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**HRM PRACTICES AND EMPLOYEE ATTRITION: A GENDER CENTRIC ANALYSIS OF INDIAN BPO INDUSTRY****AMIT MALHOTRA****ASST. PROFESSOR****VIDYA INSTITUTE OF CREATIVE TEACHING  
MEERUT****ADITYA GAUTAM****GROUP DIRECTOR (MANAGEMENT PROGRAMMES)****VIDYA KNOWLEDGE PARK  
MEERUT****ABSTRACT**

*The BPO Industry in India has achieved impressive growth in its two decades of existence. This growth would not have been possible without the abundant availability of suitable manpower. Ironically, sustaining the manpower has proved to be the foremost challenge facing this industry. The high rate of employee attrition has resulted in monetary and performance related setbacks to the organizations. The HR managers have devoted considerable attention to fix the problem and in doing so, have devised many new HRM practices to reduce the attrition but it still remains an area of concern. The workforce in the Indian BPOs consists of males and females in nearly equal proportions. Studies have shown that the orientation and preferences of male & female differ in respect of professional matters. Furthermore, the reasons for attrition amongst gender have also been observed to be different. The paper aims at ascertaining whether or not the perception of male & female employees about the impact of HRM practices on attrition, is similar.*

**KEYWORDS**

HRM practices, organizational culture, work environment, employee attrition, labour turnover, BPO industry.

**INTRODUCTION**

Attrition in a work environment refers to a reduction or decrease in the size or strength the work force, or a gradual reduction in labor occurring due to cause other than sacking of employees. It is usually measured with a metric called attrition rate, which simply measures the no of employees moving out of the company (voluntary resigning or laid off by the company). Attrition Rate is "the rate of shrinkage in size or number"

$$\text{Attrition Rate (in percentage)} = \frac{\text{No. of Separations in a Time Period}}{\text{Total No. of Employees in a time period}} \times 100$$

Attrition rate is the percentage of people leaving the organization, i.e., people left relative to total number of people who have worked for the organization during the time period under consideration.

Attrition can be known and unforeseen, when it is known attrition can be managed suitably, as the organization remains aware of such situation well in advance and takes required steps of direct recruitment or promotion on a timely basis. However, unforeseen attrition in organizations creates problems and adversely affects the production and financial status of the company. Usually organizations remain cautious of such conditions and take continuous feedback from their managers about the situation.

Human Resource Management is the process of recruitment, selection of employee, providing proper orientation and induction, providing proper training and the developing skills, assessment of employee (performance of appraisal), providing proper compensation and benefits, motivating, maintaining proper relations with labour and with trade unions, maintaining employee's safety, welfare and health by complying with labour laws of concerned state or country. The core purpose of the human resource management is to make efficient use of existing human resource in the organization. An effective HRM system should be such that it encourages an organizational climate of trust, autonomy, collaboration, communication and teamwork etc. It is important for an organization to have such systems that not only identify and recognize the top performers but also help the employees and organization to achieve sustainable growth. (Jain, S. and Gautam, A. 2016a)

The term Business Process Outsourcing (BPO) denotes an arrangement involving contracting of non-primary business activities and functions to a third-party provider. BPO services include payroll, human resources (HR), accounting and customer/call center relations. It is also referred to as Information Technology Enabled Services (ITES).

The outsourcing of services is done with a view to achieve cost reductions while improving service quality. This practice has gained worldwide acceptance cutting across various industrial sectors. BPO has become the obvious strategic choice of the companies looking at the visible profits of cost reduction while improving the quality of service, increasing shareholder value etc. (Shah and Sharma 2007).

India is now the world's favoured market for BPO companies, among other competitors, such as, Australia, China, Philippines and Ireland. The BPO boom in India is credited to cheap labor costs and India's huge talent pool of skilled, English-speaking professionals.

Besides this, Factors such as economy of scale, cost advantage, utilization improvement and superior competency have all lead to the growth of the Indian BPO industry. Business process outsourcing in India, which started around the mid- nineties has now grown manifold.

According to Mehta et al. (2006), of all the challenges posed to BPO organizations at various levels, attrition, absenteeism and motivating employees are the major ones that dominate at the middle level. The attrition rate in the industry has been reported to be 35% on an average, which is quite high for any industry.

Attrition in BPOs has had adverse effects on the organizations. Not only the organizations have to deal with disruptions in services due to unplanned exits but when more people leave an organization, the more it results in a drain on the company's resources for incurring recruitment expenses, training and orientation of new employees and the time spent on these issues. In addition to this, the high attrition rate also affects the productivity of the organization.

**REVIEW OF LITERATURE**

Joshi, R. (2004) on the basis of his study concludes that the main factors which cause high attrition in the BPO industry are (a) Unsatisfactory Monetary Rewards (b) Odd Working hours and (c) Monotony of the jobs. He further concluded that issues such as lack of clarity about expectations from employees make them unsuccessful, other issues are lack of clarity about performance based incentives & benefits, lack of feedback about performance and failure on the part of management to provide a framework within which the employee perceives he can succeed makes the situation more complex. He urged the HR to play a substantial not mere supportive role in shaping and implementing conducive HRM practices at both strategic and day-to-day levels. He further added that to be effective, HRM practices should firstly reflect organization wide commitments as to how it will manage and relate to its employees and secondly, such practices must actually be implemented.



Budhwar et al. (2006) conducted an exploratory study on the dynamics of HRM practices and systems in Indian BPOs, the study pointed out at the existence of formal, structured and rationalized HRM systems. It suggested that employee attrition issues were related to several factors which were primarily impacted by management practices. For instance, high turnover of employees could be attributed to their psychological situations which were dependent on the amount of stress a typical call centre agent would have to undergo. It was observed that a very less percentage of training and development time was spent on stress management sessions. Also, the emphasis on career development and training appeared to be somewhat less in the Indian BPOs as compared to their western counterparts. Further, it was found that communication and counseling related to managing stress within the organizations was lacking overall and more so in smaller call centres. Their research analyzed that one of the biggest problems related to attrition was growing stress that agents faced in a typical call centre environment.

According to Raman, R (2006) attrition in the BPO sector can be classified into two types i.e. "Drive Attrition" caused by factors associated with employers and secondly "Drag Attrition" caused by reasons associated with employees. "Drive Attrition" is caused due to employer's policies like terminating employees at the end of the contract period, retaining only most productive employees, lack of holidays and strict control on leave. "Drag Attrition" is caused due to perceptions and insecurities nursed by the employees such as low perceived value of their job, lack of recognition of work experience of BPO, outside the BPO industry, dearth of opportunities for career advancement, lack of time based promotions, odd working hours and health problems arising from it, disturbance in personal and social life resulting from it, desire to pursue higher education.

Shah, Hardik and Sharma, Vinay (2007) have explored the relationship between Job Satisfaction & Individual Performance in the context of a BPO unit and have concluded about job satisfaction and individual performance is that there is definitely a relationship, probably higher than the well-known but not as high as conventional wisdom assumed that "happy workers are productive workers." They further opined that learning to become, more aware of factors of dissatisfaction for BPO employees is the first major step towards managing them effectively. The study pointed out that Nature of Work, Working Conditions and Colleagues were the major source of dissatisfaction. Therefore, some interventions were suggested to minimize the problems which included allowing more flexibility and freedom to employees so as to reduce the job monotony. Offering clean attractive, well organized work place with attractive ambience so as to maintain the level of motivation to work, supportive and friendly behavior of immediate superior and promoting harmony between co-workers, selection of people friendly, customer oriented employees, organizing regular training updates, adopting fair & transparent performance appraisal system and monetary rewards for outstanding work. Shanthi and Bhargava, H. (2007) highlighted the troubling issues like stress, sleeplessness, and depression, fatigue and hearing ailments and stress for family members which cause distress among employees. Also, it was found that a number of factors like call-volume, work-timings, and repetitive processes contributed to stress. The authors also pointed that there is a significant change in life style of people working in BPOs. The young workforce (both male & female) tend to develop certain bad habits such as alcohol, smoking etc. also the spending patterns of such people have changed as the money is spent more on lifestyle products, and recreational activities. The authors concluded that since the job is stressful, better pay can temporarily satisfy the needs of the employee but once the employees face serious health problems it is likely they quit the industry.

