employment in non-agriculture.The distress factors and gowth factors playing important role in transformation of the rural nonfarm sector.

There has been change variable determining the rural nonfarm sector from the period 1983 to 2009-10.

The states in cluster 1 were growing faster than cluster 2 states from 1983 to 2009-10.The government should emphasis more creating employment in the rural areas through Make in India as there is distress factor which forcing the labour force to move out of employment.

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A Study on Employees' Safety and Health Hazards' Measures of Leather Goods Manufacturing Companies

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Abstract

The study of employees' safety and health hazards measures of leather goods manufacturing companies in chennai. The development of welfare at work should contribute not only to strengthen the company's position on the market. Environmental aspects which affect the workers current behavior as well as the state of things among employees 'needs: job security, welfare etc. The aim of this study was to evaluating and determining the exiting safety and health hazards of various small scale leather industries with the overall population of 50 employees. To gather the required data, a questionnaire was developed and analyzed by using simple percentage, correlation, chi-square and t-test was done to determine the effectiveness on safety and health between organization and employees'. Based on the findings,conducting safety training programs, Guiding employee on health hazards, Review & respond to employees' safety suggestions, Job safety analysis (JSA), Periodic safety and health inspections are having a positive and significant relationship with organization and employees', housekeeping area of the workplace, providing personal protective equipment and using of safety posters, health fairs, etc.,for promoting health & safety are not having a significant relationship with employees'. Conclusions as well as implications are discussed.

Keywords: Employees Safety, Health Hazards, Effectiveness on safety and health, Measures, Leather goods manufacturing companies.

Introduction

Today's business environment is characterized by fast, dramatic and unexpected changes. Therefore, the employees not only have to be performers in the traditional sense, but also adopt the environment by means of safety and health at workplace.The employees' safety and health activities are necessary for improving their working conditions and their economics and living standards. Labour health, safety is the important measures of promoting the efficiency of employees. The various health and safety measures provided by the employer will have immediate impact on the health, physical mental efficiency and Job satisfaction. The leadership is where also understanding and helping employees

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is a must also means having an interest in generalizing the state of health among employees, and this is reflected in their high quality of life.

Objectives of the Study

- To measure the existing safety standards, health hazard of the organization.
- To determine the effectiveness of safety & health among the organization.
- To determine the safety process among the employees'.
- To analyze the employees' health hazards in workplace.

Literature Review

Safety is the state of being "safe" (from French sauf), the condition of being protected from harm or other non-desirable outcomes. Safety can also refer to the control of recognized hazards in order to achieve an acceptable level of risk. Health is the state of "well -being", in humans it is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social challenges. The World Health organization (WHO) defined health in its broader sense in its 1948 constitution as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

As the health and safety management is concerned with the organized efforts and procedures for identifying workplace hazard and reducing accidents and exposure to harmful situations and substances. It also includes training of personnel in accident prevention, accident response, emergency preparedness and use of protective clothing and equipment's.

The first Factories Act in India was passed in 1881. It was designed primarily to protect children and to provide for some health and safety measures to the workers. Hence a new factor act was passed in 1948, was to consolidate and amend the law regulating labor in factories. It was enacted primarily to protect workers employed in factories against industrial and occupational hazards. It tries to secure for the workers employment conditions conducive to their health and safety. The Factories Act, 1948 is a piece of legislation covering all aspects regarding factories namely: approval, licensing and registration of factories, the inspecting authorities, health, safety, welfare, working hours, employment of workers-adults and young children, annual leave and penalties, etc., The main scope and benefits of this the factories Act, 1948 are available to persons who may be covered within the meaning of the term "worker" as contained in the Act.

According to (K. Rajagopal & K. Logasakthi) states health, safety and welfare refers a satisfaction on ones jobs, which consists with disposing of waste in proper way, periodical health checkup facilities, proper medical reimbursement and the maintains of safety officers in the industries. The occupational health and safety is a cross disciplinary area concerned with protection, safety, health and welfare of people engaged in work or employment. The goal of all occupational health and safety programs is to foster a safe work environment, protect co-workers, family members, employers, customers, suppliers, nearby communities and other members of the public who are impacted by the work place environment.

(Dr. Sourabh Saxena, Palash Jyothi Misra et.al) states the important of quality of life (QOL) using 26 item WHOQOL instruments (WHOQOL-BREF) the domains and facets incorporated in physical health, Psychological health, Social relationship and Environmental. The first Physical health domain has been incorporated with the activities of daily living, dependence of medicinal substance and medical aids, energy and fatigue, mobility pain and discomfort, sleep and rest, work capacity. The Second Psychological health domain has been incorporated with the bodily image and appearance, negative feelings, positive feelings, self-esteem, spirituality, religion and personal beliefs, thinking, learning, memory and concentration. The third Social relationship domain has been incorporated with personal relationship, social support etc., The fourth domain Environmental domain has been incorporated with Financial resources, Freedom, Physical Safety and Security, health and social care, accessibility\y and quality, home environment, Opportunities for acquiring new information and skills, participation in and opportunities for recreation, Leisure activities, physical environment and transport etc., as result the relationship QOL and its correlates in the context of interpersonal trust and life satisfaction.

Preston(1975) examined the association between the per-capita national income and life expectancy at birth in details as(John W. Lynch & George A. Kaplan) follows the same in his research andstates that the inequality in the distribution of income affects health. The link between low income and poor health is highly consistent when individuals are compared with in a country, but there is little association between low income and health status when compared across countries. Furthermore, the researcher should not trying to propose a particular causal pathway between income inequality and health, but rather suggest a range of factors that might be considered in developing a conceptual model of 'what fits where' in the association between income inequality and health.

(S.C. Hu, C.C. Lee, J.S.C. Shiao and Y.L. Guo) as a result of his research on employers awareness on occupational health and safety the large proportion of the manufacturing industry are small sized and also associated with employers are having less knowledgeable in OHS and comply with fewer OHS practices. The awareness of OHS is one of the most important factors for sound compliance with OHS regulations and measuring towards improving the awareness of OHS for smaller workplace are warranted in order to promote the workers' safety and health.

Under the factories act, 1948 Hazardous process [Section 2(cb)] specified to the first schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, bye-products, wastes or effluents thereof would cause material impairment to the health of the persons engaged in or connected therewith or it will be result in the pollution of the general environment etc., and the hazards analysis is a process in which individual hazards of the workplace are identified, assessed and controlled as close to source as reasonable and possible. The employees' hazard of the work place environment has been analyzed in two ways such as Physical Hazards and Psychological Hazards.

(Iraj Mohammedfam, Hanieh Nikoomaram and Mohammad Faridan) states that to improved safety culture in an organization, not only psychological and personal factors but also organizational and environmental factors. The result shows that the overall Health, Safety and Environment (HSE) culture of the industrial sector was negative in Iran industry.Health gains that environmental interventions could achieve are main question in today's world, when choosing environmental health action to prevent disease. The World Health Organization has recently released profiles of environment burden of disease for 192 courtiers. In china the advent of the economic reforms of the early 1980s driven by an economic imperative under which the profit motive overrides other concerns, causing deterioration in OSH conditions. Footwear workers are being exposed to high levels of benzene, toluene, and other toxic solvents contained in the adhesives used in the shoe-making process. Many workers have been afflicted with aplastic anemia, leukemia, and other health problems. There is also evidence that better physical health is correlated to higher job satisfaction and other factors such as lower job stress and better psychological well-being (e.g., Ganster and Schaubroeck, 1991, Cass et al., 2003).

According to (Rosa Grau, Isabel M. Martinez, et. al) has validated the scale of employee safety attitudes, training and self -efficiency and generalized self-efficiency to be positive associated with safety attitude. In addition, it is important to consider the role of self-efficiency as a type of self-belief that has a relevant direct influence on attitudes. The results has practically implicated in the workplace, especially on labour risk prevention. (Hans de Witte) states that the meta-correlation between job insecurity and job satisfaction indicated with Psychological well-being, physical health etc.,and the job insecurity is problematic for employees' well-being as well as their health, even its influence seems to be especially on "occupational well-being"

(Ayaz Ali Khan, Reshma Sultan et.al) statesthat, the chemicals in adhesive reagents used in shoe making have severe ill effect on the health of the workers and significant increase in serum cholesterol level due to exposure certain glues and chemicals. The workers were affected with asthma, contact dermatitis, depression, joint pain and gastrointestinal abnormalities for more severe in the workers that were engaged since long time in this occupation.

(Stellman J. M.) stated that, shoe making is a labor-intensive process that involves a number of OSH hazards, noise, dust pollution and injuries caused by presses and machines without double-handed safeguards, (Meei-Shina Chen and Anita Chan) as result of their research the protection of footwear workers health is inadequate and determined that the international OSH community to the importance of setting specific exposure standards for the footwear industry in worldwide.

Amidst a rapidly growing number of researcher studies on work family conflict focused on role conflicts between work and family, but also considers role conflicts resulting from job demands that are difficult to bring in line with other role expectations and responsibilities in private life beyond obligation. (Oliver Hammig, et. al) stateson their research the work life conflict in indicator variables, explanatory variables, outcome variables and Adjusting variables on age, sex, education & experience and determined the associations between work and non-work - related factors. The work life conflict has identified through Time based WLC, Strain based WLC and degree of combined time and strain based WLC. As a result of the researcher for certain and basically changeable working conditions and private life situations as relevant factors associated with WLC and most important, for different negative health outcomes as correlates of WLC.

Methodology and Design of Questionnaire

The objectives of this study is to measures the employees' safety and health. Under this study 50 questionnaires have been provided and each respondent had to answer a number of 26 questions regarding safety and health and the result will be presented as below in this paper. The questionnaire included 26 variables of employees' safety and health using three points, such as Yes(1), No(2), and somewhat (3). This study has 50 as sample size particularly from leather goods manufacturing companies at Chennai. Using statistical package and the following test were administered 1) simple percentage 2), chi-square 3) T-test4) Correlation. The most important variables with related to organization effectiveness on safety and health, and employees' effectiveness on safety and health are taken to measure and determined the level of significance on employees'safety and health, who are engaged in the leather goods manufacturing companies.

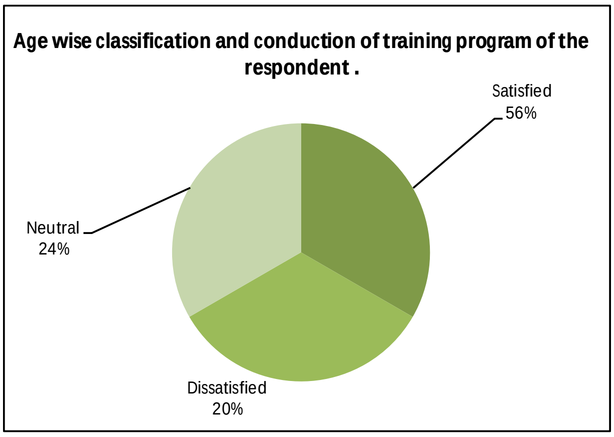
Analysis and Data Interpretations

Simple percentage

Table I: Table shows Age wise classification of the respondent and conduction of training program.

S.No	Age Group	No. of Respondents	percentage %	Does the organization have frequently conducting the basic safety training programs? (in %)
1	21-30 years	18	36	56
2	31-40 years	22	44	20
3	41-50 years	10	20	24
TOTAL		**50**	**100**	**100**

Figure I: Table shows Age wise classification of the respondent and conduction of training program



Source: Primary data

Interpretation : From the above table it is clear the 36% of the respondents are under the age group of 21 to30 years, 44% of the respondents are under the age group of 31 to 40 years and 20% of the respondents are under the age group of 41 to 50 years. And overall 56% of the respondents are satisfied, 24% of the respondents are neutral and 20% of the respondents are dissatisfied with the frequently conducting the basic safety training programs in the organization.

Chi - Square Test

Chi-square test is a non-parametric test used most frequently by the researcher to test the hypothesis procedure that helps to ascertain the likelihood of hypothesized population parameter being correct. The objective of chi-square is to determine if real or significant difference exist among various groups. The sample data is presented in the form of a contingency table with any number of rows or columns.

Chi-Square Test (X^2) = Σ(Oij - Eij) 2/Eij
Where,
Oij = Observed frequency
Eij = Expected frequency
R - Number of rows
C- Number of columns

$$\text{Expected frequency} = \frac{\text{Row total x Column total}}{\text{Grand total}}$$

Null - Hypothesis, Ho: There is no significant relationship between experience and safety meetingwith employees'.

Alternative - Hypothesis, H1: There issignificant relationship between experience and safety meeting with employees'.

Relationship between Experience and Safey Meetings with Employees

Table 2 : Expected Frequency Table

Experience / Safety meetings with employees	YES	NO	SOME WHAT	TOTAL
↑ 10 – 15 Years	11 (5.6)	2 (5.6)	4 (5.6)	17
5 – 9 years	8 (6.3)	5 (6.3)	6 (6.3)	19
↓ 5-3 years	2 (1.3)	1 (1.3)	1 (1.3)	4
↓ 3 years	5 (3)	2 (3)	2 (3)	9 (3)
↓ 1 year	0 (0.3)	0 (0.3)	1 (0.3)	1 (0.3)
TOTAL	**16.5**	**16.5**	**16.5**	**50**

Table 3

O	E	(O-E)	$(O-E)^2$	$(O-E)^2 / E$
11	5.6	5.4	29.16	5.21
2	5.6	-3.6	12.96	2.31
4	5.6	-1.6	2.56	0.46
8	6.3	1.7	2.89	0.46
5	6.3	-1.3	1.69	0.27
6	6.3	-0.3	0.09	0.01
2	1.3	0.7	0.49	0.38
1	1.3	-0.3	0.09	0.07
1	1.3	-0.3	0.09	0.07
5	3	2	4	1.33
2	3	-1	1	0.33
2	3	-1	1	0.33
0	0.3	-0.3	0.09	0.30
0	0.3	-0.3	0.09	0.30
1	0.3	0.7	0.49	1.63

$\Sigma(O - E)^2 / E = 13.47$

Calculated Value : 13.47, Degree of Freedom : 15 – 4 =14

Table value of t for 14 df at 5% level = 23.685

Interpretation : Form the above table, tabulation value 23.685. When compared to the calculated value 13.47 is less than table value. The result of experience and safety meetings with employees' support to the null hypothesis. There is no significant relationship between the experience and safety meeting with employees in the organization.

T-Test

Ho - $\mu_1 = \mu_2$, Ho: There is no significant relationship between Job Safety analysis and gender of the employees.

H1- $\mu_1 \neq \mu_2$,H 1: There issignificant relationship between Job Safety analysis and gender of the employees.

Gender / JSA	X (male)	Y (Female
Right	**13**	**13**
Wrong	**8**	**6**
Some What	**3**	**7**

Calculate the mean and SD of the two samples

Table 4 : T-Test

X	d_1 (X-8)	d_1^2	Y	d_2 (Y-8.66)	d_2^2
13	5	25	13	4.34	18.83
8	0	0	6	-2.66	7.07
3	-5	25	7	-1.66	2.75
24	**0**	**50**	**26**	**0**	**28.65**

$|t| = 0.192$

ndf = 4

The table value of t at 5% level = 2.132

Interpretation : From the above t-test, The H0 is accepted at 5% level since the calculated value of t < the table value of t 0.192. Hence there is no significant relationship between job safety analysis and gender of the employees'.

Correlation

To find out the Organization effectiveness on safety and health, the following organizational factors are pair wise correlated.

SRP - Written safety rules & procedures
ESRP- Existing / established safety rules & procedures of the organization
PSI - Periodic safety inspections
ESC- Effectiveness safety committee
AOSHAW - Occupational safety and health administration on work place

Table V: Correlation matrix for Organization effectiveness on safety and health

V	WSRP	ESRP	PSI	ESC	OSHAW
WSRP	1				
ESRP	.983**	1			
PSI	.819**	.702**	1		
ESC	.995**	.997*	.756**	1	
OSHAW	.999**	.977**	.839**	.991**	1

Source: Primary Data

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

The above shows that the factors WSRP, ESRP, PSI and ESC are independently positively correlated with OSHAW and also highly significant at 1% level. Therefore, organization effectiveness on safety and health is positively accepted. Here it is obvious that the maximum correlation (r=0.977) is exiting between ESRP and OSHAW, followed by the association (r=0.983) between ESRP and WSRP, ESC and OSHAW (r=0.991); ESC and WSRP (r=0.995).The effectiveness of the organization on safety and health are pair wise positively significant at P-value 0.000. Among the five practices the relationship between the WERP and OSHAW (r=0.999) is the highest, followed by the link between ESC and ESRP (r=0.997).

To find out the Employees' effectiveness on safety and health, the following employees' factors are pair wise correlated.

ASC - Active safety committee
WDS - Waste disposal should affects the employees / work place
SMWE - Conduct safety meetings with their employees
ERPFAB - Emergency response plan and first aid boxes
RSCI - Review all serious accidents immediately
ERFHA - Emergency responds on fire, health illness & accidents on work spot

Table 6 : Correlation matrix for Employees' effectiveness on safety and health

V	ASC	WDS	SMWE	ERPFAB	RSCI	ERFHA
ASC	1					
WDS	.977**	1				
SMWE	.970**	.999**	1			
ERPFAB	.864**	.612**	.636**	1		
RSCI	.746**	.870**	.884**	.922**	1	
ERFHA	.976**	.999**	.999*	.617**	.872**	1

Source: Primary Data

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

The above shows that the factors ASC, WDS, ERPFAB, RSCIand SMWE are independently positively correlated with ERFHA and also highly significant at 1% level. Therefore, Employees effectiveness on safety and health is positively accepted.Here it is obvious that the maximum correlation (r=0.977) is exiting between WDS and ASC, followed by the association (r=0.922) between RSCI and ERPFAB, ASC and ERPFAB (r=0.976); The Employees' effectiveness on safety and health are pair wise positively significant at P-value 0.000. Among the six practices the relationship between the WDS, SMWE and ERFHA (r=0.999) is the highest.

To find out thegeneral effectiveness on safety and health the following factors are pair wise correlated.

CSTP - Conducting safety training programs

GEHH - Guiding employee on health hazards
R&RSS - Review & respond to employees' safety suggestions
TCSCSM - taken care of sub-contractor on its safety measures
JSA - Job safety analysis (JSA)

Table 7 : Correlation matrix for general effectiveness on safety and health

V	CSTP	GEHH	R&RSS	TCSCSM	JSA
CSTP	1				
GEHH	.966**	1			
R&RSS	.988**	.916**	1		
SCSM	.818**	.644**	.896**	1	
JSA	.941**	.996**	.879**	.930**	1

Source: Primary Data

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

The above shows that the factors CSTP, GHEE, R&RSS, TCSCSM and JSA are independently positively correlated with GEHH and also highly significant at 1% level. Therefore, Employees effectiveness on safety and health is positively accepted. Here it is obvious that the maximum correlation (r=0.996) is exiting between GEHH and JSA, followed by the association (r=0.988) between CSTP and R&RSS, GEHH and CSTP (r=0.966); The Employees' effectiveness on safety and health are pair wise positively significant at P-value 0.000. Among the five practices the relationship between the CSTP and JSA (r=0.941).

Suggestions and Future Discussion

This study reviewed the employees' safety and health in leather goods manufacturing companies. In this research the consequences of the safety and health hazards has focused especially on the safety trainings, health measures of individual employees'. In this the impact leads to job insecurity and unsafe work environment to the employees. As a result, in the simple percentage table shows the age wise classification of the respondent and conduction of training program to the employees' is satisfied more than 50%, and on the basis of experience the participation of employees' on safety meetings is less in the organization. And the significance relationship show that the job safety is analyzed as a whole, but it has not been analyzed separately for masculinity.Based on the correlation matrix, conducting safety training programs, Guiding employee on health hazards, Review & respond to employees' safety suggestions, Job safety analysis (JSA), Periodic safety and health inspections are having a positive and significant relationship with organization and employees', housekeeping area of the workplace, providing personal protective equipment and using of safety posters, health fairs, etc., for promoting health & safety are not having a significant relationship with employees'. The organization should more focus on the employees' safety on work place and improving employees' "employability" this can reduces the negative consequences in job insecurity on health and safety.

Conclusion

This survey was intended to assist the organization in identifying the key work place issue on health and safety as perceived by employees, in order to develop the safety and health strategies to address and improve the quality of working conditions for leather goods manufacturing employees. The result of the study indicates that the organizations concentrated towards development of safety and health measures in the workplace, these are mostly associated with employees' well-being. Therefore it is important for employers to establish well working conditions that promote a positive consequence on safety and health among the employees.

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Emotional Intelligence as a Predicator of Managing Patient Relationship in Nursing Profession- A Study

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Abstract

Nursing is a challenging profession as it requires expertise, accuracy, specialized skills andabilities. In addition to technical skills, it requires emotional competences to take care of sick individuals and theirfamilies. Nurses need to operate sophisticated medical equipment as part of a multidisciplinaryteam and adapt to constantly changing environments. Along with that they have to remain calmand courteous during times of intense stress and critical decisions. In these situations emotional intelligence play vital role to balance both their personal and professional life situations.There is a popular belief that higher the emotional intelligence of nurses better will be their ability to manage patient relationship.

Methods: The present study is the part of a large study conducted on 300 nurses working in 5 different hospitals (both in public and private sector) in the state of Chhattisgarh to assess whether their demographic variables, emotional intelligence and ability to manage patient relationship are related with each other.

Results: The study reveals that their exist strong, significant and positive correlation (.750) between emotional intelligence and ability to manage patient relationship.

Conclusions: The findings showed that there was no statistically significant correlation between the demography, emotional intelligence and ability of nurses to manage patient relationship. Thus irrespective of the demography nurses have to perform and serve patients. However, emotional intelligence of nurseshas a significant role in managing patient relationship. Emotional intelligence of nurses acts as an important predicator of managing patient relationship. So effort should be made by the management by training and retrain to develop and enhance this quality to better serve patient empathetically and sympathetically.

Keywords: Demographic Variables, Emotional Intelligence, Managing Patient Relationships

1.1. Introduction:

With the changing business environment, relationship marketing has become an important way of doing business. Especially in hospital sector, while providing service there occurs continuous

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interaction between patients and the service providers; patient evaluates service delivered through the behavior of service employees. Especially, the way nurses provide services, it builds patient's perception towards that particular hospital, hence, they need to be equipped with non-cognitive skills along the cognitive skills to understand and relate with patients. In service industry most of the job involves social interaction, so emotional intelligence plays vital role to work effectively in such social settings. As a result, emotional intelligence has gained very high importance and serious attention as an essential skill especially for service providers along with their general intelligence to be successful individually as well as organizationally. Nursesin hospital play significant role in the delivery of service quality and making patient satisfy. The degree to which patient will satisfy himself or herself, it will result into the emergence of trust and loyalty among patients which leadspatient retention and reduces their switching behavior. According to Bowen and Ford (2002), managing employees in service industry is different than managing employees in manufacturing industry in several dimensions like (i) the process of service delivery involves customer in service production process (ii) service employee should respond to each situation uniquely (iii) emotions plays important role in service settings (iv) along with job performance, service employee needs to manage the service delivery process. Perhaps it is the human and emotional element in the service settings than the manufacturing settings which makes them different from each other. If service sector employees are not emotionally strong and are frustrated due to any personal or professional reasons, it may be seriously reflected in their job performance and can directly influence customer's perception of organization (Schlesinger and Heskett, 1991). For the service organizations, according to Beatty et al., (1996); and Griffith, (2001), customer's perception towards the service employees remains the perception towards the organization. Therefore, the firms should understand the new economics of services particularly in hospital sector where nurses play critical role in managing patient relationship.

1.2. Emotional Intelligence

The term emotional intelligence has popularized and commercialized with the writings of Daniel Goleman. According to Goleman (1998), emotional intelligence is one of the important criteria in the selection of employee and executives and he defined emotional intelligence as the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in us and in our relationships. Mayer and Salovey, (1997) viewed emotional intelligence as a set of abilities to perceive accurately, appraise, and express emotions; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotions and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth. Mayer and Salovey, (1997) highlighted on the differences between two definitions by pointing out that Goleman definition focuses on motivational characteristics such as zeal and persistence rather than emotions of individual. Notwithstanding some differences in these two definitions, there exist some similarities to measure emotional intelligence, and the general consensus made was emotional intelligence positively influence managing relationship and service performance (Mayer et al., 2004; Goleman, 1998).

Yaghoubi, (2011) examined the linkage between emotional intelligence and relationship marketing and concludes that there exist positiveassociation between various components of emotional intelligence and relationship marketing.Research concludes that emotional exhaustion of nurses is critical issue in the success of the hospital industry. Nurses in hospitals have to always remain courteous and professional to all patients while serving. They have to follow hectic schedulewith long working hours, shift duties and night duties along with that balancing the personal life brings emotional burnouts in nursing profession. So the emotional exhaustion of the nursesin hospital setting is serious issue which needs to be taken care of by the management.

1.3. Emotional Intelligence in Nursing Profession

Emotional intelligence is a competence that has been considered vital in nursing. According to Cadmen and Brewer (2001), nurses in the healthcare profession must have the ability to manage their own emotions while interpreting and responding to those of others. Whyte, (1997) observed emotionally intelligent nurses are one who can work in harmony with both their thoughts and their feelings. Similarly, Smith, (2008) supported that nurses need to understand the emotional nature of nursing and have emotional skills in order to deliver competent nursing care and to deal with hectic working environments. Freshwater and Strickley, (2004) suggest that nursing is becoming more technical at the expense of the human qualities like empathy, love and compassion resulting in a loss in the valuing of human relationships and emotions. The use of emotional intelligence by nurses has found a positive correlation between high levels of staff wellbeing and performance. Codier et al., (2008) studied that in the clinical environment, that high levels of emotional intelligence were correlated with high performance levels. The emotional intelligence levels of nursing and other healthcare staff has been found to have an impact on their ability to perform their work in a competent manner and also on their own health and wellbeing. Birks et al., (2009) found that those with high emotional intelligence scores showed a greater ability and willingness to use social support networks, were more confident in their ability to cope with stress and had improved organizational and time management skills. Those with a low emotional intelligence score did not use social support networks and were more likely to engage in destructive or harmful behaviors when stressed. Por et al., (2010) measured emotional intelligence in student nurses and found similar results. Students with high levels of emotional intelligence had higher levels of perceived competency and lower levels of stress.

1.4. Managing Patient Relationship through Emotional Intelligence

In service performance, patient needs to feel that they are being properly cared, given attention and dully valued by the nurses. Sometime ambiguity develops among patients while interacting with the nurses of hospitals. During that situation whenever the nurses with empathy and sympathy understands on his/her own about what are the possible difficulties the patients might have, what they want, what support/facilities they desire but are unable to express because of ignorance, fear, lack of confidence it ultimately gives mileage to either party. Especially the patients like this gesture of the nurses and the hospital which ultimately builds trust and loyalty. It develops long lasting relationship with the patient. Here, emotional intelligence of service provider plays a vital role. By providing personal attention, care and expressing concern leads to emergence of healthy relationship with the patient and which can be one of the reason for patient to return or retain with the hospital. The image of the hospital stands on the quality of service delivered; there exist no shield between nurse's attitude, satisfaction, performance and the patient's perception towards the hospital. Thus, it is the need of the hour forhealthcare organizations to give due emphasis on emotional intelligence of their staff, especially nurses who are involved in managing the long lasting relationship with their patient. It is high time for these hospitals to give due emphasis at the entry point, while selecting nurses, there should be use of emotional intelligence test of candidates for nursing profession. The hospital should set a minimum standard of emotional intelligence in a candidate without which the person should not be offered nursing job within the hospital. In the above backdrop, present study is a modest attempt to examine relationship between demographic variables with emotional intelligence and ability to manage patient relationship especially among the nurses of selected hospitalsunder study.

1.5. Objectives of the Study

Following were the major objectives of the study:

1. To find out whether the nurses of public and private sector hospitals under study differ from each other with respect to their emotional intelligence.
2. To examine whether the nurses of public and private sector hospitals under study differ from each other with respect to their ability to manage patient relationship.
3. To find out whether their exist relationship between demographic variables, emotional intelligence and ability to manage patient relationship of the nurses in selected hospital under study.

1.6. Methodology

The study being part of a bigger project was conducted on 300 randomly selected nurses who are working both in public and private sectors hospitals situated in the state of Chhattisgarh and data was collected from 5 (3 Public and 2 Private Sector) hospitals. Data was collected with the help of a schedule having three parts consisting of demographic variables in Part-I, a standardized instrument developed by Anukool Hyde, Sanjyot Pethe and Upinder Dhar (2002) to measure Emotional Intelligence (EI) in Part-II and properly developed, tested and validated instrument to measure Ability to Manage Patient Relationship in Part-III. Data were analyzed with help of ANOVA and Correlation Coefficient by using SPSS package.

1.7. Analysis and Interpretation of Data

Data were analyzed in the following three heads consists of: i. Difference in emotional intelligence of nurses between public and private sector hospitals; ii. Difference in ability of nurses to manage patient relationshipbetween public and private sector hospitals; iii. Relationship between demography, emotional intelligence and ability to manage patient relationship of the nurses under study.

1.7.1 Difference in Emotional Intelligence of Nursesbetween Public and Private sector Hospitals under study.

Table 1 : Emotional Intelligence of Nurses Between Public and Private Sector Hospitals (n=300)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2098.800	1	2098.800	9.170	.003
Within Groups	68206.146	298	228.880		
Total	70304.947	299			

Table-1 shows the emotional intelligence of nurses between public and private sector hospitals under study. It could be seen from the Table-1 that there exist significant difference in the emotional intelligence in nurses between the public and private hospitals as the p value is .003 which is less than .05 level of significance. It can be due to the fact thatnurses working in hospitals face almost similar situation but the attention, prompt services and care provided by the private sector hospitals differ from public sector hospitals. In terms of patient problems, expectations and their solutions which require empathy, sympathy, cooperation and consideration to serve and cure patients, the private and public sector nurses differ depending upon the requirement of the hospital. This finding of the study is in line with an earlier study by Gorji, Kalami, and Pouya (2014) found that the correlation of the emotional intelligence and entrepreneurial orientation is higher in the private sector than public sector organizations. On contrary Deshwal, (2015) indicate that there is no significant difference in emotional intelligence between the government sector and private sector employees.

1.7.2. Difference in Abilities of Nurses to Manage Patient Relationshipbetween Public and Private Sector Hospitals

Table 2 : Ability of Nurses to Manage Patient Relationship Between Public and Private Sector Hospitals (n=300)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	7298.293	1	7298.293	20.440	.000
Within Groups	106403.237	298	357.058		
Total	113701.530	299			

Table-2 shows the difference in abilities of the nurses to manage patient relationship between public and private sector hospitals under study. It could be seen from the Table-2 that there exist significant difference in the abilities of the nurses of two sectoral hospitals with respect to managing patient relationship. The difference between the public and private sector hospitals employees with respect to their ability to manage patient relationship is significance as the p value is .000 which is less than .05, level of significance. It could be due to freedom to operate, work pressure, job security, self motivation and rewards and benefits attached to the target achievement etc. which exist in private sector hospitals in comparison to the public sector hospitals. The findings of the study is in line with findings of Dash and Rajshekhar, (2013) that overall there exist difference in perceptions of the customers among private and public sector organizations with respect to the relationship marketing implementation. Similarly, William and Manoj, (2013) suggested that private sector organizations provide better services to their patients than the public sector organizations. On contrary, Rather, (2013) concludes that there exist no significance difference regarding patients' perception about the service personnel of public and private sector organizations for the various aspects like knowledge and the skill of personnel, relationship with and ability of personnel to understand the need of customers.

1.7.3. Relationship between Demography, Emotional Intelligence and Ability to Manage Patient Relationship among Nurses of Selected Hospitals under Study

Table 3 : Correlations between Demographic Variables, Emotional Intelligence and Ability to Manage Patient Relationship among nurses of selected hospitals under study (n=300)

		Age	Gender	Education	Marital Status	Org.	Income	Exp	EItotal	MPR total
Age(in yrs)	Pearson Correlation	1								
	Sig. (2-tailed)									
Gender of Nurses	Pearson Correlation	-.202**	1							
	Sig. (2-tailed)	.000								
Educational Qualification	Pearson Correlation	.145*	-.222**	1						
	Sig. (2-tailed)	.012	.000							
Marital Status	Pearson Correlation	-.488**	.152**	-.095	1					
	Sig. (2-tailed)	.000	.008	.101						
Working Organization	Pearson Correlation	-.265**	.080	-.059	.225**	1				
	Sig. (2-tailed)	.000	.166	.306	.000					
Income	Pearson Correlation	.483**	.148*	.166**	-.243**	-.378**	1			
	Sig. (2-tailed)	.000	.010	.004	.000	.000				
Exp	Pearson Correlation	.739**	-.116*	.081	-.434**	-.196**	.557**	1		
	Sig. (2-tailed)	.000	.045	.161	.000	.001	.000			
EI total	Pearson Correlation	.078	.044	-.054	-.070	.173**	-.023	.099	1	
	Sig. (2-tailed)	.175	.452	.351	.226	.003	.689	.087		
MPR total	Pearson Correlation	.034	.075	-.096	-.037	.253**	-.122*	.004	.750**	1
	Sig. (2-tailed)	.556	.195	.096	.521	.000	.035	.943	.000	
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

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

*. Correlation is significant at the 0.05 level (2-tailed).

Table-3 showscorrelation coefficients of demographic variables, emotional intelligence and ability to manage patient relationship of frontline employees in selected hospitals under study. It could be seen from Table-3, the demographic variables (age, gender, educational qualification, marital status, working organization, annual income and work experience) does not show significant correlations with emotional intelligence. Although the demographic variable like working organization (r=.173**) show low correlation coefficient rest other demographic variables like age (r= .078), gender(r=.044), educational qualification(r=-.054),marital status(r=-.070), annual income (r= -.023)and work experience (r=.099) shows insignificant correlation coefficient. It is believed that as people grow with the age and gains experiences, and get exposed to variety of situations with respect to dealing with and meeting the patients expectations. Accordingly they make efforts to serve and cure patients. Moreover, it is believed that older people have higher tendency to regulate their emotional instincts as compared to the younger ones. But the finding of Table 3 infers that irrespective of the age, gender, marital status and income, it is the necessity of nursing profession to behave sympathetically and empatheticallywhile curing the patients.

It could also be seen from Table-3, the demographic variables (age, gender, educational qualification, marital status, working organization, annual income and work experience) does not show strong significant correlations with ability to manage patient relationship of nurses in selected hospitals. Although the demographic variables like working organization (r=.253**), and annual income (r= -.122*) show low and significant correlation coefficient but they are not strong enough to generalize the relationship. Whereas variables like age (r=.034), gender (r= .075), educational qualification (r=-.096), marital status (r=-.037) and work experience (r=.004) show insignificant correlation with ability to manage patient relationship. Thus it seems ability to manage patient relationship is integral and essential aspect of nursing profession irrespective of their demography. It clearly indicates the patient wants the best service, so who provides it is immaterial but it is a necessity for attracting, curing and serving them.

Table-3 also shows correlation between emotional intelligence and ability to manage patient relationship of nurses in selected hospitals under study. It could be seen from Table-3, their exist a strong and significant correlation(r= .750**) between emotional intelligence and ability to manage patient relationship of nurses under study.The findings of the present study is in line with the findings of an early study by Prasad, (2012) in which it was observed that performance of the service employees and their capability to retain the patient is dependent on the dimensions emotional intelligence namely; social awareness, self-regulation and self-awareness. According to Zineldin (1995), it takes time, cost and effort to attract new customer or reconstruct a broken relationship than to retain and sustain the existing one. Thus it can be concluded that better the emotional intelligence of nurses better will be their ability to manage patient relationship. Hence higher will be the patient satisfaction and trust towards the hospitals in particular. The satisfied patient also leads to positive word of mouth for the hospital which ultimately builds the positive image and goodwill of the hospital.

1.8. Conclusions

To conclude, managing patient relationship in competitive environment is not only an opportunity but a necessity of hospital industry to gain competitive advantage. In hospital industry nurse's emotional intelligence can play significant role in organizational success. The organization factors determining relationship success doesn't completely rely on cognitive competencies alone but emotional competencies are also very equally important. Traditionally criteria for selection of employees were based on cognitive skills but according to Goleman, (1998) employees with high level of emotional self-awareness and empathy are more able to build long-term relationship leads to higher sale and patient satisfaction. Similarly, the nurses who are in direct contact with patient in the hospital industry need to be aware of the significance of emotional intelligence and make personal, professional and organizational efforts to enhance it through training, self study and personal efforts. Moreover, nurses having high level of emotional intelligence must to put effort to improve the patient relationship with care and concern. Thus it can be concluded that service employees with high level of emotional intelligence not only improves the financial performance but also maintain quality long term relationship with its patient. Hence, along with the cognitive skill these employees should be equally equipped with the emotional skills and they need to enhance their ability to manage patient relationship by individual and organizational efforts in order to attract, maintain and retain patients so that both should be benefitted symbiotically.Keeping these considerations in mind the hospital managements, irrespective of their public or private ownership could be giving due attention in training and development programmes and selection and placement, so that their nurses need to be emotionally intelligent enough to meet the challenges of changing expectations of their patients.

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E-Banking Services availed by the Entrepreneurs in Paramakudi

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Abstract

No business is alike, industries are different, needs and challenges are different, people are different so is their education and social background and dozens of other factors. Intelligence develops in an individual from his upbringing to adulthood and these factors helps him to apply new knowledge into his life and business situations and deliver immediate benefits to his family and organisation who are investing in his Intelligence Quotient and Emotional Quotient development. Whenever the human element is involved, it is natural to talk about behaviour and intelligence. When an employee is emotionally intelligent he can perform rough phase of life with more creativity but in modern settings, physical exhaustion affect the creative process of developing a performance. The present research explores the employees' emotional intelligence varies according to their demographics like age, gender, academic qualification, marital status, nature of the organisation, category of the organisation, managerial cadre and work experience. However the results further indicate that variations in overall emotional intelligence emerged significant only across marital status and academic qualification.

Key-words: Intelligence, Emotional Intelligence, Demographics, Employee, Organisation

Introduction

Under traditional banking system, a customer has to visit the branch of the bank in person to perform the basic banking operation, account enquiry, funds transfer, cash with drawls etc. Under the modern banking system, the customer can access the banks website for view in their account details and perform the transaction on account as per their requirements. The information technology hasrevolutionized various aspect of our life. The word at large is rapidly entering in to the net age. Internet is the connection of computer communication networks coveringthe whole world. The growth and expansion of internet and information technology has facilitated the emergence of e-commerce. Today, banking is Virtual Banking. Virtual Banking denotestheprovision of banking and other related services through the extensive use of IT without direct resource to the bank by customer. To access online banking, a customer visits the securewebsite and enters the online banking facility using the customer number credentials previously setup. Online banking services usually include viewing and

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downloadingbalancestatement, and may include the ability to initial paymentof transfer and othertransactions, as well as interacting with the banking in many ways.

Scope of the Study

The presentstudy ispurely focused on e-banking services availed by entrepreneurs in Paramakudi only. It covers socio-economic background of the customers, names of the banks which are in operation in Paramakudi and provides e-banking services to its customers.

Statement of the Problem

The banking service has become an integral part of business and human life. The reason is that financial inclusion should be followed in every type of transaction. For example, 100 days employment scheme, LPG subsidy, bank loan to SHG and the like. Hence, banking service is mixed with every walk of our life. Today, everybody wants to complete the work as early as possible. Moreover, people have no time to visit the bank branches frequently to avail the services. Whenever, e-banking service is availed by the customers, they can visit the bank officials or a need arises on the part of the customers. The knowledge of information technology i.e. the usage of internet is every essential for availing e-banking services. The present education system imparts the computer knowledge from the school days. Hence, most of the people know about the usage of internet for availing e-banking services. Under this background, the present study is conducted to find the answers to the question of what are the factors influencing to avail e-banking services? And the types of e-banking services availed by the bank customers in Paramakudi.

Objectives of the Study

The followings are the objectivesof the present field study

1. To study about the socio -economic back ground of the entrepreneurs.
2. To high light the type of e-banking services availed by the entrepreneurs in Paramakudi
3. To study the factorsinfluencing the entrepreneurs to avail e-banking services in Paramakudi.
4. To offer suggestion to the e-banking customer for availing e- banking services effectively.

Sampling

Paramakudi is one of the business centres in Ramanathapuram District. Paramakudi is surrounded by many villages. The sample respondents are selected by simple random sampling method, using lottery method. The presentstudypredominately focuses on awareness and availing the e banking services bythe entrepreneurs. A study was undertaken in Paramakudi area with a sample of 150 respondents.

Methodology

The present study, carried out by the researchers, is an empirical study in nature. The researchers have collected the data required for carrying out the present study in many ways. The researchers have made use of primary data from the selected sample respondents through a specifically designed interview schedule. Then, the researchers have visited the website address of various banks in order to know the types of e-banking services provided as on date. Next, the researchers have held discussion with the bank officials for finding the procedure to be followed by the bank customer for availing e-banking services. The primary data required for the study were collected from the selected sample respondents. First of all, the researchers have approached the existing bank customers personally at their respective business premises according to their convenience after creating a rapport with them. In this way, the researchers have collected the primary data from the selected sample respondents for ten days.

Data Analysis

The collected primary data have been analyzed in the following manner. The age of the respondents is given in Table 1

Table1 : Statement Showing Age of the Respondents

SL. No.	Age (years)	No. of Respondents	Percentage
1	Up to 30	45	30
2	30-40	55	33.3
3	40-50	27	18
4	Above 50	23	15.3
	TOTAL	150	100

Source: Primary Data

The table 1 shows that age group of respondents. Out of 150 respondents, 45(30%) respondents'age is upto-30 years, 55(33.3%) respondents'age is between 30 and 40 years, 27(18%) respondents'age is between 40 and 50years, 23 (15.3%) respondents'age is above50years. It is findingthat most of the respondents'age is between 30 and 40 years.