Ananthraja, A. (2009) examined the factors responsible for employee turnover in business process outsourcing companies. The study suggests a high degree of correlation between employee turnover and some variables of job satisfaction vis-à-vis age, gender, marital status, native place and experiences. The researcher concluded that highest percentage of attrition is in voice – based process of Business Process Outsourcing industry. The researcher discussed some major factors responsible for attrition of employees which are - Business Related Factors (disliking the nature of work, lack of variety in work, mismatch of interest, proprietary technology does not add value to bio-data, possibilities of less interaction with end users); System - Related Factors (changing policies of company, lack of technical career advancement, lack of opportunity for continuous up-gradation of skills, delay in promotion, lack of transparency in appraisal and promotion policies, post-graduates are not given any additional benefits, unfair appraisals, unsure future, limited career growth opportunity); Personal Factors like marriage, moving with spouse, parents' health require moving to other city, not able to handle situation positively, wanted a job abroad, peer pressure, going to home town, want to work in new technologies were contributors to attrition.

Thite, Mohan and Russell, Bob (2010) made a comprehensive study on work organization, HR practices and employee retention in some leading Indian BPOs and found that these BPOs followed structured, formal and rational HR practices however, the rate of attrition was observed to be alarming. They observed that in BPO sector there is a situation of highly educated young people doing semi-skilled, low value jobs. Their analysis revealed that Employment Security is not considered by majority of the employees as a significant reason to stay in the job. Secondly, employees who considered their employment prospects to be good and the possible ease of job substitution showed more inclination to exit. Thirdly, chances of retention improved where employees are of the view that a significant portion of remuneration arises from performance related pay & incentives and are content with the administration of such system. Fourthly, if employees feel that their job-skill match is satisfactory coupled with this if they place a high value on realistic incentive schemes offered then prefer to stay in their current job compensation and benefits.

Sreerexha, K. R. and Kamalanabhan, T.J. (2012) conducted a comprehensive study on the factors causing employee attrition in BPOs in India. The study focused on the influence of the intervening variables such as organizational commitment on turnover intentions of employees. The study indicated that the antecedents of turnover were significantly associated with employee turnover intention mediated by organizational commitment. The study indicated that that in a call center set up, work is highly formulated and tightly controlled and computer technology overrides management employee relations. The study suggested that management should set up an open channel of communication in line with the daily routines to enable employees to express their feelings, ideas and views. This can help the management in obtaining information regarding employee job satisfaction. Apart from this, management can also help employees to manage their stress especially among the front line representatives in call centers who experience high levels of stress while dealing with demanding clients.

Gupta, Vibha (2013) conducted an exploratory research to assess attrition control systems in case of IT-BPO sector. The research study probed into the reasons for quitting the job through telephonic interviews with former employees, the main reasons that surfaced were Offer of better remuneration, Night shifts and weekend work leading to dissatisfactory work-life balance, improper/inadequate training, lack of career prospects and deficient organizational culture.

Aranganathan, P. and Sivarethinamohan, R. (2013) identified nine factors responsible for attrition – Deprived Supervision, Low Career Growth, Poor Training and Un-favourable Working Conditions, Lack of skill variety, Good Salary expectations & Turnover Intentions, Low Self-fulfillment, Sub-Standard nature of the job, Dissatisfaction with colleagues and Lack of Authority.

Thamizharasi, K. and Uma Rani (2014) conducted a study on work stress and job performance evaluation of employees in BPOs. It was observed that every employee is expected to work for long hours, perform multiple jobs, available for 24 hours in seven days. These reasons give a mentally as well as physical problems to the employees. When these problems increase, then it gives anxiety & tension to the employees and ultimately the productivity of the employees decrease. Seven stress causing factors namely Salary, Job Task, Work Environment, Colleagues, Late Night Shift, Performance Targets and Work Load, were identified and their magnitude was analyzed. The study further revealed that female employees in BPOs suffer from higher stress as compared to their male colleagues. Specifically, women suffered higher stress due to late night shifts.

Bharathi, N. & Paramashivaiah, P. (2015) classified attrition in IT/ITES sector into voluntary and involuntary and assessed its impact on behavioural intentions. They concluded that Flexibility in work / time and Communication flow in the company are the environmental factors that require greatest attention for improvement. Coaching / mentoring by superiors and Career advancement are the training and development factors that require most attention for improvement. Employee empowerment (powers in decision-making) and Motivation Levels are the organizational culture and strategy variables that require most attention for improvement. Job Life span (job security) and Nature of job assignments are the job-specific variables that require the most attention for improvement.

Jain, S. and Gautam, A. & (2016b) have opined that Employees who feel valuable and satisfied at work are able to perform over and above their employer's expectations. The success of organizations does not only depend on the implementation of good strategies but also on the involvement of employees. Employees whose managers value their opinions perform as per potential especially when such employees know that their opinion counts. It can be appreciated that employees who feel valued & satisfied at workplace are likely to stay longer in their jobs.

**OBJECTIVE**

The objective of the present study is to examine whether or not there exists a similarity between the perceptions of male & female employees about the impact of various HRM practices on employee attrition.

**HYPOTHESES**

Considering the nature of study, and the relevant factors pertaining to HRM practices, following Null hypotheses were formulated:

- H<sub>01</sub>: There is no significant difference between perception of male & female employees regarding impact of Recruitment and Selection policies on attrition in BPOs.
- H<sub>02</sub>: There is no significant difference between perception of male & female employees regarding impact of Induction & Training programmes on attrition in BPOs.
- H<sub>03</sub>: There is no significant difference between perception of male & female employees regarding impact of Organizational Culture on attrition in BPOs.
- H<sub>04</sub>: There is no significant difference between perception of male & female employees regarding impact of Salary & Monetary Incentives on attrition in BPOs.
- H<sub>05</sub>: There is no significant difference between perception of male & female employees regarding impact of Health & Welfare Measures on attrition in BPOs.

**RESEARCH METHODOLOGY**

For the purpose of the fulfillment of the objective of the study, five research hypotheses have been formulated. The research design adopted for the study is descriptive approach wherein appropriate statistical techniques were used for both data collection and analysis.

For the stated purposes, primary data was collected using a structured questionnaire from a representative sample of employees using convenience sampling. The said data was mobilized from 400 employees that consisted of 252 males and 148 females belonging to the lower & middle cadres considering the fact that the problem of attrition is reported to be most prevalent in these cadres. The respondents were chosen from leading BPO companies located in NOIDA, Gurgaon and New Delhi of NCR chosen for the study in view of the geographical presence of majority of leading BPO organizations in the region.

The statistical analysis of data was carried out with the assistance of Microsoft Excel and statistical utilities available on internet.

A questionnaire containing 31 questions based on the attrition components/ factors related to HRM practices BPO organizations was used. The questionnaire consisted of survey questions pertaining to HRM practices namely Recruitment & Selection policies, Induction & Training Programmes, Organizational Culture, Salary & Monetary Incentives, Health & Welfare Measures. Respondents were asked to indicate the extent to which they agree to statements relating to HRM practices undertaken by their organizations on a five-point Likert scale where 1= Strongly Disagree, 2= Disagree 3= Cannot Say, 4= Agree and 5= Strongly Agree

**ANALYSIS OF DATA**

The research used Cronbach's Alpha as a measure of internal consistency. Cronbach's Alpha is a reliability coefficient that indicates how well items in a set are positively correlated to one another. Table-1 gives a summary of the reliability test based on the Cronbach's alpha values for the five scales items in the survey instrument.