The educational qualification of the respondents is presented in Table 2

Table 2 : Statement Showing Educational Qualification of the Respondents

SL.No.	Educational Qualification	No. of Respondents	Percentage
1	SSLC	27	18
2	HSC	22	14
3	Degree	55	36
4	PG and others	46	32

Source: Primary Data

Table 2shows that educational qualification of respondents. Out of 150 respondents, 27(18%) respondents having educational qualification of SSLC, 22(14%) respondents having educational qualification of HSC, 55(36%) respondents having educational qualification of degree and 46(32%) respondents having educational qualification of PG and others.It is find that most of the respondents i.e. 55(36%)respondents are having educational qualification of degree. The nature of the family of the respondents is given in Table 3

Table 3 : Statement Showing Nature of Family of the Respondents

SL.No.	Nature of Family	No. of Respondents	Percentage
1	Joint Family	49	33
2	Nuclear Family	101	67
	TOTAL	150	100

Source: Primary Data

Table3 shows that nature of family of respondents. Out of 150 respondents, 49(33%) respondentsare living in joint family system and 101(67%) respondents areliving undernuclear family system.It is find that most of the respondents i.e.101(67%)respondents areliving undernuclear family system. The period of doing business by the respondents is showing in Table 4

Table 4 : Statement Showing Period of doing Business by the Respondents

SL. No.	Period of Doing Business	No. of Respondents	Percentage
1	Up to 5 Years	55	36.3
2	5-10 Years	22	14
3	10-15 Years	23	15
4	Above 15 Years	50	33
	TOTAL	150	100

Source: Primary Data

Table4 shows that period of doing business by the respondents. Out of 150 respondents, 55(36.3%)respondents are doing business up to 5 years, 22(14%)respondents are doing business5 to 10 years, 23(15%)respondents aredoing business10 to 15 years and 50(33%) respondents are doingbusinessabove 15years.It is find that most of the respondents i.e. 55(36.3%)respondents are doing business up to 5 years. Having Saving Bank a/c details of the respondents is given in Table 5.

Table 5 shows that savings bank account details of the respondents. Out of 150 respondents, 46(30.7%) respondents are having bank account at SBI, 10(6.7%) respondents are having bank account at Canara Bank, 10(6.7%) respondents are having bank account at ICICI Bank, 4(2.7%) respondents are havingbank account at City Union Bank, 10(6.7%)respondents are havingbank account at KVB, 42(28%)respondents are having bank account at TMB,25(16.7%)respondents are having bank account atUnion Bank of India and 3(2.%)respondents are having bank account at PandiyanGrama Bank.It is find that most of the respondents i.e. 46(30.7%)respondents are having bank account at SBI. The relationship between the age of the respondents and the factors influencingthem to avail e-banking services is shown in Table 6.

Table 5 : Statement showing Saving Bank Account Details of the Respondents

SL. No.	Name of the Bank	No. of Respondents	Percentage
1	SBI	46	30.7
2	Canara Bank	10	6.7
3	ICICI Bank	10	6.7
4	City Union Bank	4	2.7
5	KVB	10	6.7
6	TMB	42	28
7	Union Bank of India	25	16.7
8	Pandiyan Grama Bank	3	2
	TOTAL	150	100

Source: Primary Data

Table 6 : Relationship Between Age And Factor Influencing Them To Avail E-Banking Services

Age (years)	Factors				Total
	Time Saving	Avoid Misleading	Bill Payment	Money Transfer	
Up to 30	17	2	20	6	45
30-40	15	20	14	6	55
40-50	10	12	2	3	27
Above 50	10	7	3	4	23
Total	46	27	22	55	150

Source: Computed Data

Ho: There is no significant relationship between age of the respondents and factors influencing themto avail E-Banking services

H1: There is a significant relationship between age of the respondents and factors influencing them to avail E-Banking services

Inference : The result is significant at $p<0.05$.Hence,the null hypothesis is rejected and alternative hypothesis is accepted. It means that there is a significant relationship between age of the respondents and factors influencing hem to avail E-Banking services. It means that all the age group respondents are not influenced by all the factors directly. In other words, particular age group of respondents is influenced by any one of the factor or all the factors collectively.

The relationship between educational qualification of the respondents and the factors influencing them to avail e-banking services is given in Table 7.

Table 7 : Relationship between Educational Qualification of the Respondents and factors Influencing them to avail E-Banking Services

Educational Qualification	Factors				Total
	Time Savings	Avoid Misleading	Bill Payment	Money Transfer	
SSLC	5	3	10	9	27
HSC	10	3	5	4	22
Degree	20	14	6	15	55
PG and others	18	2	6	20	46
Total	46	27	22	55	150

Source: Computed Data

Ho: There is no significant relationship between educational qualification of the respondents and factors influencing them to avail E-Banking services

H1: There is a significant relationship between educational qualification of the respondents and factors influencing them to avail E-Banking services.

Inference : The result is significant at $p<0.05$. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that there is a significant relationship between educational qualification of the respondents and factors influencing them to avail E Banking services. Different educational background respondents are influenced by any one of the factor or all the factors collectively for availing e-banking services.

The relationship between nature of family of the respondents and factors influencing them to avail e-banking services is presented in Table 8.

Table 8 : Relationship Between Nature of Family of the Respondents and Factors Influencing them to avail e-Banking Services

Nature of Family	Factors				Total
	Time Savings	Avoid Misleading	Bill Payment	Money Transfer	
Joint Family	20	9	15	5	49
Nuclear Family	50	40	5	6	101
Total	46	27	22	55	150

Source: Computed Data

Ho: There is no significant relationship between nature of family of the respondents and factors influencing them to avail E-Banking services.

H1: There is a significant relationship between nature of family of the respondents and factors influencing them to avail E-Banking services.

Inference: The result is significant at p<0.05.Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that there is a significant relationship between nature of family of the respondents and factors influencing them to avail E-Banking services. It means that nature of family is playing in vital role in availing e-banking services.

The relationship between period of doing business by the respondents and factors influencing them to avail e-banking services is depicted in Table 9

Table 9 : Relationship between period of doing business by the respondents and factor influencing them to avail e-banking services

Period of Doing Business (years)	Factors				Total
	Time Saving	Avoid Misleading	Bill Payment	Money Transfer	
Up to 5	20	15	5	15	55
5 to 10	5	4	10	3	22
10 to 15	3	2	11	7	23
Above 15	25	10	6	9	50
Total	46	27	22	55	150

Source: Computed Data

Ho: There is no significant relationship between period of doing business by the respondents and factors influencing them to avail E-Banking services

H1: There is a significant relationship between period of doing business by the respondents and factors influencing them to avail E-Banking services

Inference : The result is significant at p<0.05. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that there is a significant relationship between period of doing business by the respondents and factors influencing them to avail E-Banking services. The period of doing business factor is also determining the availing of e-banking services. In other words i.e. e-banking services facilitate the respondents to receive money from debtors and sent themoney to creditors. Hence experienced business men prefer to avail e-banking services at the maximum.

The relationship between age of the respondents and the problems faced by them while availing e-banking services is given in Table 10.

Table 10 : Relationship between age of the respondents and problems faced by them while availing e-banking services

Age (years)	Problems			Total
	Server Problem	Wrong Charges	Service Charges	
Up to 30	19	6	20	45
30 to 40	21	18	16	55
40 to 50	22	2	3	27
Above 50	12	8	3	23
Total	55	46	49	150

Source: Computed Data

Ho: There is no significant relationship between age of the respondents and problems faced by them while availing e-banking services.

H1: There is a significant relationship between age of the respondents and problems faced bythem while availing e-banking services.

Inference : The result is significant at $p<0.05$. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that there is a significant relationship between age of the respondents and problems faced by them while availing e-banking services. It is finding that particular age group of respondents is facing one kind of problem and another age group of respondents is facing another kind of problem.

The relationship between educational qualification of the respondents and problems faced by them while availing e-banking services is presented in Table 11.

Table 11 : Relationship between educational qualification of the respondents and problems faced by them while availing e-banking services

Educational Qualification	Problems			Total
	Server Problem	Wrong Charges	Service Charges	
SSLC	5	3	19	27
HSC	12	6	4	22
Degree	22	12	21	55
PG and others	18	2	26	46
Total	55	46	49	150

Source: Computed Data

Ho: There is no significant relationship between educational qualification of the respondents and problem faced by them while availing e-banking services.

H1: There is a significant relationship between educational qualification of the respondents and problem faced by them while availing e-banking services

Inference : The result is significant at $p<0.05$.Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that there is a significant relationship between educational qualification of the respondents and problem faced by them while availing E-Banking services. It is finding that highly educated respondents are also facing problem while availing e-banking services at the maximum.

The relationship between nature of family of the respondents and problems faced by them while availing e-banking services is shown in Table 12.

Table 12 : Relationship Between Nature of Family of the Respondents and problem faced by them while availing E-Banking Services

Nature of family	Problems			Total
	Server Problem	Wrong Charges	Service Charges	
Joint Family	17	20	12	49
Nuclear Family	55	35	11	101
Total	55	46	49	150

Source: Computed Data

Ho: There is no significant relationship between nature of family of the respondents and problem faced by them while availing e-banking services.

H1: There is a significant relationship between nature of family of the respondents and problem faced by the respondents while availing e banking services.

Inference : The result is significant at $p<0.05$.Hence, the null hypothesis is rejected and the alternative hypothesis is accepted. It means that there is a significant relationship between nature of family of the respondents and problem faced by them while availing e-banking services. Generally, it is well known that there may be mutual help among the joint family members. It is not possible in the case of nuclear family. Hence, it is finding that the type of problem faced by the respondents is based on the nature of family.

The relationship between the period of doing business by the respondents and the problems faced by them while availing e-banking services is presented in Table 13.

Table13 : Relationship between period of doing business by the respondents and problems faced by them while availing e-banking services

Period of Doing Business	Problems			Total
	Server Problem	Wrong Charges	Service Charges	
Up to 5 years	19	6	20	45
5 to 10 years	21	18	16	55
10 to 15 years	22	2	3	27
Total	55	46	49	150

Source: Computed Data

Ho: There is no significant relationship between period of doing business by the respondents and problems faced by them while availing e banking services

H1: There is a significant relationship between period of doing business by the respondents and problems faced by them while availing e banking services.

Inference : The result is significant at $p<0.05$.Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that there is a significant relationship between period of doing business by the respondents and problems faced by them while availing e-banking services. It is find that long period of doing business leads to facing many problem .In this way, there may be a small problem to the entrepreneurs who are doing business is very short and vice versa.

Findings

In this paper, e-banking services availed by entrepreneurs have been analyzed according to age ,educational qualification, type of bank account, Nature of family and period of doing business by the respondents. A survey was conducted among 150 respondents, who are using the e-banking services.

It is find that most of the respondents' age is 30 to40 years, then, majority of respondents i.e. 55(36%)respondents is having educational qualification of degree, next, majority of respondents i.e. 101(67%)respondents are living in nuclear family system, moreover, most of the respondents i.e.55(36%)respondents are doing business up to 5 years and most of the respondents i.e. 46(36.7)respondents are having bank account at SBI.

There is a significant relationship between age of the respondents and factors influencing them to avail E-Banking services. There is a significant relationship between educational qualification of the respondents and factors influencing them to avail E-Banking services.

There is a significant relationship between nature of family of the respondents and factors influencing them to avail E-Banking services. There is a significant relationship between period of doing business by the respondents and factors influencing them to avail E-Banking services.

There is a significant relationship between age of the respondents and problems faced by them while availing e-banking services. There is a significant relationship between educational qualification of the respondents and problem of faced by them respondents while availing E-Banking services. There is a significant relationship between nature of family and problems faced by them while availing e-banking services.

Suggestions

The following suggestions are given of better availing of e-banking service on the basis of the present study.

1. **Awareness Camp for E-Banking Services :** E-banking services are provided to the customer due to technology development. Generally entrepreneurs have no time to study the latest technology development. Hence, E-Banking Service Awareness Camp may be organized by each bank separately and periodically. If so, business of bank and entrepreneurs are increased through knowing e-banking services very well.

2. **Booklets about E-Banking Services :** A small size booklet may be prepared and issued to the entrepreneurs freely periodically. Due to enhancement of services and technology development,

the way of availing E-banking service may be explained in a booklet with clear pictures. If so, the bank customer can avail E- banking service without disturbing bank official at the maximum.

3. **Training :** Nearly one third respondents are having only school education there is no need of compulsory education to become an entrepreneur. Some people are doing business after completion of their school education. Hence, a training program may be arranged by a bank separately or all banks collectively to these kinds of entrepreneurs. If so, E-banking service may be utilized by all the entrepreneurs without facing any problem.

4. **Waiving of Service Charges :** The banks may waive the service charges out of the total profit earned by bank. The share of service charges for providing E-banking service out of the profit earned is very meager. The waiving of services may stimulate entrepreneur to increase the usage of E-banking services. In the long run, the waiving of service charges may be compensated through increasing profitability the bank.

Conclusion

In the e-banking system, the customers need not wait at bank branches. Moreover, the customers do not need to access the branch manager, because all the information will send by e-banking. As a result, there is no problem for the bank employees. At the time of their work, an entrepreneur can easily sent and receive money. The customer does not wait long time and also unwanted drift and stress does not cause. Currently the bank has developed a number of changes. Out of many changes taken place, the most important change is transfer money anywhere and at any time.

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A Study of Financial Inclusion of Household Workers in Jaipur

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– Dr. T. N. Mathur***

Abstract

Urban India is construed as the frontrunner in terms of basic financial services in the country with presence of branches of invariably all forms of banking and other financial service providers. But, the question arises as to the extent such services are being actually, actively and beneficially utilized by the urban poor.

The study analyzes the level of awareness of the available financial services options among the household workers in the city of Jaipur; and measures the relationship between literacy levels and the usage of organized financial services. It also tries to unearth the demand side requirements of the target population with respect to their financial needs and to find out whether the financial services are reaching the low income groups and thereby impactingtheir saving habits, and standard of living.

It is based on both primary as well as secondary data. In order to come upon a concrete conclusion various analysis tools like percentage, cross-tabulation as well as Carl Pearson's correlation analysis has been done.

At the end it has been concluded that the dream of complete financial inclusion cannot be fulfilled until and unless a mass awareness drive is launched to educate the target masses about the availability and usage of such services. The banks also need to provide tailor-made/need-based product offerings in order to bring the unbanked population in the urban areas.

Keywords: Financial inclusion, financial exclusion, financial services and products, usage

Conceptual Framework of Financial Inclusion

The Indian planning aimed at growth with equity since its inception. A number of initiatives have been taken by the Government as well as the Reserve Bank of India to address the issue of inclusive growth. Despite the rigorous combined and concerted efforts, a vast majority of population in the country, in both rural and urban areas, still encounter difficulties in getting access to formal financial services. Inclusive finance, including safe savings, appropriately designed loans for poor and low-

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income households and for micro, small and medium-sized enterprises, and appropriate insurance and payments services can help people to enhance incomes, acquire capital, manage risk, and come out of poverty (United Nations, 2006b).

Financial inclusion is delivery of banking services at an affordable cost to the vast sections of disadvantaged and low income groups. Unrestrained access to public goods and services is the sine qua non of an open and efficient society. As banking services are in the nature of public good, it is essential that availability of banking and payment services to the entire population without discrimination is the prime objective of the public policy.(Jain, Mathur, Bohra, 2012)

Giving a concrete definition to the concept of financial inclusion is very crucial for developing a conceptual framework as well as for identifying the factors that lead to low level of access to the financial system.

According to RBI, financial inclusion can be defined as, 'the process o f ensuring access to appropriate financial products an d services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players.'

Individual indicators, viz., number of bank accounts and number of bank branches that are generally used as measures of financial inclusion, can provide only partial information on the level of financial inclusion in an economy. Financial services or products rendered by banks, postal savings banks, credit unions, finance companies, micro-finance institutions (MFIs), and other formal and quasi-formal non-bank institutions generally form the basis for measuring the financial inclusion (RBI, 2013).

Review of Literature

Dr. Namita Rajput and Ms Shelly Rajput, (2014), in their paper titled, 'Reaching the Unreached: Financial Inclusion in India - A Study', tried to analyze the status of financial inclusion in India, with reference to initiatives taken up by the Government, RBI, and banks for the purpose. They used CrisilInclusix Index to analyze state orientation towards the concept of financial inclusion, and attempted to present a comprehensive means to measure state-specific financial inclusion initiatives. Through the study, they proposed various measures to contradict the challenges of financial inclusion in India.

K. HemaDivya, (2013), in her research paper titled, 'A study on impact of financial inclusion with reference to daily wage earners', discussed the impact of financial inclusion on daily wage earners in Autonagar, Tenali. The main aim of the study was to review the status of availability of financial services to the low income-group people of the area.

Sigma Ainul, Md. Irfan Hossain, Sajeda Amin and Ubaidur Rob, (2013), in their research titled, 'Financial Inclusion of Female Garment Workers' attempted to find out ways of increasing financial capabilities of young, inexperienced wage earners through a planned program of financial education. Through the study, they aimed to analyze the current financial services options available to readymade garments workers living in Dhaka Metropolitan Area and gauge the typical saving and spending habits of such workers in order to identify apt saving options for them. The study majorly focused on the garment workers in two slums areas of Dhaka City, viz., Korail Slum (Mohakhali) and Rupnagar tin shed (Duaripara, Mirpur).

Pallavi Gupta and Bharti Singh, (2013), in their paper titled, 'Role of Literacy Level in Financial Inclusion in India: Empirical Evidence', tried to assess the Usage Dimension of Financial Inclusion Index and literacy level in India with the help of statistical tool of Karl Pearson coefficient of correlation. Their research portrayed a large variation in the extent of correlation among the different states of the country, while a very low correlation at the national level. They suggested the use of ICT models like biometric ATMs and tele-centres to achieve high levels of financial inclusion in the country.

Manik L. Bose, Pradip Kumar Sarmah and Sachin Kumar, (2013), in their report titled, 'Financial Inclusion and Livelihood Promotion of Rickshaw Pullers in India'(as submitted to UNDP India), attempted to identify and examine the financial needs of safe savings (mandatory and voluntary), credit, micro-leasing, insurance (life, health and general insurance) and transfer of money/remittance and payments services required by the rickshaw pullers in the three focused States of UN-India, viz., Assam, Jharkhand and Rajasthan.

K.C. Chakrabarty, (2013), in his speech delivered at the National Seminar organized by American India Foundation, on 'Financial Inclusion of Urban Poor in India', highlighted the problem of widespread financial exclusion in urban areas, especially, for the disadvantaged and low-income groups, despite a vast network of bank branches in these areas. He emphasized on the issue of financial exclusion of migrant workers, rickshaw pullers. He applauded the efforts taken up under Joint Liability Group (JLG) model for delivery of rickshaw loans, like that of the Punjab National Bank's "Janmitra Rickshaw Financing Scheme". He also attempted to analyze the effectiveness of Rickshaw SanghProgramme in providing credit for purchase of rickshaw, together with making provisions for municipal permit, insurance (both on the asset and on the life), bank account, photo ID and a uniform. In his speech he emphasized on the provisions of need-based financial services for different segments like household workers, construction workers, weavers, hawkers, rickshaw pullers, auto drivers, etc.

Mayumi Ozaki, (2012), in the paper titled, 'Worker Migration and Remittances in South Asia' (as submitted for The ADB South Asia Working Paper Series), threw light on the enormous volume of remittance inflow to South Asian countries through informal routes by South Asian migrant workers. The paper emphasized on a rigorous and combined efforts on the part of the governments, regulators and financial sectors for addressing legal and policy constraints, improving formal financial systems, and enhancing customer education to significantly expand formal remittance markets and achieve financial inclusion.

Dr. Anurag B. Singh and Priyanka Tandon (2011) in their paper titled, 'Financial Inclusion in India: An Analysis', highlighted the various factors, like gender, age, literacy levels, legal identity, place of living, etc. affecting access to financial services to various sections of the society. It aimed to analyze the role played by micro finance initiatives in bridging the disparity between people with respect to unequal recourse to financial services, and its role in economic development of the country.

Need for the Research

A comprehensive review of literature highlights the fact that the issue of financial inclusion of urban poor has always been on the back stage due to the obvious assumption of higher penetration of banking services in the urban areas due to availability of a large number of bank branches in such areas. Financing needs of urban unorganized workers are all the more ignored, although they constitute a huge proportion of the urban poor population.

Household workers, which form a large portion of the urban unorganized workers population, have been the backbone of the urban society since long.

These workers constitute a large segment of the unorganized working class in the urban areas. A vast majority of thembeing rural-urban migrants, who live in poor housing conditions and unhygienic environment with their family and children. Often this section of the population has been the major sufferer of neglect in terms of provision of basic financial services and social protection. Their accesses to various financial and non-financial products and services are very limited due to lack of permanent settlement, permanent identity, assets, resources, and knowledge and financial incapacity.

Urban India is construed as the frontrunner in terms of basic financial services in the country with presence of branches of invariably all forms of banking and other financial service providers. But, the question arises as to the extentsuch services are being actually, actively and beneficially utilized by the urban poor.

The study analyzes their financial inclusion needs of safe savings, credit, insurance (life, health and general), transfer of money / remittances and payments services, and other social security, required by the target population group in the city of Jaipur.

Objectives of the Research

- To gauge the level of awareness of the target group about the available financial services options; and measure the relationship between literacy levels and the usage of organized financial services.
- To unearth the demand side requirements of the target population with respect to their financial needs and to find out whether the financial services are reaching the low income groups.
- To measure the frequency of their financial transactions through organized as well as unorganized financial options, in order to find out the extent of dormancy prevalent in such accounts.
- To find out the impact of financial inclusion on the saving habits, and standard of living of the target group

Research Hypothesis

- There is no significant difference between the awareness and usage of public financial assistance schemes among the respondents.
- There is no relationship between literacy level and usage of public financial assistance schemes among the respondents.

Scope of the Study

The study is undertaken in the city of Jaipur, Rajasthan. The scope of data collection is restricted to household workers (comprising of household maids, drivers, and guards), and includes both, the migrant and the original inhabitants of the city.

Research Design:

The current research is a mix of descriptive and exploratory research type. It aims to extract information on the extent of financial inclusion of household workers in the city of Jaipur. The study would be based upon the survey data collected from the sample respondents.

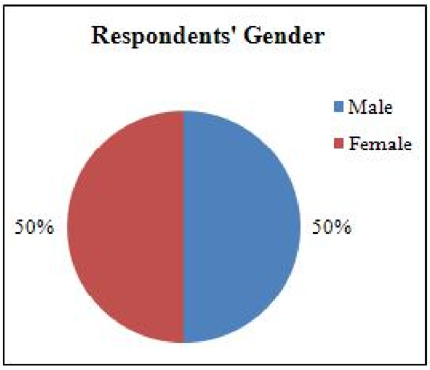
Sampling

A sample size of 200 household workers, equally representing the migrant and permanent inhabitants of the city has been taken. The method of stratified random sampling is being used for the purpose of the study so as to ensure equal representation to migrant and permanent inhabitants of the city.

Data Analysis and Interpretation

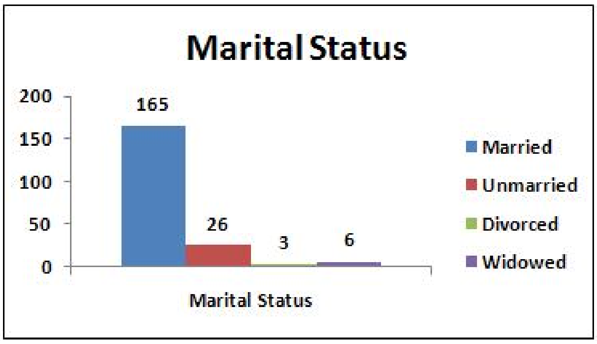
Survey Outcome: A stratified random sample survey was conducted on 200 household workers in the city of Jaipur. The results of the survey are summarized as below:

Gender-wise break-up of Respondents



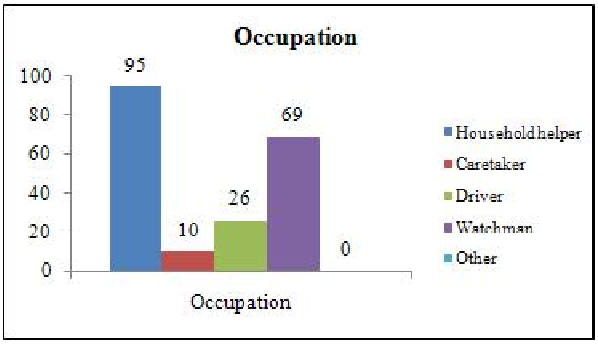
Equal representation has been given to male and female respondents, in order to gauge the level of gender disparities with respect to the financial services availability and usage among the respondents. Therefore the survey was conducted on 100 male and 100 female respondents.

Marital Status of the Respondents



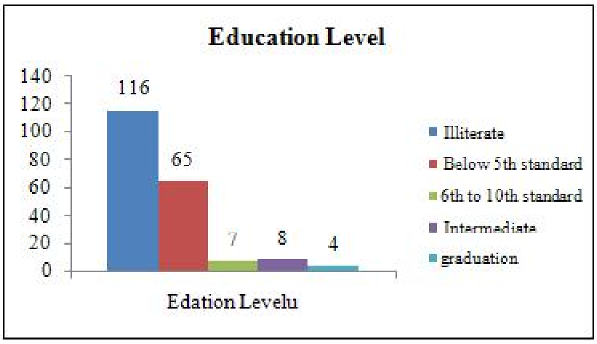
Out of the total 200 respondents, approximately 82% were married, followed by 13% unmarried, 3% widowed and 2% divorced.

Respondents' Occupation



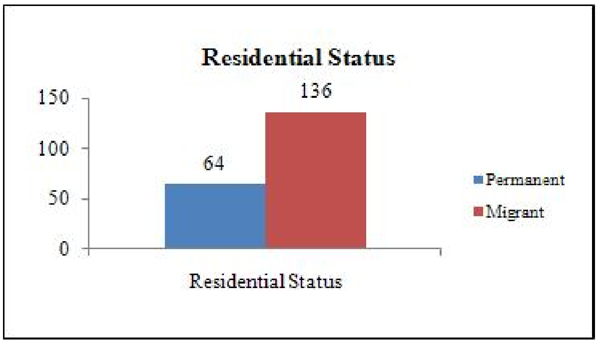
The respondents comprised of 47% household workers, followed by 35% watchmen, 13% drivers and 5% caretakers.

Respondents' Education Level



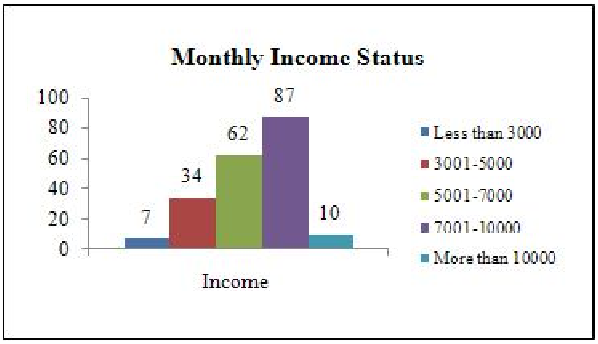
58% of the survey respondents were illiterate, followed by 33% who had received primary education. Only 9% respondents were educated beyond 6th standard.

Respondents' Residential Status



68% of the survey respondents were migrant workers, who have moved to the city from the near-by villages and towns in search of employment, and the rest were the permanent residents of the city of Jaipur.

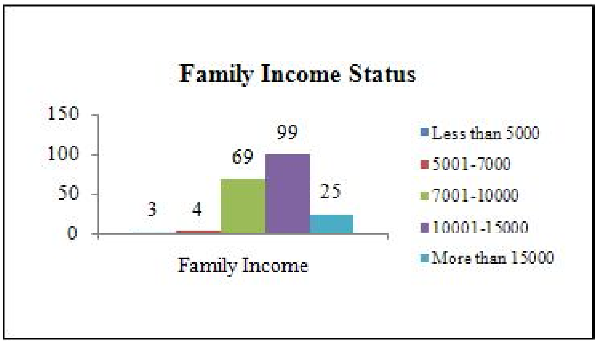
Monthly Income Status of Respondents



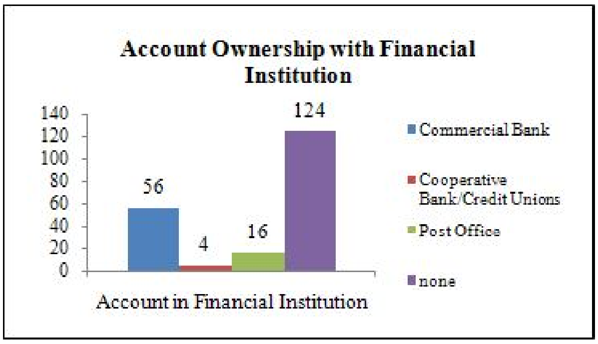
Out of the total sample 43% had their individual monthly income in the range of Rs.7001-INR10000, followed by 31% falling under individual monthly income range of INR5001-INR7000. Approx 20.5% were in the category range of below INR5000. Only 5% belonged to the income range of more than INR 10001.

Monthly Family Income Status of Respondents

Approx 84% of the sample fell under the monthly family income range of INR 7001-INR15000. Only 12.5% respondents had monthly family income range of more than INR15000.



Ownership of Accounts with Financial Institution



It is very disheartening to find that 62% of the survey respondents did not have an account with any formal financial institution. Out of the remaining, approx 74% had an account with a commercial bank, followed by 21% owning a post office savings account, and only 5% having account with any cooperative bank or credit union. In absolute terms, out of the 76 respondents having account with any financial institutions, only 27 were females and the rest were males.

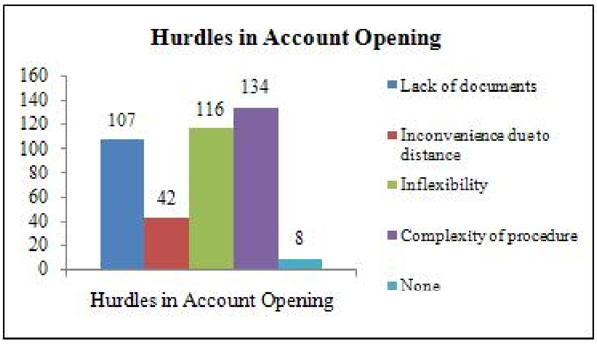
Comparing literacy levels of the account holders, 42 respondents were absolutely illiterate, followed by 14 who received primary level education till 5th standard. Only 2 respondents were graduates.

In terms of marital status, a majority of the sample, representing 66 respondents were married. Only 5 unmarried respondents had an account, comprising 50 accounts in commercial banks, 14 post office accounts and only 2 accounts in cooperative bank or credit union.

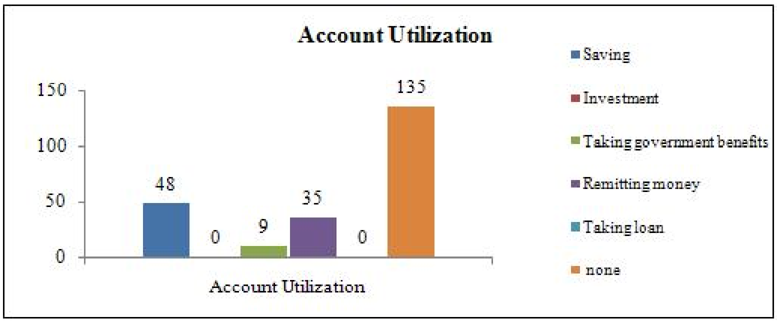
Having a formal account is a major occurrence with the migrants as compared to the permanent residents. As per the survey, total account holdings of migrants stood at 54 respondents, as against 22 accounts of permanent residents of the city of Jaipur.

Major Hurdles in Account Opening with Banks or other Financial Institutions:

As per the survey respondents, complexity of procedure was regarded as the major hurdle (accounting for 32.9% times of responses) in opening accounts with banks and other financial institutions. Inflexibility (28.5%), followed by lack of documentation (26.3%) were the other major hurdles cited by the respondents.

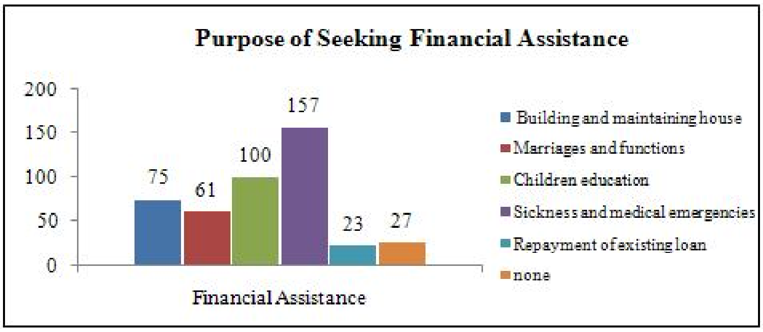


Utilization of Account



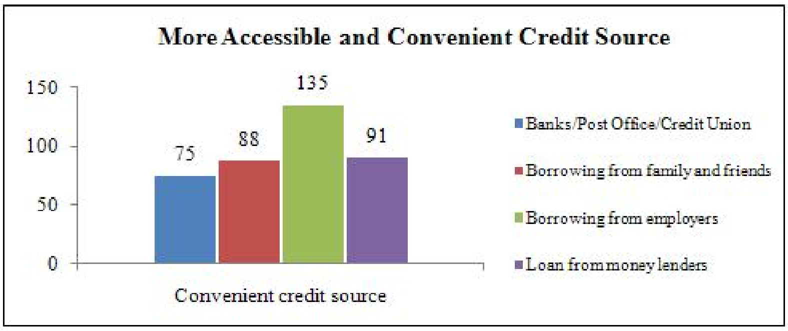
With respect to account utilization, the number of respondents opting for the option of none of these stood at 135, which involved not only the respondents who did not had account ownership but also those who own accounts in either of the above mentioned financial institutions. This clearly indicates the level of dormancy in accounts opened by the household workers. Additionally, saving comes out to be the major reason for account holding and usage, followed by money remittance and utilization of governmental benefits.

Purpose of Seeking Financial Assistance



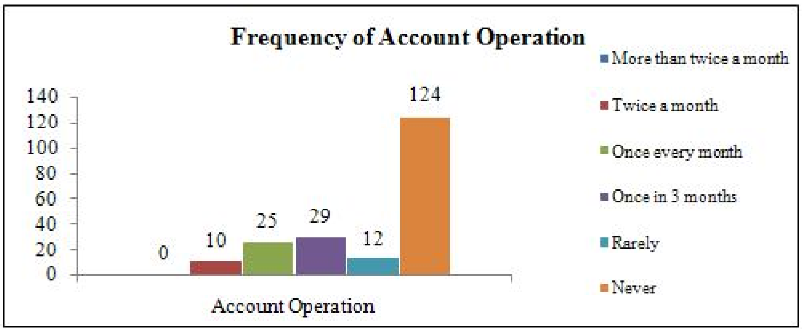
When enquired about the major reasons for the respondents for resorting to additional financial assistance, the major reason cited by them was sickness and medical emergencies (involving health issues as well as deaths in the family) accounting for approx 34% of the responses, followed by children education (23%), building and maintaining house (17%), marriage and functions (14%). Only 6% responded in favor of the 'none of these' option.

More Accessible and Convenient Source of Credit



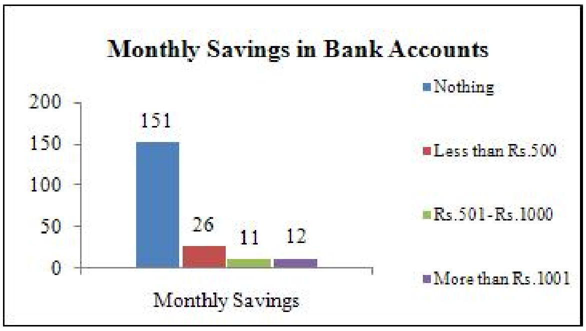
Borrowing from employers was cited as the most accessible and convenient source of credit by the respondents favoring it with 34.7% times of the responses, followed by loans from money lenders (23.4% times), and borrowings from family and friends (22.6% times). It was rather disappointing to note that bank loans was cited as the last resort for availing credit during emergencies by the respondents, accounting for 19.3% times of the responses.

Frequency of Account Operation



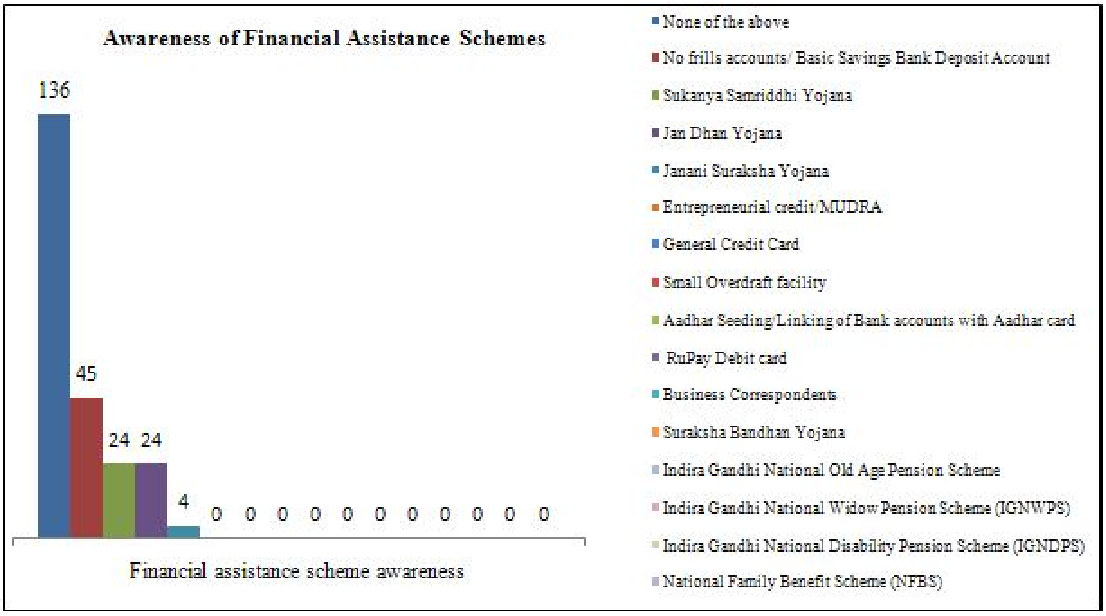
A majority of respondents (14.5%) who owned accounts with one of the formal financial institutions operated their account once in 3 months, followed by 12.5% respondents operating their account once every month. The bare fact that only 5% of the respondents operated their accounts twice or more than twice a month indicates towards low frequency of account usage by the respondents. This is further strengthened by the fact that 6% of the respondents accepted that they rarely operated their accounts for any of the before cited reasons.

Monthly Savings in Bank Accounts



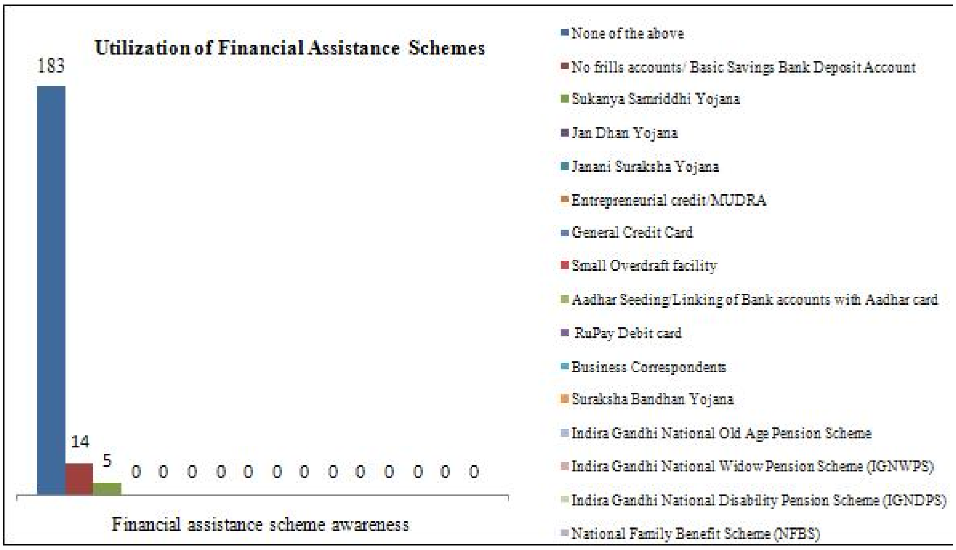
Approximately 25% of the respondents save some amount of money in their bank accounts, while the rest still do not have any savings yet. A majority of savers are in the monthly income group of Rs.7000 and above.

Awareness of Financial Assistance Schemes



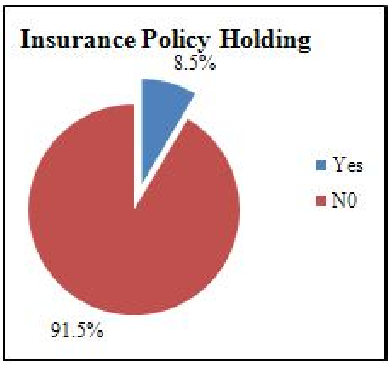
Out of the various financial assistance schemes run by the Government, the respondents were majorly aware of only a handful of them. Basic Savings Bank Deposit Account, popularly known as No frill accounts, accounting for 19.3% times of responses, was the most popular of them. It was followed by SukanyaSamriddhiYojana (10.3%), Jan DhanYojana (10.3%), and Janani Suraksha Yojana (1.7%). However, a massive 58.4% of the respondents registered their lack of awareness about any of the financial assistance schemes.

Utilization of Financial Assistance Schemes



In terms of usage of the various financial assistance schemes, the percentage of non-users plummets to 90.6%. However, 'No Frills Accounts' and 'Sukanya Samriddhi Yojana' appeared to be the personal favorites among the scheme users.

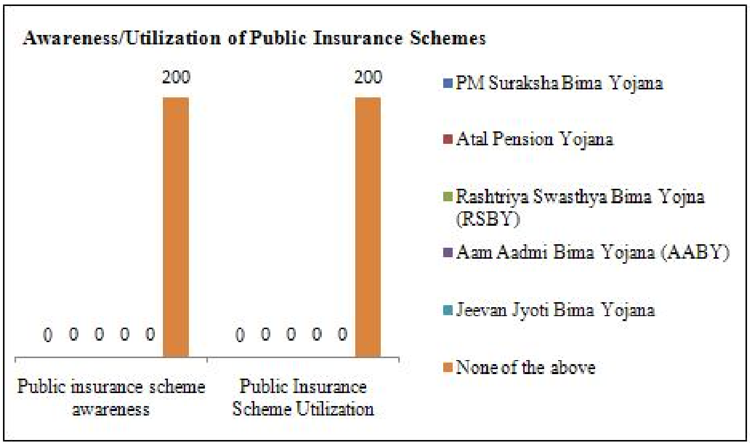
Owning of Insurance Policy



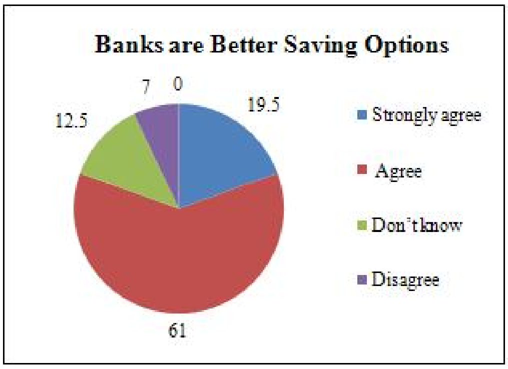
It is also alarming to note that only 8.5% of the survey respondents hold insurance policy, despite the introduction of a number of social pension schemes by the government

Awareness and Utilization of Public Insurance Schemes

The survey depicted a complete absence or lack of awareness as well as utilization of the various public insurance schemes of the government. This situation calls for an immediate attention towards creating mass awareness about availability and usefulness of such schemes for the benefit of the poor sections of the urban masses.