**TABLE 1: SUMMARY OF RELIABILITY TEST FROM EMPLOYEE RESPONSES ON SCALE ITEMS**

Scale	No. of Items	Cronbach's Alpha
Recruitment & Selection (RS1-RS4)	04	0.7127
Induction & Training (IT 5-IT 9)	05	0.7574
Organizational Culture (OC10- OC19)	10	0.8232
Salary & Monetary Incentives (SM20 - SM 24)	05	0.7656
Health & Welfare Measures (HW25-HW31)	07	0.7472

An alpha of 0.7 or above is considered to be reliable as suggested by many Researchers this study the Cronbach's alpha coefficient values in respect of scales ranged from a low of 0.7127 to a high of 0.8232. Thus, with regard to the individual scale items in Table-1, the Cronbach's alpha coefficients obtained for the various scales are acceptable.

**TESTING THE HYPOTHESES**

Chi Square Test for Independence was used for testing individual hypothesis. The results of the analysis are as under:

1. H<sub>01</sub>: There is no significant difference between perception of male & female employees regarding impact of Recruitment and Selection policies on attrition in BPOs.

The questionnaire contained 4 questions related to the Recruitment & Selection policies and their impact on reducing employee attrition. The responses are shown in Table-2 and analysis thereof using Chi-Square Test for Independence is also depicted.

The contingency tables shown hereinafter provide the information of the observed cell totals and the expected cell totals in brackets.

**TABLE 2: RECRUITMENT & SELECTION AND EMPLOYEE ATTRITION**

Results	Strongly Agree	Agree	Cannot Say	Disagree	Strongly Disagree	Row Totals
Male	353 (321.93)	478 (488.88)	114 (115.29)	39 (53.55)	24 (28.35)	1008
Female	158 (189.07)	298 (287.12)	69 (67.71)	46 (31.45)	21 (16.65)	592
<b>Column Totals</b>	<b>511</b>	<b>776</b>	<b>183</b>	<b>85</b>	<b>45</b>	<b>1600 (N)</b>

The chi-square statistic is 21.2865. The p-value is .000278. The Degree of Freedom is 4. The result is significant at p <.05.

**Interpretation:** The Chi-Square value of 21.2865 with P = 0.000278 (P<.05, for 5% significance level) shows that there is a significant difference in expected and observed frequencies. Therefore, there is a significant difference in the perception of Male & Female employees regarding the impact of Recruitment & Selection policies on employee attrition. That means H<sub>01</sub> regarding impact of Recruitment and Selection policies on attrition in BPOs stands rejected.

2. H<sub>02</sub>: There is no significant difference between perception of male & female employees regarding impact of Induction & Training programmes on attrition in BPOs.

The questionnaire contained 5 questions related to the Induction & Training programmes and their impact on reducing employee attrition. The responses are shown in Table-3 and analysis thereof using Chi-Square Test for Independence is also depicted.

**TABLE-3: INDUCTION & TRAINING PROGRAMMES AND EMPLOYEE ATTRITION**

Results	Strongly Agree	Agree	Cannot Say	Disagree	Strongly Disagree	Row Totals
Male	445 (442.89)	573 (587.79)	120 (107.73)	72 (76.23)	50 (45.36)	1260
Female	258 (260.11)	360 (345.21)	51 (63.27)	49 (44.77)	22 (26.64)	740
<b>Column Totals</b>	<b>703</b>	<b>933</b>	<b>171</b>	<b>121</b>	<b>72</b>	<b>2000 (N)</b>

The chi-square statistic is 6.7272. The p-value is.151026. The Degree of Freedom is 4. The result is not significant at p <.05.

**Interpretation:** The Chi-Square value of 6.7272 with P = 0.151026 (P<.05, for 5% significance level) does not show significant difference in expected and observed frequencies. Therefore, there is no significant difference in the perception of Male & Female employees regarding the impact of Induction & Training Programmes on employee attrition. That means the hypothesis H<sub>02</sub> regarding impact of Induction & Training programmes on attrition in BPOs is accepted.

3. H<sub>03</sub>: There is no significant difference between perception of male & female employees regarding impact of Organizational Culture on attrition in BPOs. The questionnaire contained 10 questions related to the Organizational Culture and its impact on reducing employee attrition. The responses are shown in Table-4 and analysis thereof using Chi-Square Test for Independence is also depicted.

TABLE 4: ORGANIZATIONAL CULTURE AND EMPLOYEE ATTRITION

Results						
	Strongly Agree	Agree	Cannot Say	Disagree	Strongly Disagree	Row Totals
Male	492 (509.04)	1390 (1378.44)	328 (330.12)	200 (191.52)	110 (110.88)	2520
Female	316 (298.96)	798 (809.56)	196 (193.88)	104 (112.48)	66 (65.12)	1480
<b>Column Totals</b>	<b>808</b>	<b>2188</b>	<b>524</b>	<b>304</b>	<b>176</b>	<b>4000 (N)</b>

The chi-square statistic is 2.8741. The *p*-value is .579106. The Degree of Freedom is 4. The result is not significant at *p* < .05.

**Interpretation:** The Chi-Square value of 2.8741 with *P* = 0.579106 (*P* < .05, for 5% significance level) does not show significant difference in expected and observed frequencies. Therefore, there is no significant difference in the perception of Male & Female employees regarding the impact of Organizational Culture on employee attrition. It means the hypothesis H<sub>03</sub> regarding impact of Organizational Culture on attrition in BPOs is accepted.

4. H<sub>04</sub>: There is no significant difference between perception of male & female employees regarding impact of Salary & Monetary Incentives on attrition in BPOs.

The questionnaire contained 5 questions related to the Salary & Monetary Incentives and their impact on reducing employee attrition. The responses are shown in Table-5 and analysis thereof using Chi-Square Test for Independence is also depicted.

TABLE 5: SALARY & MONETARY INCENTIVES AND EMPLOYEE ATTRITION

Results						
	Strongly Agree	Agree	Cannot Say	Disagree	Strongly Disagree	Row Totals
Male	174 (178.29)	710 (710.64)	213 (207.27)	113 (116.55)	50 (47.25)	1260
Female	109 (104.71)	418 (417.36)	116 (121.73)	72 (68.45)	25 (27.75)	740
<b>Column Totals</b>	<b>283</b>	<b>1128</b>	<b>329</b>	<b>185</b>	<b>75</b>	<b>2000 (N)</b>

The chi-square statistic is 1.4335. The *p*-value is .838354. The Degree of Freedom is 4. The result is not significant at *p* < .05.

**Interpretation:** The Chi-Square value of 1.4335 with *P* = 0.838354 (*P* < .05, for 5% significance level) does not show significant difference in expected and observed frequencies. Therefore, there is no significant difference in the perception of Male & Female employees regarding the impact of Salary & Monetary Incentives on employee attrition. The hypothesis H<sub>04</sub> regarding impact of Salary & Monetary Incentives on attrition in BPOs is accepted.

5. H<sub>05</sub>: There is no significant difference between perception of male & female employees regarding impact of Health & Welfare Measures on attrition in BPOs. The questionnaire contained 7 questions related to the Health & Welfare Measures and their impact on reducing employee attrition. The responses are shown in Table 6 and analysis thereof using Chi-Square Test for Independence is also depicted.

TABLE 6: HEALTH & WELFARE MEASURE AND EMPLOYEE ATTRITION

Results						
	Strongly Agree	Agree	Cannot Say	Disagree	Strongly Disagree	Row Totals
Male	560 (549.99)	789 (787.50)	152 (163.17)	194 (192.15)	69 (71.19)	1764
Female	313 (323.01)	461 (462.50)	107 (95.83)	111 (112.85)	44 (41.81)	1036
<b>Column Totals</b>	<b>873</b>	<b>1250</b>	<b>259</b>	<b>305</b>	<b>113</b>	<b>2800 (N)</b>

The chi-square statistic is 2.797. The *p*-value is .592355. The Degree of Freedom is 4. The result is not significant at *p* < .05.