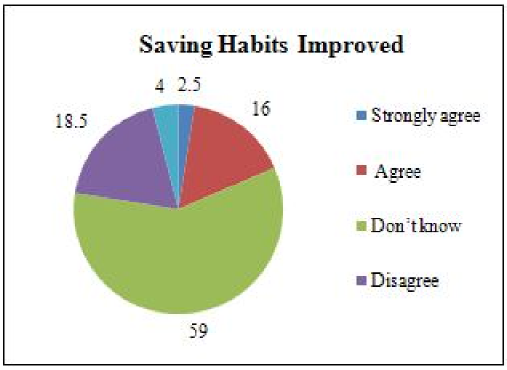
Banks Considered as Better Options for Savings



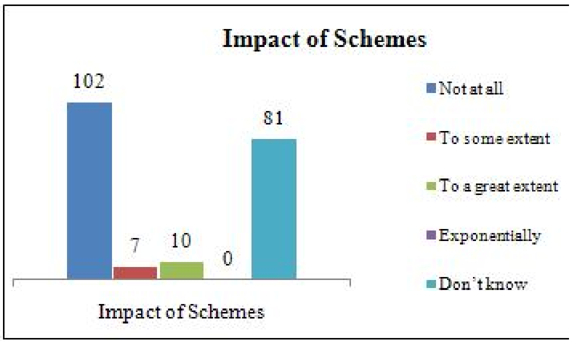
Around 81% of the respondents agreed to the fact that banks are better saving options. They include even those respondents who did not have an account ownership. They expressed their desire of owning one such account, but are lagging behind due to the existence of one of the previously mentioned inherent hurdles.

Improvements in Saving Habits

Around 19% of the respondents have agreed to the fact that their saving habits have improved after their association with one of the formal financial institutions. On the contrary, 18.5% disagreed to the fact. However, a majority of such respondents belonged to the group that did not own a formal account.



Impact of Schemes on Family's Income Levels and Living Standards



Out of 66 respondents who admitted their awareness about the various public financial assistance schemes, 34 respondents clearly denied any positive impact of such schemes on their standard of living. Only 10 respondents admitted that these schemes have affected their income levels and living standards to a great extent. While, 7 accepted of some positive impact of such schemes on their living standards.

However, all of the 17 respondents who actually utilized such schemes have accepted that such schemes have positively impacted their income levels and living standards at least to some extent.

Hypothesis Testing

Hypothesis 1: There is no relationship between literacy level and awareness of public financial assistance schemes among the respondents.

The value of Carl Pearson's Correlation Coefficient between the two hypothesis variables i.e., level of education and awareness of public financial assistance schemes comes out to be 0.021, which is much below the ideal value of 1. So, it can be said that the two variables are not related and the null hypothesis is thus accepted, i.e., there is no relationship between literacy levels and awareness of public financial assistance schemes. This indicates that even an illiterate person can have knowledge about the availability of such schemes if due efforts are made.

Correlations

Correlations			
		What is the level of your education	Are u aware of any public financial assistance schemes
What is the level of your education	Pearson Correlation	1	.021
	Sig. (2-tailed)		.771
	N	200	200
Are u aware of any public financial assistance schemes	Pearson Correlation	.021	1
	Sig. (2-tailed)	.771	
	N	200	200

Hypothesis 2 : There is no significant relationship between the awareness and usage of public financial assistance schemes among the respondents.

Correlations

Correlations			
		Are u aware of any public financial assistance schemes	Have you utilized any of the social financial assistance scheme
Are u aware of any public financial assistance schemes	Pearson Correlation	1	.434**
	Sig. (2-tailed)		.000
	N	200	200
Have you utilized any of the social financial assistance scheme	Pearson Correlation	.434**	1
	Sig. (2-tailed)	.000	
	N	200	200
**. Correlation is significant at the 0.01 level (2-tailed).			

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

From the above analysis it can be clearly state that there exist a moderate low level of correlation among the awareness and usage of financial assistance schemes among the respondents. So, the above hypothesis is rejected as there exists some relationship between the two variables, though it is significant at 0.01 levels. In other words, improving awareness about financial services, products and financial assistance schemes would play a determining role in their usage by the target masses.

Conclusion

To conclude with the above analysis, it can be said that despite of a widespread availability of banking services in the urban areas, the poor masses are still lagging behind in the usage of such services due to obvious reasons of lack of awareness and proper knowledge about the availability and utility of such services for their benefit. Creation of education/awareness of financial inclusion and public insurance schemes are the key factors that can help in achievement of the goal of complete financial inclusion as envisioned by the present government. Through the above analysis it is clear that there is no direct relationship between literacy levels and their usage of financial services by the masses. This indicates that instead of creating a huge hue and cry about illiteracy among the masses as the main lacuna in reaching out to them. If proper provisioning of awareness drives and camps are done, the masses can be easily driven towards the usage of formal financial services, which are far better than those sources to which they usually resort in times of crisis. It is heartbreaking to note that in the current era of rapid inclusion, people still consider other financing options, other than banks, to be more suitable and convenient to address their needs. The bank and the policy makers need to proactively consider the hurdles faced by the poor urban masses to bring them closer to the usage of such services. The banks need to understand the financing needs of this section of the masses and create tailor made offerings to make them comfortable in their dealings with the banks and other financial service providers. They need to urgently consider the hiccups faced by them in converting their awareness into usage of financial services and public financial assistance schemes and address their needs to the best of their capacities. Failing which the dream of complete financial inclusion would remain unachieved. The Government also needs to redesign their policies to also address the issues faced by the household workers in the urban areas, who are considered as the backbone of the modern urban setup. It is also very disheartening to note that a huge segment of the urban population is still uninsured, despite the announcement and availability of numerous public insurance schemes by the Government. This phenomenon clearly indicates towards the urgent requirement of massive awareness creation drive, both on the part of the Government as well as the service providers. A lot has been done so far, but still the need to go that extra mile still exists in order to provide the very basic financial services to the urban poor and specifically the household workers.

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Financial Inclusion - A Reality Check

– Dr. Rinki Rola*
– Vinod Varghese**

Abstract

Financial inclusion is the main concern of any country in terms of economic growth and development. It also enables to channelize the money-flow to the financial system and it ensures access financial services to all levels of economy in country. India's poor are largely excluded from the formal financial system. Even many small industries and businesses find it difficult to access to formal sources of finance and thus are largely excluded from financial system. In year 2014, a national mission has been launched by honorable Prime Minister "PRADHANMANTRI JAN DHAN YOJNA (PMJDY)" scheme which planned to achieve financial inclusion by providing basic banking accounts with a debit card, with insurance. The PMJDY scheme has created an impressive result in the banking sector with regard to eradication of financial exclusion in India. But merely opening of bank accounts will not fulfill the aim of the scheme. For PMJDY to be a successful scheme there should be continuous operation and movements in these bank accounts. The paper discusses present scenario of financial inclusion in India with the specific focus on Gujarat based on a primary research. The research also identifies challenges for financial inclusion in terms of extent of usage of financial services among the respondents. The study indicates that mass financial literacy and awareness among the marginalized sections of people are enormously requisite to achieve financial inclusion. Financial institutions will have to be socially responsible as well as accessible to achieve absolute financial inclusion.

Keywords: Financial Inclusion, PMJDY, Account Penetration, financial services, inclusive growth.

1. Introduction

In last two decades, there has been a significant increase in number of initiatives taken by Government, Banks, and Non Government Organizations (NGO's) to improve financial inclusion. There are many measures taken by Government of India, Banks, and RBI for Financial inclusion plans like No Frills Account (NFAs), Krishna Credit cards (KCCs), Self Help Group (SHG), Business Facilitators (BFs), Simplified Know Your Customer (KYC) norms, mobile banking, Kiosk/ATM based banking, Swarnjayanti Gram Swarozgar Yojana (SGSY) and National Rural Livelihood Mission (NRLM), Financial Literacy Centers Government initiatives Branchless banking, Aadhar Card Enabled payments, etc.

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Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of the society (RBI, 2011). Financial inclusion helps and supports to reduce the gap between rich and poor people in the country. It also enables to channelize the money-flow to the financial system and it ensures access financial services to all levels of economy in country. The information from Census of India, 2011 estimates that only 58.7 percent of the households have access to banking services. The present banking network of the country (as on 31.03.2014) comprises of a bank branch network of 1, 15,082 and an ATM network of 1, 60,055. Access to formal financial institutions has improved progressively but thousand of villages still lack a bank branch; less than 10 percent of all commercial bank credit goes to rural areas, where around 70 per cent of the total population lives. In year 2014, a national mission has been launched by honorable Prime Minister "PRADHANMANTRI JAN DHAN YOJNA" scheme which planned to achieve financial inclusion by providing basic banking accounts with a debit card, with insurance. The scheme has successfully reached the target of 1 Crore banks account on first day itself. The PMJDY scheme has created an impressive result in the banking sector with regard to eradication of financial exclusion in India. But merely opening of bank accounts will not fulfill the aim of the scheme. For PMJDY to be a successful scheme there should be continuous operation and movements in these bank accounts. The paper discusses present scenario of financial inclusion in India with the specific focus on Gujarat. The study also identifies with the specific focus on Gujarat state in terms of extent of usage of financial services among the respondents. The study indicates that mass financial literacy and awareness among the marginalized sections of people are enormously requisite to achieve financial inclusion.

2. Literature Review

Literature on financial inclusion originates from the studies explaining the financial inclusion and reasons behind financial exclusion. Financial inclusion refers to universal access to a wide range of financial services at a reasonable cost. These include not only banking products but also other financial services such as insurance and equity products. (Planning Commission, 2009). Financial inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of society including vulnerable groups such as weaker sections and low income groups at an affordable cost in a fair and transparent manner by mainstream institutional players. Chakraborty (2011)

Kempson and Whyley, 1998 discuss the major forms of exclusion that prevent certain segments of population from being ?nancial included. The five major forms of financial exclusion are access exclusion, price exclusion, condition exclusion, marketing exclusion and self exclusion. The weaker sections of the society are generally ignored by the formal financial institutions in the race of making huge profits. Further there are the complexities involved in providing finance to the weaker section due to various forms of financial exclusion (Kempson and Whyley, 1998; Kempson et al, 2000; Ramsay, 2001). The people who lack access to financial services are frequently also excluded in other ways, and financial exclusion often reinforces other aspects of social exclusion (Caskey and Collard, 2000; Sarma and Pias, 2011).

To reach the unbanked population in India requires strategic integration of policy and technology. Since 2004, Government of India (GOI) and Reserve Bank of India (RBI) have introduced several policies/schemes as part of their efforts for pushing ?nancial inclusion.

The literature on financial inclusion provides the merits of an inclusive financial system. However, the literature lacks a comprehensive measure that can be used to measure the extent of financial inclusion in an economy. Measuring financial inclusion is a challenge due to the difficulties in differentiating between voluntary and non-voluntary financial exclusion. A census or household survey may be the only way to obtain such data but very few such surveys on use of financial services are available (Savita, 2013).

Reddy (2011) found that the importance of financial inclusion is widely recognized, there is still a lack of literature in the evaluation of the extent of financial inclusion among small borrowers. The study found that degree of financial inclusion among small borrowers is not very satisfactory.

Tamilarasu (2014) says that financial inclusion is possible only through proper mechanism which channelizes all the resources to all the direction of the customers. It is an innovative concept which makes alternative techniques to promote financial habits of people.

Garg and Agarwal (2014) stated in the findings that over 40% of India working population earn but have no saving. Financial inclusion provides protection to poor from the control of the spurious money lenders.

Bhatia and Singh (2015) have studied the initiatives of central government towards financial inclusion, strategies adopted by RBI and Government of India for strengthening financial inclusion and challenges faced to achieve financial inclusion in their study. They concluded that India is at moderate level of financial inclusion and the need of efficient and effective implementation of policies to achieve the target of banking facilities being is felt.

The study by Patnaik (2015) reveals that only 13.8% of the respondents in Bhubaneswar have access to bank accounts and out of the total respondents who do not have bank account due to various reason are surprisingly not aware of PMJDY scheme. Amongst males 79% and in 95% were not aware of the scheme. The study concluded that the banks should make more effort in creating awareness on zero balance account and should aggressively campaign for such scheme.

Verma and Garg (2016) find that more than 50% of the deprived population still not aware about PMJDY scheme. The account holders are not keeping their account live and not able to deposit amount due to low connectivity to banking facility.

3. Financial inclusion in India

As per data available from Reserve Bank of India report 3,445 rural bank branches opened during 2014-15, 2,230 branches were opened in unbanked rural centres. Around 155 million basic savings bank deposit accounts (BSBDAs) were added taking the total BSBDAs to 398 million. This includes 147 million accounts opened under PMJDY. With the addition of 2.6 million small farm sector credits (Kisan Credit Cards-KCCs) and 1.8 million small non-farms sector credits (general credit cards- GCCs), the total number of such accounts went up to nearly 42.5 million and 9.2 million respectively (RBI Report, August, 2015). Apart from direct initiatives, the Reserve Bank's efforts to expand financial literacy are channeled through banks. In terms of current instructions, financial literacy centres (FLCs) and rural branches of banks are required to conduct financial literacy camps at least once a month with focus on financially excluded people. Additionally, banks are encouraged to conduct such camps in unbanked locations. As at end March 2015, 1,181 FLCs were operational in the country, up from 942 as at end March 2014 (RBI Report, December, 2015).

Still we are far behind from the other countries in terms of financial inclusion. As on 2014 there were only 18 ATMs per 100,000 adult population in India against over 65 in South Africa and over 180 in Russia. Similarly, 10 per cent of individuals aged 15 years and above had made payments through debit cards in India as against approximately 40 per cent in South Africa. In terms of remittances, Kenya holds a leading position. In 2014, over 60 per cent of its adult population had received domestic remittances compared with less than 10 per cent in India. Similarly, only 3 per cent of the rural population in India had directly received wages into their accounts, as against 14 per cent in Brazil and 23 per cent in South. The low use of accounts in India is also evidenced from the fact that in 2014 over 40 per cent of accounts did not witness any 'movement'. There are numerous barriers to financial inclusion in India .The biggest an issue is to minimize the barriers leading to selective and self exclusion of few disadvantaged sections of our society. The barriers have grown big from both the demand and supply side; demand side factors are financial illiteracy, unwillingness and skepticism related to formal financial sector and supply side barriers are non-bankable perception, cumbersome procedures, unsuitable products, staff attitude (Thorat , 2007; Agrawal , 2008).

4. Research Objectives

1. To study the current scenario of financial inclusion in India with the specific focus on Gujarat state.
2. The objective of the study is to study the emerging challenges for financial inclusion in India with the specific focus on Gujarat state.
3. The study aims to find the extent of usage of financial services among the respondents.

5. Research Methodology:

The objective of the study is to study the emerging challenges for financial inclusion in India. The primary study is done with the help in the rural areas of Gujarat; Also, this study aims to suggest ways to improve financial inclusion in India based o the secondary and primary data research. The secondary data collected from RBI website and other national and international journals. We composed a questionnaire that asked about family background; bank access information; Banking Services Usage;

income; loans; and expectations. The data collection was done in months of May 2015 to September months of 2015 specifically after "PRADHANMANTRI JAN DHAN YOJNA" scheme was already launched. The data have been collected from 500 respondents from the rural areas of Gujarat. The questionnaires were made in English and then translated in vernacular language with the help of local experts help. They were then pre-tested in a village nearby and ?ne-tuned. All questions were factual and the majorities were close-ended. The study is limited to the respondents from the Gujarat Region. Table I shows the distribution details of the respondent.

6. Data Interpretation and Findings

The distribution of the respondents based upon the demographic variable age, gender, occupation, educations levels, income levels etc. is given below in table 1.

Table 1 : Demographics Detail of the Respondents

Demographic Variable	Particulars	(N)	Percentage (%)
Age	Below 20	55	11%
	20 to 40	305	61%
	40 to 60	85	17%
	Above 60	55	11%
Gender	Male	390	78%
	Female	110	22%
Occupation	Farmer	198	39.6%
	Retired from Service	47	9.4%
	Job	98	19.6%
	Business	87	17.4%
	Land Labour	47	9.4%
	Household Workers	23	4.6%
Education	Below SSC	87	17.4%
	SSC	88	17.6%
	HSC	87	17.4%
	Graduate	173	34.6%
	PG and above	65	13%
Annual Income	Less than 1,50,000	231	46.2%
	1,50,000 to 3,00,000	181	36.2%
	Above 3,00,000	88	17.6%

The findings are interpreted as follows:

Account Penetration: The survey shows that out of the only 55 % percent of the surveyed sample is having at least one single or a joint account with one or other bank or any other financial institution. Surprisingly, 45% of the respondents don't possess even a single bank account with any financial institution may be a post of a bank. The cross tabulation of gender with the data on respondents with bank accounts shows that still the out of 225 respondents who do not have accounts, majority

(92) of them are the female respondents. Therefore it reveals that the account penetration differ among the genders. Also, it reveals that even after so many initiatives, account penetration is still a long a way ahead.

Understanding the Unbanked: The survey findings revealed that out of 225 respondents not holding any account have various reasons associated with it. Around 35% of them people who are not holding any accounts have majorly no access to banks in near by places. 15% said they don't have adequate documents to open an account. 7 % said they don't have surplus money to put in financial institution or bank; whatever they earn either used or kept with them safe for future emergencies. 27 % of them said that they don't trust financial institutions and 18 % said that they don't need accounts as one or other family member already have an account with one or other financial institutions. This clearly shows that the respondents still are not very keen opening accounts and still the awareness levels are low for the benefits of being financially included.

Transactions Patterns: The finding indicates that only 30% of the respondents holding accounts normally withdraw money or deposit money once in a month. 80 % of them withdraw cash from bank branch if they need and 20 % of them use ATM Machines to withdraw money. This shows that the accounts lack the transaction utility and also lack movements.

ATM Cards Usage: The study also indicates that only 38% of the respondents holding accounts has ATM card which are linked with their bank accounts. And surprisingly, only 8 % percent people use this ATM card for direct purchase. Others are not using these cards and they have different reasons for it. Some say they don't know how to use, some of them says are not comfortable using it etc.

Agriculture Utility: The study reveals that still hardly 16 % of the respondents holding accounts use these bank accounts for sale of agricultural products, crops, produce, livestock etc.

Utility Payments: Surprisingly, none of the respondents use these accounts for any sought of Utility Payments like electricity bills, telephone bills etc.

Credit Transactions: The survey shows that only 16 % the respondents holding accounts who are retired from some government jobs / public sector companies receive their pensions and other financial benefits in bank accounts.

Reasons behind Inactive accounts: The survey exhibits that 50% of the respondent says, they have account but are inactive as there are no transactions since they opened the accounts on others suggestions but don't use for their regular financial needs. 18% of them say that they find it difficult to access the accounts for regular financial needs. 27% of them responded that they are not comfortable dealing with banks. Some others have no reasons.

Internet Banking: The survey shows that none of them made any payments for online purchases using internet in the last 6 months.

SHG & MFIs: The study reveals that none of them have done any savings of any kind with any formal bank or SHG or MFI Group.

Credit Cards: The survey shows that out of all only 5% of are having credit cards and which they just hold but do not use directly for any purchase or transactions.

Mobile Payments: None of them is registered to the Mobile money accounts like Pay TM.

Borrowing Patterns: The study finds that 55 % of people have borrowed money in recent past. 48% of them had borrowed money for Education and School Fees of their Children's and grandchildren's.13 % of them for Medical Purpose, 10 of them had borrowed for their family members marriages and 24% of them had borrowed money to start a business.5 % of them for other personal needs.

Reasons for Borrowings: The survey shows 38 % of them have borrowed it from friends and relatives. Hardly 10 % of them have taken credit from banks and other financial institutions. 8% of them taken from some confidential sources which they don't want to disclosed. Around 44 % of respondents have borrowed money from private money lenders which are both costly as well as unsecure.

Domestic Remittances: The survey shows 65 % have personally sent or receive money to a relative or a friend residing in India in last 1 Year. 76 % of them have sent any money to a relative/friend thru Angadia. Only 16% had send or received money thru bank / Financial Institution. And rest 8% thru Money Transfer Service.

7. Discussions

Financial inclusion is not a short term goal: it is a big initiative and will evolve as the time progresses. The stake holders who are involved are government, regulators, public and private entity and the People of the country. To enhance financial inclusion initiative all stockholders have to work together to create a better business model which not only serves the need of the current economy but also it should build foundation for future financial inclusion plans .In this regards it is worth to mention that the technology plays a vital role. It helps to reduce transaction cost, enhances customer accessibility, products are more affordable. In order to achieve the goal of total financial inclusion, policymakers, banks, Microfinance Institutions', Non Governmental Organizations and regulators have to work together in a team take financial inclusion forward. While the results from the study should be of help to policymakers and bankers as they consider innovative approaches and products to improve the participation of excluded populations in financial system. It is suggested that to promote financial savings of poor households, innovative product design that matches their specific needs should be considered. Encourage and develop technology solutions that reduce operating costs of selling small ticket financial tools and support innovations in financial institutions to enable sustainable and robust financial inclusion. At the same time stimulate financial literacy and awareness for better utilization and usage of financial services.

8. Conclusion

The sole objective of the study is suggesting some ways to advance the financial inclusion in India. This study is by no means trying to evaluate of the financial inclusion drive. India has to move forward for the inclusive growth and financial inclusion to develop. Still, there is a long way for the total financial inclusion according to K.C.Chakrabarty RBI Deputy Governor "Even today the fact remains that nearly half of the Indian population doesn't have access to formal financial services and are largely dependent on money lenders". Mere opening of no-frill bank accounts is not enough for financial inclusion. To advance financial inclusion, financial institutions have to gain the trust and goodwill of the poor through developing strong community based linkages.

Financial Inclusion is the necessary requirement which can stimulate the inclusive economic growth and development of India. Every step moving towards inclusive financial system is encouraged worldwide and so is research based on financial inclusion. This study is just a small effort in this direction. The present study is being done in the limited geographic scope of Gujarat. There is still a broader future scope of the extending the research to other states of the country. Also the study can be done pan India with a larger sample. The present studies limit the survey to find the spread and scope of financial inclusion. The study also identifies the challenges for financial inclusion, with the help of extent of financial services usage by the people, even when they have access to a bank or financial institution. The future research can be done by including the social factors in consideration which would impact financial inclusion.

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Mushroom Cultivation and Marketing Strategies: An Untapped Source of Sustainable Development and Livelihood in North Bengal

– Mr. Sabyasachi Bose*

Abstract

Mushroom cultivation can help in reducing vulnerability to poverty and strengthens livelihoods through the generation of a fast yielding and nutritious source of food and a reliable source of income.Thehorticulture sector contributes around 28% of the GDP from about 13.08% of thearea and 37% of the total exports of agricultural commodities.The horticulture sector encompasses a wide range of crops namely fruit crops,vegetables crops, potato and tuber crops, ornamental crops, medicinal and aromaticcrops, spices and plantation crops. New introductions like mushroom, bamboo andbee keepingfurther expanded the scope ofhorticulture.Since it does not require access to land, mushroom cultivation is a viable and attractive activity for both rural farmers and pre-urban dwellers. Small-scale growing does not include any significant capital investment too. The present study has focused on analyzing the mushroom producer's market potential by taking into consideration the forces that influences the competition and consumers'awareness. Both primary and secondary data are used in the research. Self administered questionnaires are used to collect the required primary data from respondents. SWOT analysis is used at the end to generate information and hypothesis testing is used for mathematical reasoning. The research reveals that much needed financial and technical assistances from the Govt. are required on high priority basis. More importantly Mushroom cultivation does not require access to significant land and thus, Mushroom cultivation is a viable and attractive activity for both rural farmers and semi-urban dwellers as a source of sustainable development and livelihood in North Bengal.

Keywords : Mushroom Cultivation, Marketing Strategies, Market Potential, Consumers' Awareness, SWOT Analysis, Sustainable Development, Livelihood.

1.1. Introduction

Mushrooms are a valuable part of the human diet and are an important food in the United States and worldwide. Their production plays a significant role in the national as they are produced by hundreds of producers in addition to a vast distributionnetwork of wholesalers and retailers.The market for mushrooms has been expanding in recent years. The trend is away from the canned product

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toward fresh and dried mushroom sales. Many people are interested in the nutritional and medicinal aspects of mushrooms. Mushrooms contain many essential amino acids and can be a valuable food source. White button mushrooms contain more protein than kidney beans but less than milk. Shiitake mushrooms are less nutritious, but still are important as a potential protein source. Low in fat, mushrooms also provide vitamins (B1, B2,C) and minerals.White and Brown Agaricus species are the main mushroom crops grown all over the world.

Marketing strategy is how a company reaches its marketing objectives, which is where the company intends to be in the future (Mercer 1999). The marketing strategy outlines the way in which the marketing mix is used to attract and satisfy the target market and achieve the company's goals (Eveans and Berman 1977). There are many factors that affect the marketing strategy, such as the volatile of the economy, versatile and changes of technology, the socioeconomic and lifestyle changes and political situations within a country. Thus, the company has to consider these factors when establishing their marketing strategies.

1.2. The horticulture sector

It encompasses a wide range of crops namely fruit crops,vegetables crops, potato and tuber crops, ornamental crops, medicinal and aromaticcrops, spices and plantation crops. New introductions like mushroom, bamboo andbee keeping (for improving the crop productivity) further expanded the scope ofhorticulture. While the first few Five Year Plans assigned priority to achieving selfsufficiency in food grain production, over the years, horticulture has emerged as anindispensable part of agriculture, offering a wide range of choices to the farmers forcrop diversification. It also provides ample opportunities for sustaining large numberof agro-industries which generate substantial employment opportunities. Thehorticulture sector contributes around 28% of the GDP from about 13.08% of thearea and 37 % of the total exports of agricultural commodities.

1.3. Benefits of Mushrooms consumptions

Mushrooms are important constituents of minor forestproduce, that grow on the most abundant biomolecule of this biosphere, that is, cellulose. Presently mushroomsare regarded as a macro-fungus with a distinctive fruitingbody which can be either epigeous or hypogeous and large enough to be seen with the naked eyes and to bepicked by hand (Chang and Miles, 1992). Only fruiting body of the mushroom can be seen whereas the rest of the mushroom remains underground as mycelium. Geologically, mushrooms existed on the earth even before man appeared on it, as evidenced from the fossil records of the lower cretaceous period. Thus anthropologically speaking, there is every possibility that man used the mushrooms as food when he was still a food gatherer and hunter on the chronology of culturalevolution. Mushrooms offer tremendous applications as they can be used as food and medicines besides their key ecological roles. They represent as one of the world's greatest untapped resources of nutrition and palatable food of the future. Mushrooms have been found effective against cancer, cholesterol reduction, stress, insomnia, asthma, allergies and diabetes (Bahl, 1983). Due tohigh amount of proteins, they can be used to bridge the protein malnutrition gap. Mushrooms as functional foodsare used as nutrient supplements to enhance immunityin the form of tablets. Due to low starch content and low cholesterol, they suit diabetic and heart patients. One third of the iron in the mushrooms is in available form. Their polysaccharide content is used as anticancer drug.

Even, they have been used to combat HIV effectively (Nanba, 1993; King, 1993). Biologically active compounds from the mushrooms possess antifungal, antibacterial, antioxidant and antiviral properties, and have been used as insecticides and nematicides as well. Thus keeping in view the tremendous applications of mushrooms, the present study reviews different aspects of mushrooms towards human health benefits such as food, medicine, minerals, drugs etc.The production of mushrooms can play an important role in managing organic wastes which have become problematic as landfills reach capacity. Many by-products from agricultural production and food processing can be used as growing media in mushroom production. The materials remaining after harvest can be composted and applied directly to the soil as an organic amendment.

1.4. Importance of Mushroom Cultivation

Mushroom cultivation can help reduce vulnerability to poverty and strengthens livelihoods through the generation of a fast yielding and nutritious source of food and a reliable source of income. Since it does not require access to land, mushroom cultivation is a viable and attractive activity for both rural farmers and semi-urban dwellers. Small-scale growing does not include any significant capital investment. Indirectly, mushroom cultivation also provides opportunities for improving the sustainability of small farming systems through the recycling of organic matter, which can be used as a growing substrate, and then returned to the land as fertilizer. Through the provision of income and improved nutrition, successful cultivation and trade in mushrooms can strengthen livelihood assets, which can not only reduce vulnerability to shocks, but enhance an individual's and a community's capacity to act upon other economic opportunities.

Mushroom cultivation activities can play an important role in supporting the local economy by contributing to subsistence food security, nutrition, and medicine; generating additional employment and income through local, regional and national trade; and offering opportunities for processing enterprises. In many parts of Africa, edible fungi are an important food source, but in the Hai district of Northeastern Tanzania, many community members' traditionally perceived mushrooms to be poisonous. Until a few years ago, oyster mushrooms were considered to be an expensive luxury food for urban consumers and not of interest to resource poor households. The benefits of growing and selling mushrooms have enabled farmers to buy livestock (chickens and goats), pay school fees and household goods, and a number of farmers have invested in expanding their mushroom production in this areas.

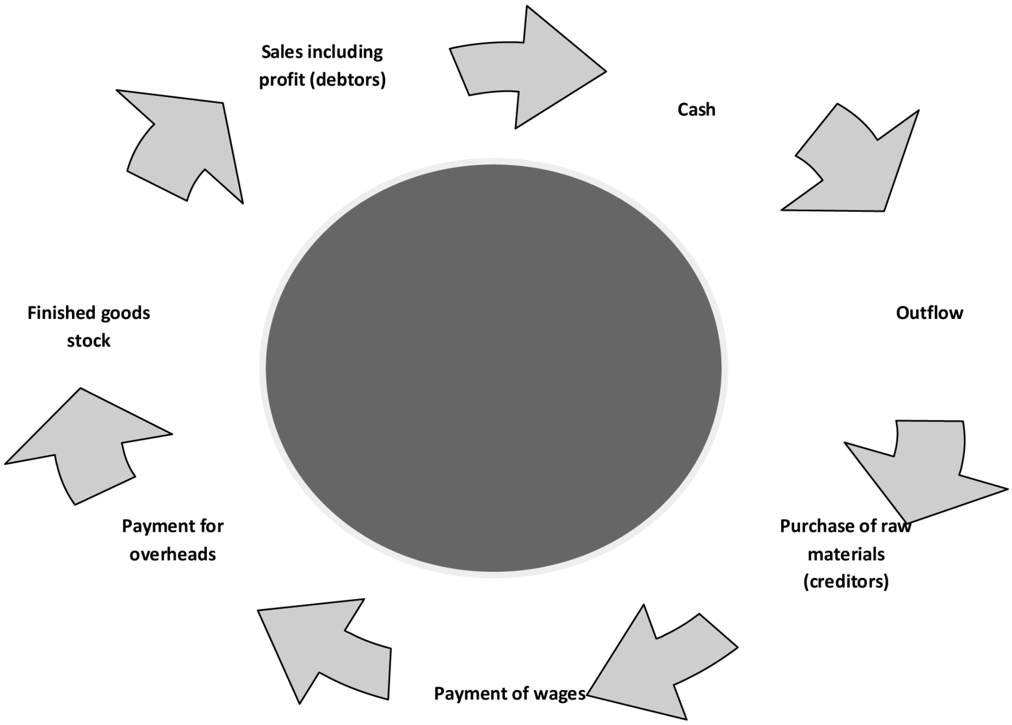
As a result of all of these factors, interest in cultivating the edible fungi has grown. Mushroom production may offer opportunity to those willing to develop a commercial operation as an additional enterprise for the farm or rural community, or for farmers without large acreages. The following material is offered to those considering this option as a new enterprise. An attempt has also been made to include resources for entrepreneurs who wish to do further research. It should be made clear at the outset that mushroom production is labor and management-intensive. Specialty mushrooms have very frequently been promoted as being a "get rich quick" kind of enterprise. On the contrary, it takes a considerable amount of knowledge, research time, planning, and capital investment to set up a commercial production system. Once in production, sporadic fruiting, invasion of "weed" fungi, and unreliable market prices are problems which producers must be prepared to handle.

The basic concept in cultivation is to start with some mushroom spores, which grow into mycelium and expand into a mass sufficient in volume and stored up energy to support the final phase of the mushroom reproductive cycle, which is the formation of fruiting bodies or mushrooms. The key generic steps in mushroom production - a cycle that takes between one to three months from start to finish depending on species - are:

1. Identifying and cleaning a dedicated room or building in which temperature, moisture and sanitary conditions can be controlled to grow mushrooms in;
2. Choosing a growing medium and storing the raw ingredients in a clean place under cover and protected from rain;
3. Pasteurizing or sterilizing the medium and bags in which, or tables on which, mushrooms will be grown (to exclude other fungi that would compete for the same space - once the selected fungi has colonized the substrate it can fight off the competition);
4. Seeding the beds with spawn (spores from mature mushrooms grown on sterile media);
5. Maintaining optimal temperature, moisture, hygiene and other conditions for mycelium growth and fruiting, which is the most challenging step; adding water to the substrate to raise the moisture content since it helps ensure efficient sterilization;
6. harvesting and eating, or processing, packaging and selling the mushrooms;
7. Cleaning the facility and beginning again.

Marketing agricultural products is considered to be very challenging and complex effort. It involves moving of products from farm gate to retail consumers. It is a dynamic process and involves a number of ownership activities such as harvesting, processing, storage, transporting and retailing. Furthermore, the marketing of agriculture food products require some public rules such as grading and standards, food-safety policies, market information and future markets. The marketing of agriculture food products is very different from marketing of agriculture commodities in general.

The operating cycle of working capital may be explained with the help of following diagram:



Cultivated mushrooms are one of the highest-valued crops all over the world. There are many policies implemented in different countries. The commodity is grown intensively with government supports. However, information about the industry that includes the supply and demand product, consumer perception and preferences towards fresh mushrooms is still lacking. Not much data are available for industry players and policy makers to make strategic decisions on production and marketing of fresh mushrooms all over the world.

2. Demographic Profile of Siliguri

Siliguri is the largest city in the North Bengal. It is the second largest city of West Bengal. Siliguri is situated at the latitude of 26'72" and the longitude is 88'41". The city is situated at the foothill of the Himalayan Mountain range in the plain. This city connects the hill towns (Gangtok, Rangpo, Kalimpong, Kurseong, Mirik and Darjeeling) with rest part of the India. The Mahananda river (also known as Mahanandi) flows past Siliguri. There are three distinct season in Siliguri. These are Summer, Winter and Monsoon. As Siliguri lies in the shadows of Himalayas, it is comparatively cooler than central and southern regions of West Bengal. The cool wind blowing from the Himalayas provides respite to an otherwise hot and humid climate. It is the best season for the tourism of Siliguri. Tourists from all over the world choose this season to enjoy the light breeze from the Himalaya. The climate of the Siliguri makes the other two "T"- Tea and Timber possible along with the third "T" Tourism. The soothing conditions of climate really make the Siliguri a Piece of Heaven of the Earth.

Siliguri the gateway of North-East Bengal is one of the fastest growing economic center. It is the meeting point of four international borders (Nepal, China and Bangladesh) and many other region of India because of the unique location. Siliguri occupies the position of trade hub of North Bengal. The silk route of India that is trade route between India and China is accessible only after crossing Siliguri. Siliguri is the head quarter of FOCIN (Federation of Chamber of Commerce and Industry of North Bengal). Apart from these many shopping malls are rising rapidly on the roads of Siliguri. Some popular Shopping Malls are Cosmos, City Center, Orbit. Siliguri has experienced a huge surge in population in recent times based on census Data of 2012, the city had an approximate population of 15, 72,000 residents.

3. Importance of the Study

Thehorticulture sector contributes around 28% of the GDP from about 13.08% of thearea and 37% of the total exports of agricultural commodities.The horticulture sector encompasses a wide range of crops namely fruit crops,vegetables crops, potato and tuber crops, ornamental crops, medicinal and aromaticcrops, spices and plantation crops. New introductions like mushroom, bamboo andbee keepingfurther expanded the scope ofhorticulture.Mushroom cultivation can help to reduce vulnerability to poverty and strengthens livelihoods through the generation of a fast yielding and nutritious source of food and a reliable source of income. Since it does not require access to land, mushroom cultivation is a viable and attractive activity for both rural farmers and pre-urban dwellers. Small-scale growing does not include any significant capital investment. Indirectly, mushroom cultivation also provides opportunities for improving the sustainability of small farming systems through the recycling of organic matter, which can be used as a growing substrate, and then returned to the land as fertilizer. Through the provision of income and improved nutrition, successful cultivation and trade in mushrooms can strengthen livelihood assets, which can not only reduce vulnerability to shocks, but enhance an individual's and a community's capacity to act upon other economic opportunities.This study provides an analysis of the mushroom industry with reference to Siliguri Market and focuses on the marketing strategies of the Mushroom cultivator in the context of consumer preferences and attitudes about mushrooms.

4. Review of Literature

"British Columbia cultivated Mushroom industry initiative"

This document is the Mushroom industry strategic plan (2006-2010), which has been prepared as a roadmap for industry development over the next five years by the BC Mushroom industry. It is aligned with the AFFF (Agri Food Futures Fund0 for cost sharing trust fund whose goals are the development and sustainability of the agri-food industry in British Columbia. The British Columbia Mushroom industry stated that besides meeting the various guidelines of the AFFF this document also outlines projects and initiatives that the industry will pursue through other sources. These various activities are fitted within the boundaries of the plan. A good strategic plan will provide framework to provide direction and guide decisions of future activities. The goals and actions outlined in this plan will facilitate growth and development of the emerging speciality sector: further diversification and stability of the established sector of Agricus mushrooms. The BC mushroom industry advised to form an advisory committee which will have oversight responsibility for approving and funding projects conducted through this strategic plan. The advisory committee has the final decisions including the approval of all projects subjects to compliances with the terms of funding established by the IAF and the fund administrator.

"Make money by growing mushrooms"

According to Elaine Marshall and N.G. (Tan) Nair there are hundreds of identified species of fungi which since time immemorial have made a significant global contribution to human food and medicinal values are over 2300 species. Cultivated mushrooms have now become popular all over the worlds. People need to know the exact knowledge about which mushroom should be grown and which will provide them profit in terms of money. The cultivator must select the best mushroom variety which can be cultivated on the location of the village and market demand. Ellaine Marshall and N.G.(Tan) Nair suggests that the government, private sector extension personnel, and farmers should be trained. Different pilot demonstration farms in the village must be setup. Providing advice on mushroom marketing and obtaining links to local and distant markets.

"An investigation of potential marketing strategies for entry into the Shiitake mushroom industry in UTAH"

According to Imran Khan this study provides an analysis of the mushroom industry in the Utah with a focus on identifying opportunities for entry into the specialty mushroom market. Determining the strategic position of the mushroom industry strategic position of the mushroom industry requires the use of local information. In this case study the author Imran Khan made a survey of consumers in Northern Utah and use to generate specific information and then use this information for competitive analysis with the use of consumer survey, logic analysis and trend analysis the conclusion about the competitive position of the potential entrants into the specialty mushroom market is drawn. Based on the results from this study, expanding the production base of mushrooms in Utah has the potential to be a viable economic venture for new or existing firms, on the condition that appropriate marketing strategies are employed. The other aspects such as cost of production , availability of raw materials, technical and financial analysis for this to be a successful venture in Utah by the new entrant in the specialty market.

"A competitive market analysis of the United States Shiitake mushroom market place"

Michael A. Gold1,2, Mihaela M. Cernusca, and Larry D. Godsey have conducted research to describe the Shiitake mushroom market. The research builds upon previously reported findings that shed light on specific agro forestry market. There are various advantages and disadvantages involves in production of Shiitake mushroom. The authors conducted various surveys about the market shares and valuable information's about the market was provided. This information helps the growers, growers' organization and associations to understand several facts about the Shiitake mushroom market place.

"Understanding the mushroom industry and its marketing strategies for fresh produce in Malaysia"

According to Mohd Tarmizi Haimid, Hairazi Rahim and Rozhan Abu Dardakmushroom is a new and small industry in Malaysia. The study was carried to understand the potential of this industry. Focus groups study was conducted to test the perception, expectation and experience in cultivating and marketing fresh mushrooms. This study revealed that the three main issues of concern within this industry were related to production, marketing and government policies and initiatives. The study also revealed that Research and development on the production system to overcome the environmental issue, introduction of new seeds, training and subsidy on the production house are some initiatives required from the government. This study was carried out basically to explore the main issues and challenges faced by mushroom growers and also to find out the constraints in the mushroom industry in general.

"Marketing channels for wild and cultivated edible mushrooms in developing countries: The case of Mexico"

According to D. Martinez - Carrera, D. Nava, M. Somilla and Y. MayettMushroom requires efficient marketing system to move from producers to consumers keeping high quality and price. The period of study was from 1999-2004, the researchers studied the channels of distribution for wild and cultivated edible mushrooms are marketed within this region. Several marketing channels were identified and described, involving middlemen, wholesalers, retailers, "tianguies", public markets, retail food stores, and food services. Main structures, organization and trends of the Mexican mushroom marketing system are discussed.

5. Objectives of the Study

- To analyze the mushroom producer's market potential by taking into consideration the forces that influences the competition.
- To assess the consumers'awareness, attitude, knowledge and usage information about mushrooms, in particular.
- To identify present and potential customers to help the farmers in framing marketing strategies.
- To identify strengths, weaknesses, opportunities and threats for growing mushroom market to facilitate decision making based on market segmentation.

6. Research Questions

- Whether marketing strategies used by mushroom producers in sampling area are optimum or not [Null Hypothesis (Ho-1): The Marketing Strategies used by mushroom producers are not optimum].
- Whether consumers are aware about benefits of mushroom consumption or not [Null Hypothesis (Ho-2) : The consumers are not aware about benefits of mushroom consumption].
- SWOT analysis for growing mushroom market [Null Hypothesis (Ho-3): The marketing strategies of mushroom producers are not based on strengths, weaknesses, opportunities and threats of their businesses].

7. Research Methodology

Data : Both primary and secondary data are used in the research. The Literatures are reviewed; historical data and printed materials are gone through to collect secondary data. A self administered questionnaire is used to collect the required primary data.

Research Design, Sampling plan and Sample size:For the purpose of survey, the information is gathered personally by the researcher using the questionnaire from 120 targeted respondents (non-producers) and available 20 producers. Non producer's respondents were selected randomly. However, purposive and convenient sampling techniquesare used to collect data from scattered producers within SMC area and surroundings.

Research instruments : To achieve the objectives of the research detailed questionnaire was designed based on Literature Review to gather information from respondents. SWOT analysis is used at the end to generate information. Where require, possible hypothesis is generated and Chi-square hypothesis testing statistical technique is used through statistical software SOFA for mathematical reasoning.