**Interpretation:** The Chi-Square value of 2.797 with *P* = 0.592355 (*P* < .05, for 5% significance level) does not show significant difference in expected and observed frequencies. Therefore, there is no significant difference in the perception of Male & Female employees regarding the impact of Health & Welfare Measures on employee attrition. It shows that H<sub>05</sub> regarding impact of Health & Welfare Measures on attrition in BPOs is accepted.

**CONCLUSION**

The results of the data analysis show that male and female employees in BPO industry are of the identical view about the impact of HRM practices pertaining to aspects such as Induction & Training Programmes, Organizational Culture, Salary & Monetary Incentives and Health & Welfare Measures on employee attrition in BPO sector. It implies that there is similarity in the perceptions of male and female BPO employees the about the fact that above mentioned aspects have a considerable bearing on employee attrition. In view of this, it can be argued that when HR managers deal with attrition, they must place more emphasis on HRM practices related to these aspects. However, the perception of male and female employees regarding Recruitment & Selection policies vis-à-vis employee attrition in BPO sector differs.

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**CONSUMER BRAND PREFERENCE TOWARDS PASTEURIZED PACKAGED MILK IN GUDALUR TOWN****DR. L. RAMESH****PRINCIPAL****BHARATHIAR UNIVERSITY ARTS & SCIENCE COLLEGE  
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GUDALUR****ABSTRACT**

Milk is an essential commodity which is inevitable in our day-to-day life. Hardly in any human beings who does not taste milk throughout his life? India being basically agriculture country, milk and milk product are by-product of several million agriculturalists. Milk and milk products provide essential nutrition to all walks of life. It provides livelihood to millions of small and marginal farmers in the state of TamilNadu. TamilNadu is an agricultural oriented State and majority of the farmers own cattle. All the products are named and identified by the reputed brands, yes brand is key signal to the consumer while they are selecting the products. The Term "Brand preference" means the preference of the consumer for one brand of a product in relation to various other brands of the same product available in the market. Consumers are mostly influenced by the marketing activities. Consumer behavior can be defined as the behavior that consumers display in searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy consumer needs and wants. To elaborate further, consumer behavior focuses on how individuals make decisions to spend their available resources (time, money, effort) on consumption related items. That includes what they buy? Why they buy it? When they buy it? Where they buy it? How often they buy it? How often they use it? How they evaluate it after the purchase? The impact of such evaluations on future purchases, and how they dispose of it? The process starts much before the products have been acquired or bought. The objectives of the paper are to identify the customer brand preference towards pasteurized packaged milk in Gudalur town the Nilgiris. In this work, 100 samples have been selected and administered the statistical tools such as Chi-square test the researchers found that Income and age, marital status, educational qualification, occupation, family member's quality, price. The mediating factors for the brand loyalty which lead to the price and quality for the brand preferences.

**KEYWORDS**

milk, consumer behavior, consumer preference, brand, pasteurized packaged milk.

**I. INTRODUCTION**

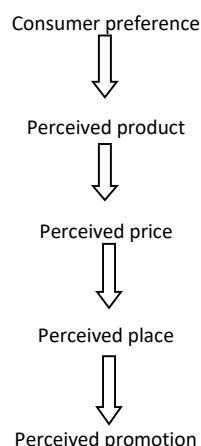
Milk is whitish liquid containing proteins, fats, lactose and various vitamins and minerals that is produced by mammary glands of all mature female mammals after they have giving birth and serves as nourishment for their young. Cow milk generally contains between 3 and 4 g of fat/100 g, although values as high as 5.5 g/100 g have been reported in raw milk. Milk and dairy product contain many nutrients and provide a quick and easy way of supplying these nutrients to the diet within relatively few calories.

Milk, cheese and yogurt all provide the following beneficial nutrients in varying quantities.

- (i) Calcium- for healthy bones and teeth
  - (ii) Phosphorous- for energy release
  - (iii) Magnesium- for muscle function
  - (iv) Protein- for growth and repair
  - (v) Vitamin B12- for production of healthy cells
  - (vi) Vitamin A- for good eyesight and immune function
  - (vii) Zinc- for immune function
  - (viii) Ribo flavin – for healthy skin
  - (ix) Folate- for production of healthy cells
  - (x) Vitamin C- for formation of healthy connective tissues
- Iodine- for regulation of the body rate of metabolism (How quickly the body burns energy and the rates of growth)

**CONSUMER PREFERENCE**

Consumer preferences are defined as the subjective (individual) tastes, as measured by utility, of various bundles of goods. They permit the consumer to rank these bundles of goods according to the levels of utility they give the consumer. Note that preferences are independent of income and prices. Ability to purchase goods does not determine a consumer's likes or dislikes





Consumer behavior can be defined as the behavior that consumers display in searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy consumer needs and wants. To elaborate further, consumer behavior focuses on how individuals make decisions to spend their available resources (time, money, effort) on consumption related items. That includes what they buy? Why they buy it? When they buy it? Where they buy it? How often they buy it? How often they use it? How they evaluate it after the purchase? The impact of such evaluations on future purchases, and how they dispose of it? The process starts much before the products have been acquired or bought. (Sachiffman L.G. and Kanuk L.L. (2008). Consumers' lifestyles are influenced by number of factors. Like culture, subculture, values, demographic factors, social status, reference groups, household and also the internal makeup of the consumer, which are emotions, personality motives of buying, perception and learning. Consumers are also influenced by the marketing activities. (Malika Rani 2012). Hence the study focuses on customer brand preference towards pasteurized packaged milk in Gudalur town the Nilgiris.

## BRANDING OF DAIRY PRODUCTS

### BRANDING

When a company brands a product, they determine its "personality." Creating a brand that is instantly recognizable and perceived positively is the ultimate goal. Branding integrates components such as color, style and visual imagery to distinguish a company's products from the competition. Developing logos, slogans and tag lines are all ways that marketers communicate a specific brand.

### BRAND MANAGEMENT

Brand management is the application of marketing techniques to a specific product, product line, or brand.

### BRAND EQUITY

It is a phrase used in the marketing industry to describe the value of having a well-known brand name, based on the idea that the owner of a well-known brand name can generate more money from products with that brand name than from products with a less well known name, as consumers believe that a product with a well-known name is better than products with less well known names. Another word for "brand equity" is "brand value".

Brand equity is one of the factors which can increase the financial value of a brand to the brand owner, although not the only one. Brand equity is strategically crucial, but famously difficult to quantify. Many experts have developed tools to analyze this asset, but there is no universally accepted way to measure it. As one of the serial challenges that marketing professionals and academics find with the concept of brand equity, the disconnect between quantitative and qualitative equity values is difficult to reconcile. Quantitative brand equity includes numerical values such as profit margins and market share, but fails to capture qualitative elements such as prestige and associations of interest. Overall, most marketing practitioners take a more qualitative approach to brand equity because of this challenge.

## DIFFERENT BRANDS OF DAIRY PRODUCTS

### AAVIN

The Dairy Development Department was established in Tamil Nadu in the year 1958 to oversee and regulate milk production and commercial distribution in the state. The Dairy Development Department took over control of the milk cooperatives. It was replaced by the Tamil Nadu Cooperative Milk Producers Federation Limited in the year 1981. On February 1, 1981, the commercial activities of the Department such as Milk Procurement, Processing, and Chilling packing and sale of milk to the consumers etc., hitherto dealt with by the TamilNadu Dairy Development Corporation Ltd., were transferred to the newly registered TamilNadu Co-operative Milk Producers' Federation Limited, popularly known as "Aavin". Aavin is the trademark of the Tamilnadu Co-operative Milk Producers' Federation Limited, a Tamil Nadu-based milk producer's union. The aim of Aavin is to procure milk, process it, chill it, pack and sell it to the consumers. Aavin comes from Tamil meaning 'from cow'. So 'Aavin paal' translates to cow's milk.

The Tamilnadu Co-operative Milk Producers' Federation Limited is an apex body of 17 District Cooperative Milk Producers' Unions. The Federation has four dairy plants at the following locations in Chennai - Ambattur with a capacity of 4.00 lakh liters per day, Madhavaram with a capacity of 3.00 lakh litres per day, Sholinganallur with a capacity of 4.00 lakh litres per day, Ambattur - Product Dairy. Its revenue in 2010 is \$300 million. With many private companies entering the field of dairy, the Tamil Nadu government is giving high priority to improve the performance of the cooperatives. Tamil Nadu is one of the leading states in India in milk production with about 14.5 million litres per day. Aavin produces 4 varieties of milk Toned milk (3% Fat), Doubled toned milk (1.5%), Standardized Milk (4.5%), Full Cream Milk (6%)

### AMUL

Amul ("priceless" in Hindi. The brand name "Amul," from the Sanskrit "Amoolya," (meaning Precious) was suggested by a quality control expert in Anand.), formed in 1946, is a dairy cooperative in India. Amul Gujarat Cooperative Milk Marketing Federation (GCMMF) is India's largest food products marketing organization. It is a state level apex body of milk cooperatives in Gujarat. It markets its array of products under brand name 'Amul'. Amul products have been in use in millions of homes in India and also exported all over the world since 1946 with a turnover of Rs. 52.55 billion in 2007-08. Today Amul is a symbol of high-quality products sold at reasonable prices; of the genesis of a vast co-operative network, of the triumph of indigenous technology, of the marketing savvy of a farmers' organization and of a proven model for dairy development in India.

The Amul Pattern has established itself as a uniquely appropriate model for rural development. Amul has spurred the White Revolution of India, which has made India the largest producer of milk and milk products in the world. It is also the world's biggest vegetarian cheese brand.

Gujarat Co-operative Milk Marketing Federation Ltd. (GCMMF), which today is jointly owned by some 3.1 million milk producers in Gujarat, India. Amul's product range includes milk powders, milk, butter, ghee, cheese, Masti Dahi, Yoghurt, Buttermilk chocolate, ice cream, cream, shrikhand, paneer, gulab jamuns, flavoured milk, basundi, Nutramul brand and others. In January 2006, Amul plans to launch India's first sports drink Stamina, which will be competing with Coca Cola's Powerade and PepsiCo's Gatorade. In August 2007, Amul introduced Kool Koko, a chocolate milk brand extending its product offering in the milk products segment. Other Amul brands are Amul Kool, a low calorie thirst quenching drink; Masti Butter Milk; Kool Cafe, ready to drink coffee and India's first sports drink Stamina. Amul is the largest food brand in India and world's Largest Pouched Milk Brand with an annual turnover of US \$2.2 billion (2010-11). Besides India, Amul has entered overseas markets such as Mauritius, UAE, USA, Oman, Bangladesh, Australia, China, Singapore, Hong Kong and a few South African countries.

### AROKIA / HATSUN

Hatsun Agro Product Limited is a public limited company that was founded by Mr. R.G.Chandramogan, who is also the present Chairman & Managing Director. Hatsun, based in South India is the largest private sector dairy company in India and hence has a distinct advantage of dealing in cow's milk. In 1970, Hatsun began with the pioneering effort of producing Arun ice-cream, which still continues to be the most popular ice-cream brand in South India.

When the market was ruled by unhygienic milk, Hatsun came up with Arokya - the standardized, homogenised and bacteria clarified milk. Arokya milk is still unsurpassed in purity, thickness and quality and has made it one of the most preferred milk brands consumed by several hundred thousand households every day and then came Hatsun Komatha. This product is Hatsun's proud contribution of a superior quality, lower fat milk which Hatsun calls Cow's milk. Komatha is the perfect symbolization of the values and attributes of the provider of fresh milk - the cow. Hatsun started marketing fresh milk in pouches from 1993 and manufacturing dairy ingredients from 2003.

Today, Hatsun is a USD 250 million company, listed in the Mumbai Stock Exchange. Hatsun's Dairy Ingredients are processed at the state-of-the-art processing technology run by people with strong technological capabilities. These, together with an innovative and flexible approach, enable it to manufacture a range of high quality products. Hatsun has an annual production of 20,000 MT of Milk Powders and 11,000 MT of milk Fat at present.

Hatsun sources its milk with an ever watchful eye, always keen on quality. It is an enthusiastic and bustling activity when milk takes its first step in its journey to the consumers homes. Hatsun handles a total 1.8 million litre a day. Hatsun's quest for quality starts at procurement, two times a day, 365 days of the year at over a thousand collection centers, from more than a hundred thousand farmers.



**AROMA**

Sri Mahalakshmi dairy was founded by Mr. R. Ponnuswamy, Chairman and Managing Director of the Aroma Sri Mahalakshmi Group of Food industries in the year 1972 and the brand name Aroma milk is a house hold name in the city of Coimbatore and Tiruppur. Sri Mahalakshmi dairy had a humble beginning in 1972 in a small village called a Telugupalayam, nearby Coimbatore. The dairy was started with an ideological goal to serve the poor and Economically weaker dairy farmers of Coimbatore Dist. and nearby Tiruppur dist. From the time the dairy started, it has served the farmer community with complete dedication and affection. The farmers have developed an ever increasing loyalty to this organisation which is reflected in the yearly growth rate of the company.

Its product ranges are Full cream milk, toned milk, standardized milk, curd and ghee etc., It has developed good distribution network in Coimbatore dist, Erode Dist, Tiruppur Dist, Dindigul Dist, The Nilgiri's Dist and Palakkad, Ottapalam, Trichur & Perunthalmanna of Kerala state.

**CAVIN**

Cavinkare's new dairy business Cavinkare Dairy Division is the new venture of CavinKare. Cavin's dairy products include milk, curd, ghee, butter, flavoured milk etc. The first product, Cavin's milk was launched on 14th of January 2009. The milk procured from village farms is sent for processing at CavinKare's State-of-the-art dairy plant. Cavin's milk is freshly procured from the farmers and hygienically processed through state of the art technology under stringent quality standards to retain its freshness and full nutritional value. Care is taken to reach the processed milk from the plant to consumers within 24 hours. This ensures the freshness of Cavin's products when it reaches the market. Cavin's milk is available in different variants to suit the requirements of different age groups.

**SAKTHI**

P. Nachimuthu Gounder laid the foundation Treatment of the Sakthi Group. It was in 1921, P. Nachimuthu Gounder broke away from his traditional business of hiring out bullock carts, into pioneering a passenger transport service. The Sakthi Group has spread its roots into Sugar, Industrial Alcohol, Effluent Treatment Plant, Auto Components, Textiles, Transport, Finance, Beverages, Soya Products, Dairy Products, Synthetic Gems manufacture and Plantations.

**DAIRY DIVISION**

Sakthi milk is marketed in various towns of Tamil nadu and Kerala. It is the second largest brand in Kerala next to state owned co-operative brand. It is also manufacturing and marketing value added milk products like Cream, ghee, butter, curd, sterilized flavored milk panner, buttermilk, etc. Attributing future growth of the division the export of Sakthi to foreign countries has earned significant market response. Presently it is procuring and processing 1,10,000 litres of milk every day. Liquid milk is marketed in various towns of Tamilnadu and Kerala carrying the brand name of "Sakthi Milk". This division will be the thrust area for further growth of the company and the potential for growth is immense. Products like butter, khoa, flavoured milk, yogurt, paneer and cheese are being planned for introduction shortly. It has established good marketing network for dairy export demand both in Tamilnadu and in Kerala. It has increase substantially, giving more margin.