8. Findings

The research study, based on analysis of primary and secondary data has found that majority of the customers came to know about Mushroom from family members and only 42% of the respondents are aware about the nutritious and protein contents in Mushroom. Thus, there is a need for aggressive promotional strategy to be made by the Mushroom producers to increase awareness about mushroom benefits by other mediums such as Newspapers, Magazines etc(Annexure-II). Meat is the main competitive product of Mushroom, at least in sampling area and the word of mouth may act as a good promotional tool. The average profits per month of majority number of the producers range from 46%-60%. All producers sale their products to middlemen and this increases the cost of distribution. Total Working Operating Cycle for Mushroom production is 45 days (Annexure-IV).The marketing strategies used by mushroom producers in sampling area are not optimum (Annexure-I). The research reveals that much needed financial and technical assistances from the Governments are required on high priority basis.

9. SWOT Analysis of Mushroom Industry in Siliguri

Strengths	**Weaknesses**
• Significant targeted respondents are well aware about the edible mushroom. Thus, a huge scope of converting suspects into prospects exists in market. • Mushroom industry is presently providing a high return on capital employed, at least in sampling area. • This industry has very few heterogeneous substitute products. • The operating cost of mushroom industry in sampling area is low due to less involvement of indirect and direct expenditure heads.	• Significant respondents are aware about the product and still the market growth rate of this industry is poor. Thus. This industry lacks effective and efficient promotional efforts. • The purchase frequency of existing consumers is very low i.e. major consumers purchase once in a month. • The required capital employed is very low, still this industry lack financial assistance from desired sources. • Lack of proper training on mushroom production is pulling down the optimum production level.
Opportunities	**Threats**
• As majority respondents are male, there is a huge scope to promote women entrepreneurship through self help groups. • Effective and efficient promotional efforts may enhance and capitalize the untapped market share of this industry based on public awareness. • Return on capital employed may be maximized as competition level in this industry is still low, at least in sampling area.	• Non-veg alternative products especially meat, a major threat to the growth of this industry. • As the production of this industry is highly dependent on climatic changes, the risk profile of this industry is very high. • High involvement of intermediaries leading to high distribution cost.

SWOT (Strength, Weaknesses, Opportunities and Threats) analysis should be undertaken in an integrated way. SWOT analysis is undertaken by combining organizational/ industrial capability profile and environmental threat and opportunity profile. The basic objective of SWOT analysis is to provide a framework to reflect on the organizational/ industrial capability to avail opportunities or to overcome threats presented by the environment. In fact the dimensions of the organizational capabilities have relevance in so far as they relate to the environmental conditions. Hence, organizational/ industrial analysis and environmental analysis should be interlinked. In this context it was worthwhile to know whether marketing decisions of mushroom producers in sampling area are according to Strengths, Weaknesses, Opportunities and Threats (SWOT) of their business. The research study based on statistical reasoning has revealed that the mushroom producers, at least in the sampling area, frame their business decisions like selection of product category, supply level according to market demand, number of employees to be engaged, capital to be employed, etc. according to Strengths, Weaknesses, Opportunities and Threats (SWOT) of their business (Annexure-III). SWOT analysis helps an organization/ industry to compare its standing vis-à-vis its competitors in the market place through competitive advantage profile and choice of a strategy.

The respective industrial analysis and environmental analysis of mushroom industry with in sampling area have revealed different Strengths, Weaknesses, Opportunities and Threats. To facilitate competitive advantage profile development and choice of a strategy, the following factors may be identified based on analysis and findings:

10. Suggestions

The horticulture sector encompasses a wide range of crops namely fruit crops,vegetables crops, potato and tuber crops, ornamental crops, medicinal and aromatic crops, spices and plantation crops. New introductions like mushroom, bamboo andbee keepingfurther expanded the scope ofhorticulture.Mushroom cultivation can help reduce vulnerability to poverty and strengthens livelihoods through the generation of a fast yielding and nutritious source of food and a reliable source of income. Since it does not require access to land, mushroom cultivation is a viable and attractive activity for both rural farmers and pre-urban dwellers. Small-scale growing does not include any significant capital investment. Indirectly, mushroom cultivation also provides opportunities for improving the sustainability of small farming systems through the recycling of organic matter, which can be used as a growing substrate, and then returned to the land as fertilizer. Since, mushrooms are a valuable part of the human diet worldwide and their production plays a significant role in the national context, the market for mushrooms has been expanding in recent years. The trend is away from the canned product toward fresh and dried mushroom sales. Many people are interested in the nutritional and medicinal aspects of mushrooms. This study provides few suggestive measures for the mushroom industry with reference to Siliguri Market and focuses on the marketing strategies of the Mushroom cultivator in the context of consumer preferences and attitudes about mushrooms as follows:

- There is a need for aggressive promotional strategy to be made by the Mushroom producers to increase awareness about it by other mediums such as Newspapers, Magazines etc.
- There is a need for a very effective and efficient marketing strategy to be implemented to induce the other consumers to purchase the product.
- There is a need for providing extra inducements to the purchasers to increase the rate of purchase and be habituated with the product.
- The Manufacturers must use explicit advertising strategies to make the target audience aware about the nutritious contents of the product.
- Therefore the manufacturers must try and keep the price stable and avoid extra cost of production to earn more profit.

11. Conclusion

Mushroom cultivation can help reduce vulnerability to poverty and strengthens livelihoods through the generation of a fast yielding and nutritious source of food and a reliable source of income. Mushrooms contain many essential amino acids and can be a valuable food source.Thehorticulture sector contributes around 28% of the GDP from about 13.08% of thearea and 37% of the total exports of agricultural commodities.The horticulture sector encompasses a wide range of crops namely fruit crops,vegetables crops, potato and tuber crops, ornamental crops, medicinal and aromaticcrops, spices and plantation crops. New introductions like mushroom, bamboo andbee keepingfurther expanded the scope ofhorticulture.Since it does not require access to land, mushroom cultivation is a viable and attractive activity for both rural farmers and pre-urban dwellers. Small-scale growing does not include any significant capital investment. The present study focused on analyzing the mushroom producer's market potential by taking into consideration the forces that influences the competition and consumers'awareness. To conclude, it may be said that there is a need for aggressive promotional strategy by the Mushroom producers to increase awareness and market demand through Newspapers, Magazines etc. At the same time much needed financial and technical assistances from the Govt. is required on high priority basis. More importantly Mushroom cultivation does not require access to significant land and thus, Mushroom cultivation is a viable and attractive activity for both rural farmers and semi-urban dwellers.

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Annexure-I

Research Question: Whether marketing strategies used by mushroom producers in sampling area are optimum or not.

Hypothesis (Ho-1): The marketing strategies used by mushroom producers are not optimum.

Observed Table-1: Showing impact of marketing strategies on Consumers

Impact on Consumers/ Marketing Strategies	Get Influenced	Do not get Influenced	**Total**
Price	27	15	**42**
Product Information	26	12	**38**
Place of Availability	22	07	**29**
Advertisement	10	01	**11**
Total	**85**	**35**	**120**

Contingency Table-1: Showing Expected Impact of marketing strategies on Consumers

Impact on Consumers/ Marketing Strategies	Get Influenced	Do not get Influenced	**Total**
Price	$\frac{42 \ x\ 85}{120} = 30$	$\frac{42 \ x\ 35}{120} = 12$	**42**
Product Information	$\frac{38 \ x\ 85}{120} = 27$	$\frac{38 \ x\ 35}{120} = 11$	**38**
Place of Availability	$\frac{29 \ x\ 85}{120} = 21$	$\frac{29 \ x\ 35}{120} = 08$	**29**
Advertisement	$\frac{11 \ x\ 85}{120} = 07$	$\frac{11 \ x\ 35}{120} = 04$	**11**
Total	**85**	**35**	**120**

Testing of hypothesis through Chi-square (χ^2)

$$\chi^2 = \Sigma \frac{(O-E)^2}{E}$$ Where,O = Observed value, E = Expected Value

$= 4.9$

Degree of freedom = (No. of Row - 1) x (No. of Column - 1) = (4-1) x (2-1) = 3

Conclusion : For 3 d.f. the tabulated value of χ^2 at 5% level of significance is 7.8. Since the observed value of ?2, i.e., 4.9 is less than the tabulated value, we accept the Null-hypothesis and conclude that the marketing strategies used by mushroom producers in sampling area are not optimum.

Annexure-II

Research Question: Whether consumers are aware about benefits of mushroom consumption.

Hypothesis (Ho-2): The consumers are not aware about benefits of mushroom consumption.

Observed Table-1: Showing Consumers' awareness about Mushroom

Consumers' awareness/ Consumers' education level	Aware about benefits	Not aware about benefits	**Total**
Below 12^{th} Standard	08	14	**22**
12^{th} Standard	14	16	**30**
Graduation	27	33	**60**
Post Graduation	01	04	**05**
Others	01	02	**03**
Total	**51**	**69**	**120**

Contingency Table-1: Showing Consumers' Expected awareness about Mushroom

Consumers' awareness/ Consumers' education level	Get Influenced	Do not get Influenced	**Total**
Below 12^{th} Standard	$\frac{22 \times 51}{120} = 09$	$\frac{22 \times 69}{120} = 13$	**22**
12^{th} Standard	$\frac{30 \times 51}{120} = 13$	$\frac{30 \times 69}{120} = 17$	**30**
Graduation	$\frac{60 \times 51}{120} = 26$	$\frac{60 \times 69}{120} = 34$	**60**
Post Graduation	$\frac{5 \times 51}{120} = 02$	$\frac{5 \times 69}{120} = 03$	**05**
Others	$\frac{3 \times 51}{120} = 01$	$\frac{3 \times 69}{120} = 02$	**03**
Total	**51**	**69**	**120**

Testing of hypothesis through Chi-square (χ^2):

$$\chi^2 = \Sigma \frac{(O-E)^2}{E}$$

Where,O = Observed value, E = Expected Value

= 2.23

Degree of freedom = (No. of Row - 1) x (No. of Column - 1) = (5-1) x (2-1) = 4

Conclusion: For 4 d.f. the tabulated value of χ^2 at 5% level of significance is 9.49. Since the observed value of χ^2, i.e., 2.23 is less than the tabulated value, we accept the Null-hypothesis and conclude that the consumers are not aware about benefits of mushroom consumption.

Annexure-III

Research Question: Whether marketing decisions of mushroom producers in sampling area are according to Strengths, Weaknesses, Opportunities and Threats (SWOT) of their business.

Hypothesis (Ho-3): The marketing decisions of mushroom producers in sampling area are not according to Strengths, Weaknesses, Opportunities and Threats (SWOT) of their business.

Observed Table-1: Showing significance of marketing decisions of Mushroom producers

Decisions as per SWOT/ Marketing Decisions	Yes	No	**Total**
Product	18	02	**20**
Price	06	14	**20**
Place	02	18	**20**
Promotions	0	20	**20**
Total	**26**	**54**	**80**

Contingency Table-1: Showing significance of marketing decisions of Mushroom producers

Decisions as per SWOT/ Marketing Decisions	Yes	No	**Total**
Product	$\frac{20 \times 26}{80} = 6.5$	$\frac{20 \times 54}{80} = 13.5$	**20**
Price	$\frac{20 \times 26}{80} = 6.5$	$\frac{20 \times 54}{80} = 13.5$	**20**
Place	$\frac{20 \times 26}{80} = 6.5$	$\frac{20 \times 54}{80} = 13.5$	**20**
Promotions	$\frac{20 \times 26}{80} = 6.5$	$\frac{20 \times 54}{80} = 13.5$	**20**
Total	**26**	**54**	**80**

Testing of hypothesis through Chi-square (χ^2):

$\chi^2 = \Sigma \frac{(O-E)^2}{E}$ Where,O = Observed value, E = Expected Value

= 44.46

Degree of freedom = (No. of Row - 1) x (No. of Column - 1) = (4-1) x (2-1) = 3

Conclusion: For 3 d.f. the tabulated value of χ^2 at 5% level of significance is 7.81 and at 1% level is 11.34. Since the observed value of ?2, i.e., 44.46 significantly exceeds the tabulated value, we reject the Null-hypothesis and conclude that marketing decisions of mushroom producers in sampling area are according to Strengths, Weaknesses, Opportunities and Threats (SWOT) of their business.

Annexure-IV

Determination of Working Capital Operating Cycle Period:

1. Duration of Raw materials

$$= \frac{\text{(Average stock of raw materials and stores=20 days}}{\text{Average raw materials and stores consumed per day=2 per day}} = 10 \text{ days}$$

Hence, duration of raw materials is 10days.

2. Duration of work-in-progress or process

$$= \frac{\text{Average work-in-progress or process=225}}{\text{Average work-in-progress or process value of raw materials committed per day=5 days}} = 45\text{days}$$

***Cost of making per cylinder is Rs.45 (45 x 5 per day =225)

Hence, duration of work-in-progress = 45 days.

3. Duration of finished goods

$$= \frac{\text{Average finish goods=0}}{\text{Average cost of goods sold per day=45 days}} = 0$$

Hence, there is no opening and closing finished goods so the finished goods is zero.

4. Duration of account receivable (collection period from debtors)

$$= \frac{\text{Average account receivable (debtors)=Rs.15000}}{\text{Average sales per day=RS.3000}} = 5\text{days}$$

Hence, duration of accounts receivable is 5 days.

5. Duration of accounts payables (credit allowed by creditors or suppliers)

$$= \frac{\text{Average accounts payable (creditors)=Rs.3375}}{\text{Average credit purchase per day=RS.225}} = 15 \text{ days}$$

6. Total operating cycle = (i) + (ii) + (iii) + (iv) - (v).

= (10+ 45+ 0+ 5 - 15) days

= 45 days

Hence, total operating cycle requires 45 days.

Consumer Behaviour towards Green Technology and It's Impact in Marketing Home Appliances

– Dr. N Barathi Dasan*

Introduction

In today's changing market environment, understanding the need of customers and forecasting their changing buying behaviour is an important strategy for the manufacturer, which enables them to establish and build potential buyers, trust in their product and win valuable market share, thereby increase the company's profit. Hence, therefore consumer and marketers started shifting their needs towards green technology products and service. Due to increasing awareness in environmental friendly strategy among the consumer, companies started to form marketing strategies according to green marketing technique and carrying out their business according to the environmental principles and new green behaviour, this will lead to increase in environmental awareness among the stakeholder i.e. law makers, consumers, financial institution, owners and employees of the company. It also helps in increasing environmental schemes for international business. It helps the companies to face the competitive advantage and maintain long term relationship among the stakeholders.

Statement of Problem

Increasing industrialization and urbanization leads to pollution and shortage in natural resources. Environment and environmental problems are the main reasons for emerging the green marketing. Customers started to change over environmental friendly product which in turn will reduce environmental problems and health issues . So, therefore the companies should understand the customer buying behaviour and apply environmental management strategic tools for achieving the organizational goal.

Importance of the Study

This study aims to give information about the effect of green marketing on customers purchasing behaviour. Consumer started changing their preference over the period of time as they were worried about their future and they are more aware about environmental issues and they might have unpleasant behaviour toward environmental friendly product and they pay more attention towards eco-friendly products. An important challenge that marketers are facing now is thorough understanding on consumer's behaviour regarding green marketing and green purchasing. So, therefore the companies

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started to form new marketing strategies for attaining the organizational goal. Apart from producing environment-friendly products and selecting environment-friendly markets, essentially understanding of 'Environmentally Friendly" is required to be integrated into the corporate culture.

Objective of the Study

The purpose of the research is to analyze the consumer behaviour toward green technology products in home appliances i.e. how effective the green technologies are satisfying the customer needs. The objectives of the study are as follows :

- To Judge the awareness and attitude of people towards Green Technology.
- This research paper aims to find out the factors affecting preference of consumer towards eco-friendly products.
- To study the impact of Green Technology on sustainable growth in marketing home appliances.

Hypothesis of the Study

1) Knowledge about Green Technology is not positively correlated with preference for eco-friendly products.

2) Energy efficiency and health features have negative influence on preference for eco-friendly products.

Review of Literature

It highlights the study of previous literature regarding the green product and consumer behaviour; the previous study helps to get an idea about different approaches made by the earlier researches in the field and also to identify the research-gap. The following are the few reviews taken from the renowned authors work.

1. **Aysel Boztepe (2012),** conducted a survey with a sample of 540 consumers in Istanbul. To study the customer buying behaviour towards green marketing. This study was based on the hypothesis whether there is relation between green marketing product and environment. They found that environmental awareness, green product features, green promotion activities and green price affect green purchasing behaviours among the customers.

2. **Diamantolopous and others (2003)** conducted a study on 1697 customers in Britain. According to this study demographic variables were insufficient to determine green consumer outline and the author also found that women were more related to the environment. Women and married couple were displayed with pro- environmental behaviours. There was negative correlation between age and pro- environment attitude. There was positive correlation between education, information and attitude.

3. **Tilikidou ve Delistavrou (2001)** conducted a survey in Greece among 420 household. As a result of this study, it is concluded that customer who frequently adopt pro-environmental non-purchasing behaviours were highly educated people. These citizens are not many, neither strongly engaged in most of these behaviours. The non-purchasing ecological behaviours were positively correlated to recycling attitudes and locus of control. Recycling behaviour is better predicted by recycling attitudes, while post-purchasing behaviour and ecological activities are better predicted by the other behaviours. Consumers who are mostly involved in recycling and non-energetic, rather traditional activities are mostly influenced by their positive attitudes towards recycling as well as by their social responsibility.

4. **Sehrawet et.al.(2007),** conducted a study which aims to establish whether the residential background of consumers has a varying influence on their buying decisions. A survey of1090 urban and rural respondent was carried out of which 523 were rural and 567 were urban. The gathered data were analyzed by applying counts, percentages, means, and analysis of variance. Rural residents found that packaging is more helpful in buying, that better packaging contains a better product and that they are more influenced by the ease of storing a package than their urban counterparts. Ease of carriage, package weight, simplicity, transparency and similarity of packaging have comparatively less impact on purchase decisions of rural consumers than urban ones. However, rural consumers are more critical about packaging as they strongly consider that it contributes to misleading buyers and is also an environmental hazard

Methodology of the Study

Methodology is a systematic way used for making observations or obtaining data, evidence, or information as part of a research study to solve the research problems. This study is descriptive in nature to explore the consumer behaviour with reference to green marketing. Both Primary and Secondary data were used in this study. Secondary data used for collecting information on published sources like magazine, books, journals, and annual report etc about green marketing for clear understanding of the concept. Primary data were collected by using questionnaire, the first part of the questionnaire consist of demographic profile of the consumer and the second part consists of five point scaling questions relates to consumer perception on viral marketing. The sample size is limited to 200 and simple random sampling techniques adopted as well using suitable statistical tools like percentage analysis, cross tabulation, chi-square test, and ANOVA, the collected data were analyzed and results were interpreted.

Results and Discussions

The results of the study shed lights on consumer behaviour towards green technology which enlighten on green market environment, product, awareness and attitude towards green technology.

Demographic profile of the customers

Demographic profile trend to play an important role in green product development. The demographic characteristics of the respondents are summarized in table-1 which helps to segment the customers in the market.

Table 1 : Demographic profile of the respondents

	Profile	Frequency	Percentage
Gender	Male	132	66.0
	Female	68	34.0
Age	Below 30 years	43	21.5
	30 - 40 years	50	25.0
	40 – 50 years	70	35.0
	Above 50 years	37	18.5
Education	Graduation	35	17.5
	Post-Graduation	90	45.0
	Professional	66	33.0
	Others	9	4.5
Family	Nuclear family	145	72.5
	Joint family	65	27.5
Income	Less than 50,000	16	8.0
	50,000 to 1,00,000	74	37.0
	1,00,000 to 2,00,000	72	36.0
	2,00,000 and above	38	19.0
Total		**200**	**100.0**

The above tables present the socio-demographic profile of the consumers. As depicted, Male constitute around 66% of the respondent, with respect to the distribution of the age, it was evident that approximately 35% of the respondent falls under the age group of 40 - 50 years while 25% of the consumers were between the age group of 30 - 40 years and 45% have done their post - graduation which is followed by professional 33%. Among them most of the customers 72.5% belongs to nuclear family. 37% of the respondents falls under the income group of less than Rs.50, 000 - Rs.1, 00,000. Therefore it is found man and customers between the age group of 30 - 40 years have positive attitude towards organic product and they have tendency towards green technology information.

Table 2 : Impacts on Consumer buying behaviour towards Green Technology

Attributes	Weighted Average mean	Rank
Green Awareness	3.73	2
Green Price	3.28	4
Green Product Features	3.75	1
Green promotion	3.71	3

To measure scores and order the attributes from the most important to less important and summed up by rating scale.

**Source-primary data*

Inference : From the above table, it is clear that the most important attributed to be increase in environmental awareness leads to increase in green technology. It is being Green product Features (3.75), while the second most popular reason is Green awareness (3.73), it is been followed by Green promotion (3.71) and Green price (3.28). It is concluded from the above table environmental awareness, green product features, green promotion and green price increases the purchasing behaviour of the customers..

ANOVA

A statistical analysis tool that separates the total variability found within a data set into two components: random and systematic factors. The random factors do not have any statistical influence on the given data set, while the systematic factors do. The ANOVA test is used to determine the impact independent variables have on the dependent variable in a regression analysis.