Being the world's largest producer and consumer of dairy products, India represents one of most lucrative dairy markets. At the outset with the emergence of different brands of dairy products the demand for processed dairy products is expanding and is expected to keep doing so as cold supply chains and modern trade continue to evolve. Increasing urbanization, exposure to gourmet foods and corresponding changes in consumer preferences, behavior and purchasing power are the catalysts for the rise of processed dairy categories.

**OBJECTIVES OF THE STUDY**

1. To assess the level of consumer brand preference towards pasteurized packaged milk
2. To know the average expenditure on milk and dairy product of the consumer.
3. To identify the factors influencing in purchase decision in study area.
4. To identify the brand awareness, problems and level of satisfaction of the respondents in purchasing of various brands of milk and milk products.

**LIMITATION OF THE STUDY**

1. Due to limitation of time only few people would be selected for the study
2. The sample size for the study is 100 only.
3. The study is limited up to Gudalur town only.

**REVIEW OF LITERATURE**

(i) **Rubaina<sup>1</sup> (2010)** conducted a research on the customer preference towards dairy products. The study made an attempt to identify the customer's preference towards dairy products and to know about the factors which influence the selection of different brands of dairy products. The study revealed that the company should make survey **to know the expectations of the consumers** and produce that product in the manner so as to attract more customers towards their brand and advertisement can be done through mass media to increase sales and to educate customers about the product

(ii) **Nagapani<sup>2</sup>** in his study on the marketing aspects with special reference to Coimbatore district co-operative milk producer union limited made an attempt to **identify the reasons for low procurement of milk and to know about the demand in that area**. The study found that the reason for low procurement in the areas of shanmugapuram and sultanpet chilling centers was due to the competition in procurement from private dairies. The sale of milk in 500 ml sachet was found to be high among the available size of sachets.

(iii) **Radder and Natalie heather smith<sup>3</sup>** conducted a study on milk marketing by selected dairy companies in port Elizabeth. The objectives of the study were to determine consumers' milk consumption patterns and **factors which influence consumers' milk consumption** and to review the major competitors in the Port Elizabeth. The study found that most of the respondents used milk for whitening of tea or coffee and they had the opinion that the milk was very healthy and it was an enjoyable tasting beverage and they felt that quality, availability and freshness were the most influencing factors. The study also found that the increasing competitiveness in the milk industry, including the no-name brand milk was forcing dairy companies to sell the milk at very low profit margins.

(iv) **Abinesh<sup>4</sup>** made a Comparative study on consumer behavior towards loose milk and packed milk. The objective of the study was **to analyses the factors influencing consumer behavior and the government intervention to change consumer's preference from loose milk to packed milk**. The study found that the factors like quality, quantity, hygienic aspect and government intervention influence consumer behavior. Government agencies like, dairy development department, Kerala co-operative milk marketing federation and the dairy cooperatives societies have to play an important role, to help the milk farmers on one hand and consumer on the other hand. Further the efforts of Dairy development department and MILMA have to go a long way in the days to come to develop quality milk procurement and marketing in Kerala

(v) **Shanthi<sup>5</sup>** in her doctoral research attempted to study on buyer behavior of urban household in fluid milk market with reference to Coimbatore district and attempted **to identify the fluid milk consumption and pattern of utilization by the households with respect to price, promotion and distribution of fluid milk**. The study found that the higher attitudinal strength was based on the selection of the brand of milk on fat content and other nutritional facts, the lower attitudinal strength had resulted towards lack of assurance on continuous purchase of the same brand in the future. It was also found that the organized sector dairies concentrate in marketing pasteurized branded fluid milk.

**STATEMENT OF THE PROBLEM**

Milk is an essential commodity in human life of Indian consumers. They prefer healthy and energy drinks for consumption. Milk and Dairy products are easily available, it offered by number of milk brands. The main challenge for marketers is, to create the consumer loyalty by quality, freshness, odor and taste. Marketers are necessary to know the consumers response towards their own brand milk and dairy products of its availability, acceptability and affordability. Aavin plays a vital role in marketing. The success of the milk and milk product depends not only, the marketing but also the consumer preference pattern towards their product.

To have better marketing the union needs a maximum inspiration from the consumer side. If marketing is done without the execution of consumer. It cannot run successfully for a long period of time. So an analytical study is conducted based on consumer preference with regards to market of milk and milk product.

**RESEARCH METHODOLOGY**

**AREA OF THE STUDY**

Gudalur is a Municipality town and taluk in Nilgiris district in the Indian state of Tamil Nadu. As of 2011, the town had a population of 49,535. Gudalur is a picturesque green valley on the way from Mysore to Ooty. It is a gateway to three states, Tamil Nadu, Kerala and Karnataka lying equidistant from both Kerala and Karnataka. Though the history of the name has been lost, it is the place where all of the three states' boundaries meet. Some even say the name originated as 'Koodal'(Joining) in Tamil and 'Ooru'(Village),and Goodal+uru as a mysterious place. As the town is located 50 km from any other nearby bigger towns, Ooty, Sulthan Bathery, and Gundalpet & Nilambur it can very well be called as the Joining-Place or Point.

**HYPOTHESIS OF THE STUDY**

There are significant relationships between the Income and age, marital status, educational qualification, occupation, family members and influences to buy of the milk and milk products

**METHODS AND DATA COLLECTION**

The present study is based on both primary and secondary data. The study is mainly based on primary data. The primary data required for this study has been collected from the consumer of various branded milk and milk products. The primary data has been collected through a well- structured questionnaire. The study is also based on the secondary data. The secondary data required for this study has been collected from various books, journals and magazines related with Milk and milk products.

**(i) Simple Percentage Analysis**

This is a method to compare two or more serious of data. It identifies the relationship between the data's.

$$SAA = \frac{\text{No. of Respondents}}{\text{Total No of Respondents}} \times 100$$

Where SSA stands for **simple average analysis**

**(ii) Chi- Square Analysis**

In order to the chi- square test either as a test of goodness of fit or as a test to judge the significance of association between attributes, it is necessary that the observed as well as theoretical or expected frequencies must be grouped in the same way and the theoretical distribution must be adjusted to give the same total frequency.

$$\chi^2 = \sum \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Where, Oij = observed frequency of the cell in i the row and j the column.

Eij = expected frequency of the cell in i the row and j the column.

**RESEARCH DESIGN AND SAMPLE SIZE**

**(I) RESEARCH DESIGN:** The Research design is the conceptual structure within which research is conducted; it The study notches the consumer brand preference towards pasteurized packaged milk.

**(II) SAMPLE SIZE:** Most of them were preferred Aavin milk in day- to - day life. Out of this 100 respondents were selected.

**(III) SAMPLING METHOD:** The sampling method is Non-probability sampling under which convenience sampling technique were used.

**ANALYSIS AND INTERPRETATION**

The result of analysis and interpretation of empirical data based on the questionnaire of 100 respondents. The primary data is collected by the way of questionnaires from various age grouped and socio-Economic people of Gudalur Taluk of Nilgiris district, Tamil nadu. The questionnaire is prepared through the various levels, awareness about brand, products and level of satisfaction of respondents. The profile of respondents include age, gender, marital status, place of resident, educational qualification, occupation, family category, size of family, average age of family, monthly income. Percentage and Chi-square methods are using for analysis and interpretation of data.

**ANALYSIS OF DATA**

**TABLE 1: BRAND PREFERENCE**

Brand name	Total	Percentage
Aavin	34	34
Amul	6	6
Arokia	12	12
Hat sun	6	6
Aroma	14	14
Cavin	10	10
Sakthi	4	4
Fresh	9	9
Nilgiris	3	3
Amritha	2	2
<b>Total</b>	<b>100</b>	<b>100</b>

Sources: Primary Data

**FIGURE 1: BRAND PREFERENCES**

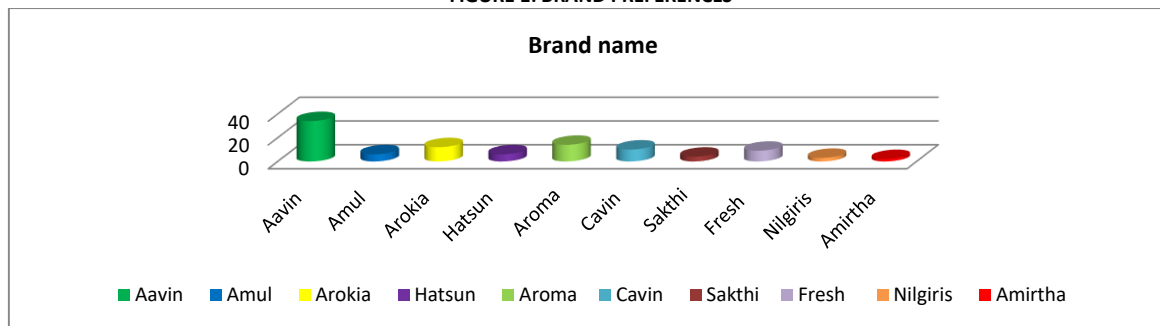


Table-1: Shows that majority (34 percent) of the respondents were preference Aavin brand milk and milk products, followed by, Aroma (14) percent Arokia (12) percent, Cavin (10) percentage Fresh (9) percentage, Hat sun (6) percentage.

**PERCENTAGE METHOD**

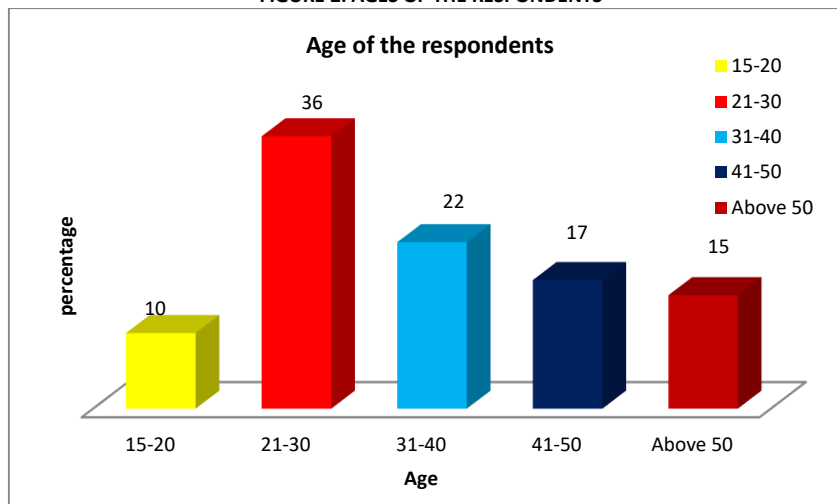
**TABLE 2: AGE OF THE RESPONDENTS**

Age	Name of the respondent	Percentage
15-20	10	10
21-30	36	36
31-40	22	22
41-50	17	17
Above 50	15	15
<b>Total</b>	<b>100</b>	<b>100</b>

Sources: primary data

The Table 2 show the age wise classification of the 100 respondents, 10% of the respondents are belongs to the age group of 15-20 years. 36% of the respondents are between the age group 21-30 years, 22% of the respondents are between the age group 31-40, and 17% of the respondents are between the age group 41-50 years and 15% of the respondents are belongs to the age group of above 50. Majority (36%) of the respondents are between the age group of 21-30 years.

**FIGURE 2: AGES OF THE RESPONDENTS**



The Figure 2 show that the Majority 36% of the respondents is belongs to the age group between 21- 30.

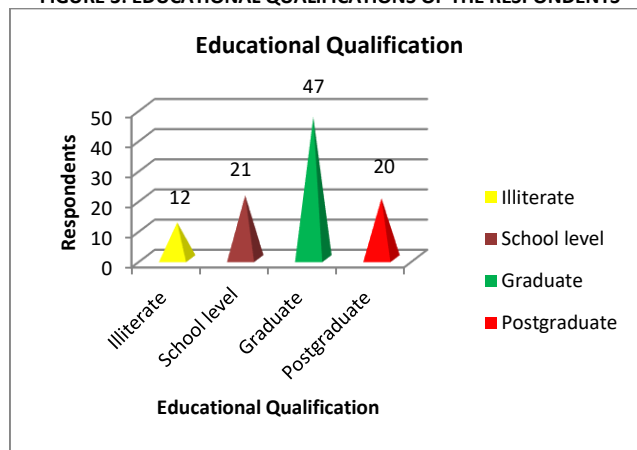
**TABLE 3: EDUCATIONAL QUALIFICATION OF THE RESPONDENTS**

Educational qualification	No of Respondent	Percentage
Illiterate	12	12
School level	21	21
Graduate	47	47
Post graduate Above	20	20
<b>TOTAL</b>	<b>100</b>	<b>100</b>

Sources: of primary data

The table 3 shows the educational qualification of the 100 respondents, 12% of the respondents are illiterate, 21% of the respondents belongs to school level education, 47% of the respondents have completed graduate level and 20% of the respondents belongs to post graduate and above.

**FIGURE 3: EDUCATIONAL QUALIFICATIONS OF THE RESPONDENTS**



The Figure 3 shows that the Majority 47 % of the respondents were graduates.

TABLE 4: MONTHLY INCOME OF THE FAMILY

MONTHLY INCOME OF THE FAMILY	NO OF RESPONDENTS	PERCENTAGE
5,000	22	22
RS. 5,001-10,000	49	49
RS.10,001-20,000	17	17
MORE THAN 20,000	12	12
TOTAL	100	100

Sources: Primary Data

The table 4 shows the monthly income of the family of the 100 respondents, 22% of the respondents, whose monthly income ranges, are Rs. 5,000. 49% of the respondents are earning monthly income between Rs. 5,001 to Rs. 10,000 17% of the respondents whose income ranges between Rs. 10,001 to Rs. 20,000 and 12% of the respondents are earning more than Rs. 20,000.

FIGURE 4: MONTHLY INCOME OF THE RESPONDENTS OF THE RESPONDENTS

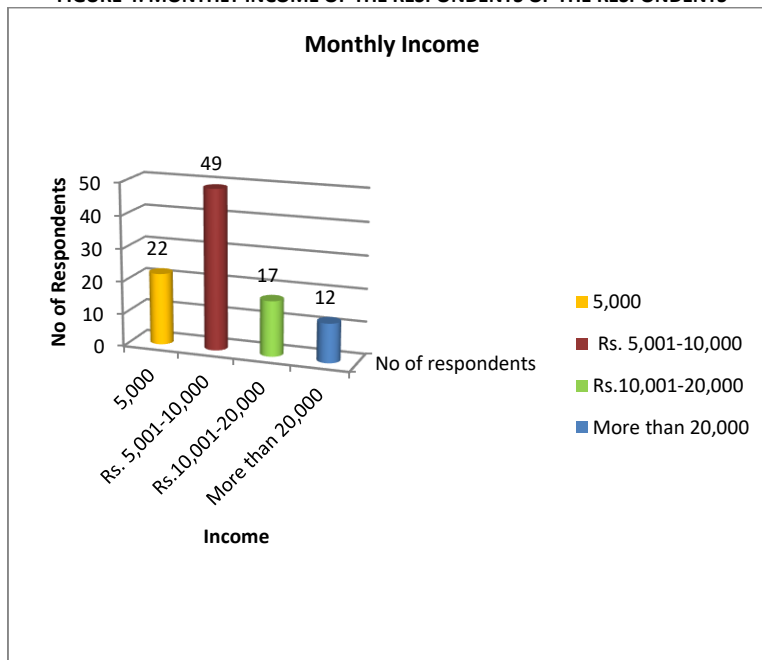


Figure 4 show that Majority 49% of the respondents who's earning range between Rs. 5,001 to Rs. 10,000.