Table 3 : One way analysis of gender of the customer and their awareness level towards green technology

ANOVA					
Particulars	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.505	3	3.168	17.553	.000
Within Groups	35.375	196	.180		
Total	44.880	199			

Inference : H0 (Null hypothesis) = There is no significant difference between gender and environmental awareness towards green technology

H1 (Alternate hypothesis) = There is a significant difference between the gender and environmental awareness towards green technology

The above table shows that the effectiveness of ERP system based on awareness level of the customers. The F value is 17.553 and it is significant at the level of significance .000 at the degrees of freedom 3. In F test if the significant value is above 0.05 then Accept null hypothesis and reject the alternate hypothesis. And this study shows there is a significant difference between the gender and environmental awareness towards green technology

Table 4 : One way analysis of occupation of the customer and their awareness level towards green technology

ANOVA					
Particulars	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.832	3	4.277	4.813	.003
Within Groups	174.188	196	.889		
Total	187.020	199			

Inference : H0 (Null hypothesis) = = There is no significant difference between occupation and environmental awareness towards green technology

H1 (Alternate hypothesis) = = There is significant difference between occupation and environmental awareness towards green technology

The above table shows that the effectiveness of ERP system based customer awareness towards green technology. The F value is 4.813 and it is significant at the level of significance .003 at the degrees of freedom 3. In F test if the significant value is above 0.05 then Accept null hypothesis and reject the alternate hypothesis. And this study shows there is significant difference between occupation and environmental awareness towards green technology.

Table 5 : One way analyses showing monthly income of the family and influence towards green products

ANOVA					
Particulars	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	47.845	3	15.948	29.760	.137
Within Groups	105.035	196	.536		
Total	152.880	199			

Inference : H0 (Null hypothesis) = There is no significant difference between the income and their influence towards green products.

H1 (Alternate hypothesis) = There is a significant difference between the income and their influence towards green products.

The above table shows that the effectiveness of ERP system based on consumer monthly income towards influence on green products. The F value is 29.760 and it is significant at the level of significance .137 at the degrees of freedom 4. In F test if the significant value is above 0.05 then Accept null hypothesis and reject the alternate hypothesis. And this study shows there is no a significant difference between the income and their influence towards green products.

Table 6 : Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.851	27

Researchers commonly use the cronbach alpha coefficient for establishing scale reliability for measuring the internal reliability. The cronbach alpha coefficient is an indicator of internal consistency of the scale. A high value of the cronbach alpha coefficient suggests that the items that make up the scale "hang together" and measure the same underlying construct. In this study the overall cronbach's Alpha value for customer buying behaviour is 0.851.

Table 7 : KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.804
Bartlett's Test of Sphericity	Approx. Chi-Square	1711.452
	Df	325
	Sig.	.000

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistics that indicates the proportion of variance in variable that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with data. If the value is less than 0.50, the result of the factor analysis probably won't be very useful. In this study, the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.804.

Factor Analysis

Factor analysis is a statistical procedure used to identify a small number of factors that can be used to represent relationships among set of interrelated variables. The means 16 statements rated from 1 to 4. In the Total Variance Explained table we see that 4 factors have been extracted that have Eigen value greater than 1. Eigen values explain the variances of the factors and values greater than one represent considerable variance, forming significant factors.

Table 8 : Total variance explained

Total Variance Explained						
Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.745	33.636	33.636	4.952	19.047	19.047
2	2.120	8.154	41.790	2.997	11.527	30.575
3	1.850	7.114	48.904	2.302	8.853	39.428
4	1.632	6.278	55.181	2.285	8.789	48.217
Extraction Method: Principal Component Analysis.						

Extraction Method: Principal Component Analysis.

Interpretation : The above table shows that the total variance explained is 48.217%. This is appropriate for factor analysis. The 48.217% variance was explained by the 4 extracted components.

Rotated Component Matrix

Based on these loadings 16 items reduced into 4 significant factors that affect the study. The positive values show positive loadings on the factors extracted and the negative values show inverse relationships. The factors can be explained by arranging consumer variables from the questionnaire, into 4 groups based on highest Component Matrix loadings per statement, as below:

Table 9 : Rotated component matrix

Particulars	1	2	3	4
I believe that the use green electronic products by me will help in reducing pollution and also help in improving the environment.	.747			
I believe that the use green electronic products by me will help in reducing wasteful use of natural resources	.742			
I believe that the use green electronic products by me will help in conserving natural resources	.739			
I feel good about myself when I use green electronic products.	.716			
I like using green electronic products	.698			
My friends expect me to engage in green electronic products usage behaviour.		.765		
My society expects me to engage in green electronic products usage behaviour.		-.689		
People can rely on me to make a positive contribution to the society due to my green electronic products usage behaviour		.614		

People can rely on me to make a positive contribution to the society due to my green electronic products usage behaviour		.614		
I am familiar with the availability of green electronic products in my locality.			.796	
I can easily get green electronic products whenever I need them			.726	
I have control on affordability toward green electronic products.			.674	
I have control on the time spending for searching and using green electronic products			.596	
1 It is valuable for any individual consumer to do something about pollution				.812
One person cannot have any effect upon pollution and natural resources problems, but many people together can make difference				.752
Each consumer's behaviour can have a positive effect on society by purchasing green electronic products				.616
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 9 iterations.				

The factors extracted in this study are environmental awareness, promotional activities, and flexibility and buyers preference. The components are explained below

Factor 1: Environmental Awareness

Now a days, business world are facing serious changes towards the environment and the society. Strategies targeting not only making a profit for the day but also for long-term profitability and environmentally friendly sustainability have started to become agendas of the companies. Consumers who are aware of the environmental issues tend to have a positive attitude towards green purchasing. Environmental management as a strategic tool not only improves control and reduces environmental impact but also develops business opportunities for company managers.

Factor 2: Promotional Activities

In this present scenario consumers are very much attracted by the promotional offers and the sales promotion activities that are followed by the firm. Maximum number of customers is attracted by their friends and family because they trust their family and friends while comparing to advertisement. They are motivated they their friends and society to purchase the green technology products.

Factor 3: Flexibility

Customers' mindset is different from one person to person. They can able to access product easily according to their convenience in the affordable price. Since this is the percent scenario customers started purchasing eco-friendly product easily according to their requirement within their accessibility.

Factor 4: Buyers Preference

Consumer buying behaviour here represents that the consumers are very much clear in their searching their products and selecting their products according to their environment. Consumers are very much cautious about the price and the products quality, most of the customers prefer environmental friendly product. Customers are not ready to waste their time in counters for their transaction to be completed; they also need fashionable and trendy products according the social change for sustaining their growth.

Summary and Suggestions

The study finds that environmental awareness, promotional activity, flexibility and buyers preference are vital factors influencing consumer behaviour towards Green technology. All over the world, the demand in green products is growing and as such there is a concern for understanding how green is a green product. Consumers who are aware of the environmental issues tend to have a positive attitude towards green purchasing. Some of the suggestions, Companies should be aware of their responsibilities towards the environment and the society in the same way as towards clients, shareholders and employees. Climate change, environmental issues and social problems will challenge the leaders of future generation for taking efficient and comprehensive decisions. In the process of taking these decisions, the priority of business people should be based on the principal of protecting the environment rather than profitability of the business and they should create economic value for the customers. So, that lack of trust and privacy among the customer can be avoided and security measure should be taken by firm for attracting more customers.

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A Study on Determinants that Cause the Occupational Stress among the Information Technology Employees in Chennai City

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Abstract

Stress has become a part of our fast paced life. Stress not only affects the mental health but also has become a reason for many critical diseases like cancer, obesity, heart attack, etc. Stress is caused by both personal and professional environment. People spend more than one-third of their time at their workplaces, therefore occupational stress is getting more attention from the researchers. The stress among the information technology employees can directly affect the production capacity of the company, which can lead to declining trend of revenues to the company. Thus this study has been done, keeping in view the importance of studying occupational stress. The study highlights the factors that need to be improved for minimizing the occupational stress among information technology employees.

Keywords: Occupational Stress, IT Professionals, and IT Sectors.

Introduction

Psychologist Richard S. Lazarus best described stress as "a condition or feeling that a person experiences when they perceive that the demands exceed the personal and social resources the individual is able to mobilize." The term 'stress' was first defined by Selye (1956) as "the nonspecific response of the body to any demand for change". Stress is mainly related to the response of our body to any kind of demand. It can be caused by both good and bad experiences. In a medical or biological context, stress is a physical, mental or emotional factor that causes bodily or mental tension (Palmer et al., 2003). Stress can be caused due to the external environment like family environment, work environment or social environment, or internal issues like illness or from a medical process. Occupational stress can be defined as the adverse psychological and physical reactions that occur in an individual as a result of their being unable to cope with the demands being made on them (Omolara, 2008). Stress that happens due to a person's employment is termed as occupational stress. The term job stress and occupational stress are used interchangeably (Dollard, 2003). Keeping in view all the above definitions, occupational stress is defined as the harmful emotional (i.e., anxiety and depression), physical (i.e., insomnia, headaches and infections), and behavioral responses (i.e., job dissatisfaction, low commitment and

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poor work performance) that occur when work necessities do not match the capabilities, possessions and needs of the worker (Zafir et al., 2009).

Occupational stress prevails almost in every sector of the economy, whether it is service sector, agricultural sector or industrial sector. In industrial sector, it is becoming a highly noticeable issue nowadays. In automobile industries, blue-collar employees are part of the human resource of a company, considered the most valuable assets of any company, as it is the man (human resource) who gives movement to other three M's of the company which are: material, machine and money. Blue-collar employees are directly related to the production process. Blue-collar employees are the bases of each and every manufacturing organization across the world. If treated well, blue-collar employees can prove to be a competitive advantage for a firm as the productivity of the workforce determines the success of an organization. This group is more prone to stress as they are less educated, work in strenuous conditions and belong to lower income group. Thus, it becomes more important for the organization to give more attention to dealing with any work-related stress of blue-collar employees. Occupational stress may be caused due to many reasons. Some of the causes of occupational stress among blue-collar employees can be: poor working conditions, work overload, poor leadership, poor interpersonal relationships, role ambiguity, lack of career growth and development opportunities and many more (Cooper et al., 2001; and Zafir et al., 2009).

Occupational stress can directly affect the performance of the employees, which leads to a decrease in the overall production level of the organization. Less production will lead to fewer profits to the company and can even create a negative image of the company in the market. Thus ultimately it is the organization that will bear the consequences of increased level of stress among its employees in the form of high labor turnover, low group morale and output, and poor labor relations (Ivancevich and Matterson, 1980). Occupational stress is harmful not only to the organization, but also for the health of the employees (Kyriacou, 1989). Northwestern National Life (1991) found that 25% of employees report that their job is the number one stressor in their lives. Work stress is linked to health issues more strongly than any other life stressors, including family issues and financial problems (The St. Paul Fire and Marine Insurance Company, 1992).

Living with this stress will take a toll on the employee, which in turn will take a toll on the organization through increased burnout, decreased engagement, decreased productivity, decreased retention and decreased participation (Weaver, 2003; and Bryner, 2006). Thus, it is very important for any organization to identify the causes of occupational stress among its employees and to minimize the level of occupational stress. Minimizing occupational stress could be a productive endeavor for organizations. In addition, identifying some of the factors of occupational stress such as conflict, ambiguity and overload can help the organizations to better identify when stress is present. Reducing these stress levels through increased engagement will increase productivity and retention of key personnel through reduction of occupational stress (Caponetti, 2012).

Though there are many reasons for the increased level of occupational stress among blue-collar employees, as they are more prone to stress because of their socioeconomic background and the workplace environment, the most important reason which is highlighted by many researchers is the leadership style prevailing in the organizations (Lewin, 1939). Identifying the factors in an organization that may lead to occupational stress among blue-collar employees is important for both the organization (in terms of production level) and employees (physical and mental health).

Review of Literature

Eliza Sharma (2015) found that the factors that need to be improved for minimizing the occupational stress among the blue-collar employees. Rivera et al. (2014) analyzed the relationship between leadership styles of the supervisors and burnout among the subordinates and found that leadership has a significant positive relationship with personal achievement and is negatively related with emotional exhaustion and thus leads to burnout. The study also found that there is a positive relationship between passive style of leadership and emotional exhaustion. Hand (2010) found out the relationship between leadership styles and stress in the Catholic education system and concluded that leadership styles are positively related to the capacity to cope with stress, and also found that the gender differences do not affect the stress level of an individual. Amir and Abraham (2009) and Costa et al. (2009) concluded that work characteristics have a great influence over the occupational stress among hotel employees. Viljoen and Rothmann (2009) found that work overload, control, job aspects, work-life balance and pay were the main factors which cause occupational stress. The study also confirmed the negative effect of occupational stress over physical and psychological health. De Nobile and McCormick (2007) also favored the statement that there is an association between stress and leadership styles. Jackson and Rothmann (2006) concluded that occupational stress causes ill-health. Organizational commitment has a direct influence over occupational stress. They also found that leadership styles are also responsible for the occupational stress among employees.

Objectives of the study

The main objectives of the study are as follows:

- To identify the factors that cause occupational stress among the information technology employees in Chennai city; and
- To measure the predominant factors towards the occupational stress among the information technology employees in Chennai city.

Research Methodology

The present study's core objective is to find out the determinants that cause the occupational stress among the information technology employees and measure the predominant factors of occupational stress. The study used both secondary and primary data. Secondary data was used to attain the above objectives. The study was conducted in Chennai city, Tamilnadu. The Chennai is one of the important place for software industry. The software Industries operation is software development, software export, import; software testing, Business Processing outsourcing, foreign projects and others job related activities in Chennai city. So the researcher finds Chennai as the most suitable place to conduct this research. The sample for this study consisted of 400 employees drawn on the basis of random sampling from IT industries situated in and around Chennai city. The information technology employees were contacted face-to-face for the purpose of collection of primary data. For the purpose of checking the reliability of the responses given by the employees, the actual working place of the information technology employees was visited for collecting more information about their working conditions, environment, the problems faced by the employees during their work, etc. The data was collected during a period of ten months from June 2015 to March 2016. For the purpose of collecting the data for the primary study, structured research instruments were used for collecting information about the occupational stress among the employees. The research instrument used to collect and measure the level of occupational stress among information technology professionals working in Chennai. Based on the literature review, 17 statements were developed. The instrument was first tested by doing a pilot study. The value of Cronbach's alpha came to 0.892 during the pilot study; hence, the same questionnaire was used for the final study, keeping in view the high score of reliability and validity of the instrument. All the statements were based on Likert's five-point scale, from strongly agree to strongly disagree. The demographic data of the employees was also collected through primary survey such as, age, gender, dependent members in the family, annual salary, family type, marital status and education. The data was analyzed using SPSS 21.0 version.

Data Analysis and Interpretation

Table 1 : Profile of Respondents

	Frequency	Percent
Gender		
Male	275	68.8
Female	125	31.2
Total	**400**	**100.0**
Age		
Up to 25 years	100	25.0
26-30 years	119	29.8
31-35 years	90	22.5
Above 35 years	91	22.7
Total	**400**	**100.0**
Marital Status		
Single	112	28.0
Married	288	72.0
Total	**400**	**100.0**

	Frequency	Percent
Educational Qualification		
UG	148	37.0
PG	133	33.2
Professional Degree	119	29.8
Total	**400**	**100.0**
Monthly Income		
Up to Rs.20,000	80	20.0
Rs.20,001 - Rs.40,000	160	40.0
Rs.40,001 - Rs60,000	120	30.0
Above Rs.60,000	40	10.0
Total	**400**	**100.0**
Dependent Members		
one	112	28.0
Two	195	48.8
Three	56	14.0
Above 4	37	9.2
Total	**400**	**100.0**
Family Type		
Nuclear family	312	78.0
Joint family	88	22.0
Total	**400**	**100.0**

Source: Primary data

Exploratory Factor Analysis

Factor analysis is used to identify the determinants that cause the occupational stress among the information technology employees in Chennai city. The purpose of adopting exploratory factor analysis is smaller number of factors underlying the large number of observed variables. The KMO ranges from 0 to 1, with higher values indicating great suitability. Ideally, this value is to be greater than 0.7. According to Kaiser, a KMO measure of 0.9 to 1.0 marvelous, 0.8 to 0.9 meritorious, 0.7 to 0.8 middling, 0.6 to 0.7 mediocre and 0.5 to 0.6 miserable (Marcus et.al., 2006) . Table 2 shows, with regard to information technology employees perception towards the occupational stress, Kaiser-Meyer-Olkin measure of sampling adequacy (MSA) is 0.855 and Bartlett's test of sphericity is significant (Chi-square value is 5328.147 and P value is 0.000).

Table 2 : KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.855
Bartlett's Test of Sphericity	Approx. Chi-Square	5328.147
	df	136
	Sig.	.000

Source: Computed data

Table 3 : Total Variance Explained

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.948	40.871	40.871	4.498	26.460	26.460
2	2.443	14.370	55.241	3.103	18.252	44.712
3	1.269	7.466	62.707	2.611	15.356	60.068
4	1.177	6.923	69.630	1.473	8.667	68.736
5	1.029	6.055	75.685	1.181	6.950	75.685
6	.839	4.937	80.622			
7	.681	4.005	84.628			
8	.555	3.265	87.892			
9	.455	2.677	90.569			
10	.428	2.516	93.085			
11	.369	2.169	95.254			
12	.248	1.456	96.710			
13	.204	1.197	97.907			
14	.156	.916	98.823			
15	.079	.462	99.286			
16	.075	.443	99.729			
17	.046	.271	100.000			

Extraction Method: Principal Component Analysis

The above table indicates that the 17 variables are converted into 5 predominant factors with Eigen value 4.498, 3.103, 2.611, 1.473 and 1.181 and individual variance of 26.460%, 18.252%, 15.356%, 8.667% and 6.950%. The total variance of 17 variables is 75.685% which is statistically significant at 5% level. It also shows that the derivations of 5 factors are meaningful in explaining the determinants that cause the occupational stress among information technology employees in Chennai city.

Table 5 : Rotated Component Matrix

Rotated Component Matrix[a]					
	Component				
	WP	WE	IR	CG	JA
Excessive work load	.903				
Target to complete the projects	.902				
Work pressure	.840				
Restless	.824				
Work Ambiguity	.689				
No good relationship		.853			
No Job rotation		.799			
Job culture		.793			
No proper recognition		.750			
Conflict with supervisor			.865		
Lack of support from supervisor			.826		
Poor peer relations			.693		
Lack of Training				.862	
Lack of carrier development opportunities				.573	
Lack of control over the pace of work					.819
Pint-sized authority or powerlessness					.601

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalizationa
Rotation converged in 11 iterations.

(WP: Work Pressure, WE: Work Environment, IR: Interpersonal Relations, CG: Carrier and Growth prospects and JA: Job Authority)

The above Table 5 highlights that the prime five components which played a great role of organizational stress among the information technology employees in Chennai city. The rotated component helps in making a broad interpretation of five parameters that are identified. The first factor is the most important factor explaining 26.460% out of total variance. The first factor loaded five statements which included "Excessive work load" (0.903), "Target to complete the projects" (0.902), "Work pressure" (0.840), "Restless" (0.824) and "Work Ambiguity" (0.698). It can be interpreted as "Work Pressure".

The second factor explains 18.252% out of total variance, which comprises four variables namely "No good relationship" (0.853), "No Job rotation" (0.799), Job culture (0.793) and "No Proper Recognition" (0.750). It is named as "Work Environment".

The third factor explains 15.356% out of total variance. There are three variables included in this factor namely "Conflict with supervisor" (0.865), "Lack of support from supervisor" (0.826) and "Poor peer relations" (0.693). It can be represented as "Interpersonal Relations".

The fourth factor explains 8.667% out of total variance. In this factor, there are two variables included namely "Lack of Training" (0.862) and "Lack of carrier development opportunities" (0.573). It is named as "Carrier and Growth Aspects".

The last factor explains 6.950% out of total variance. This factor included two factor namely "Lack of control over the pace of work" (0.819) and "Pint-sized authority or powerlessness" (0.601). It can be named as "Job Authority".

Table 6 : Determinants of Occupational Stress among the information technology employees in Chennai city

Independent Variable	Beta	t value	Sig.
Work Pressure	0.823	42.819	0.001**
Work Environment	0.740	34.215	0.000**
Interpersonal Relations	0.631	28.162	0.003**
Carrier and Growth Aspect	0.526	24.187	0.001**
Job Authority	0.459	23.148	0.000**
R Value=0.891, R-Square value=0.724			
ANOVA Results: (F Value = 106.352, Significant value 0.000**			

Note: **denotes significant at 1% level

The above table shows that determinants of occupational stress among the information technology employees in Chennai city. The multiple regression analysis was conducted to measure the contribution of each of the above five predominant factors (which has been derived through exploratory factor analysis) in occupational stress among the information technology employees in Chennai city. It is noted from the above table, R value is 0.891 and R square value is 0.724 which indicates 72.4% variations towards independent variable towards dependant variable. The F value is 106.352 and corresponding p value is 0.000 which is less than 0.01. The independent variable causes the occupational stress among the information technology employees in Chennai city. The table also found that work pressure is the most significant factor for occupational stress, followed by work environment, interpersonal relations, and carrier growth aspect. The job authority is the least significant factor for occupational stress among the information technology employees in Chennai city.

Conclusion

It is noted from the above study, five predominant factors namely Work Pressure, Work Environment, Interpersonal Relations, Carrier and Growth prospects and Job Authority causes the occupational stress among the information technology employees in Chennai city. The Overall occupational stress was found to be very high among the information technology employees in Chennai city. The study highlights the factors which are highly responsible for causing occupational stress among the employees. By improving on these factors or making some strong strategies for these factors, the level of occupational stress can be minimized. The managers should try to improve the working environment of the company, as it is found to be the highest contributing factor to occupational stress among employees.

Limitations of the Study

The study has some limitations also. The study is done in Chennai city only. The research focused on the employees of information technology organisations and the study has restricted to find out only the occupational stress among the information technology employees in Chennai city.

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