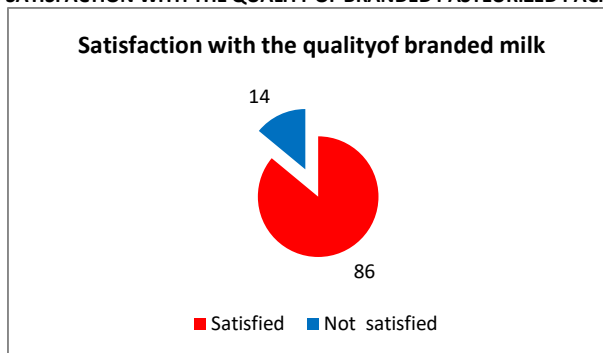
TABLE 5: SATISFACTION WITH QUALITY OF BRANDED PASTEURIZED PACKAGED MILK

Satisfaction with Quality of branded pasteurized packaged milk	No of Respondents	Percentage
Satisfied	86	86
Not satisfied	14	14
Total	100	100

Sources: primary data

The Table 5 shows that the satisfaction with quality of branded pasteurized packaged milk of the 100 respondents. It indicates 86% of the respondents are satisfied with quality of milk and rest 14% of the respondents are said that not satisfied with quality of milk. Majority (86%) of the respondents are satisfied with quality of milk.

FIGURE 5: SATISFACTION WITH THE QUALITY OF BRANDED PASTEURIZED PACKAGED MILK



Majorities 80% of the respondents are satisfied with quality of milk.

TABLE 6: SATISFACTION LEVEL ON PRICE OF THE BRANDED PASTEURIZED PACKAGED MILK

Satisfaction with price of Branded pasteurized packaged milk	No of Respondent	percentage
Strongly Agree	12	12
Agree	32	32
Normal	40	40
Disagree	06	06
Strongly disagree	10	10
Total	100	100

Sources: primary data

Table 5: reveals the satisfaction level of price of the Branded pasteurized packaged milk of the 100 respondents. It indicates 12% of the respondents are strongly agree with the price with milk 32% of the respondents are agree with the price of Branded milk 40% of the respondents are specified the normal as the price of milk 6% of the respondents are disagree with the price of milk and remain 10% of the respondents are strongly disagree with the price of the milk.

FIGURE 6: SATISFACTION LEVEL ON PRICE OF THE BRANDED PASTEURIZED PACKAGED MILK

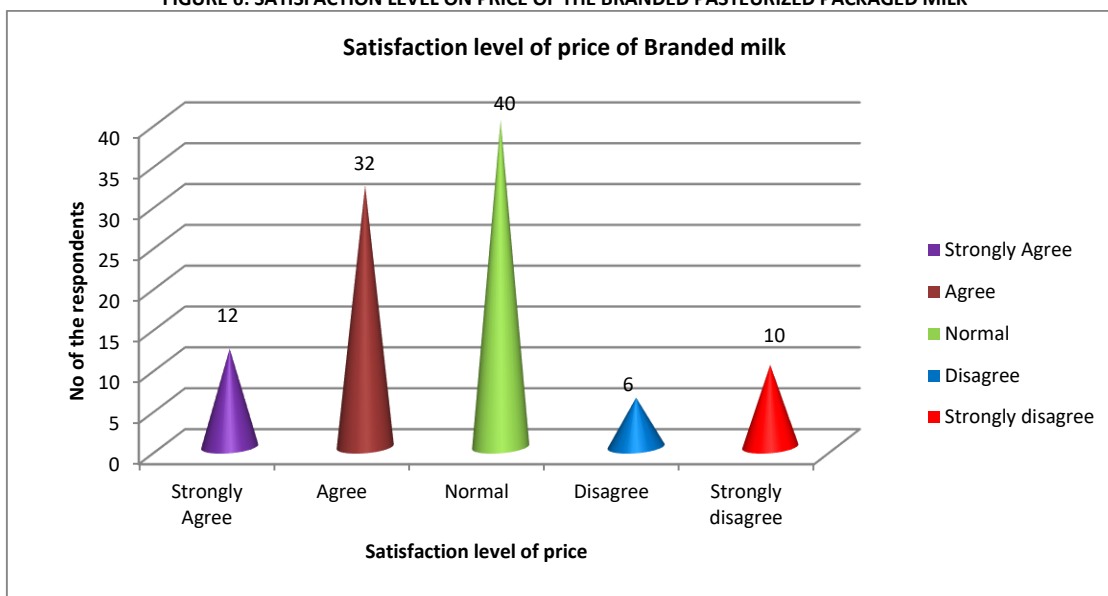


Figure 5: Show that Satisfaction level on price of Pasteurized packaged milk. Majorities (40%) of the respondents are satisfied with the level on price of milk.

CHI-SQUARE TEST

TABLE 7: LEVEL OF SATISFACTION BASED ON PLACE OF RESIDENCE

Level of Residence	Level of satisfaction			Total
	Highly satisfied	Satisfied	Dis -satisfied	
Village	20	45	3	68
Town	5	23	4	32
<b>Total</b>	25	68	7	<b>100</b>

Ho: There is no significant relation between place of resident and level of satisfaction

O	E	O-E	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E
20	17	3	9.0	0.53
45	46.24	-1.24	1.5	0.03
3	4.76	-1.76	3.1	0.65
5	8	-3	9.0	1.13
23	21.76	1.24	1.5	0.07
4	2.24	1.76	3.1	1.38
				<b>Total:3.8</b>

Degree of Freedom: 2

Calculated  $\chi^2$  Value: 3.8

Table value: Five percent level- 5.99

The above table indicates that the level of satisfaction based on place of residence of 100 respondents, 68 respondents are residing at village. From this table 20 respondents are highly satisfied, 45 respondents are satisfied and rest 3 respondents are dissatisfied. 32 respondents are residing at town. From this, 5 respondents are highly satisfied, 23 respondents are satisfied and remain 4 respondents are dissatisfied.

Thus it inferred that 20 respondents are highly satisfied, under the place of resident out of 68 village residents and total of 100 respondents. Chi- square value is less than the table value at five percent level. Hence the hypothesis is accepted. There is no significant relation between place of resident and level of satisfaction of branded milk. Thus, two attributes such as place of resident and level of satisfaction are not associated and interdependent.

TABLE 8: LEVEL OF SATISFACTION BASED ON GENDER

Gender	Level of satisfaction			Total
	Highly satisfied	Satisfied	Dis -satisfied	
Male	19	10	3	32
Female	41	23	4	68
<b>Total</b>	60	33	7	<b>100</b>

Sources: Primary Data

Ho: There is no significant relation between Gender and level of satisfaction

O	E	O-E	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E
19	19.2	-0.2	0.04	0.002
10	10.56	-0.56	0.3136	0.030
3	2.24	0.76	0.5776	0.258
41	40.8	0.2	0.04	0.001
23	22.44	0.56	0.3136	0.014
4	4.76	-0.76	0.5776	0.121
			<b>Total</b>	<b>0.426</b>

Degree of Freedom: 2

Calculated  $\chi^2$  Value: 0.426

Table value: Five percent level- 5.99

The table 7 indicates the level of satisfaction based on gender of 100 respondents, 32 respondents are Male. From this table 19 respondents are highly satisfied, 10 respondents are satisfied and rest 3 respondents are dissatisfied. 68 respondents are female. From this, 41 respondents are highly satisfied, 23 respondents are satisfied and rest 4 respondents are dissatisfied. Thus it inferred that 41 respondents are highly satisfied, under the female category out of 68 female respondents and total of 100 respondents. Chi-square value is less than the table value at five percent. Hence the hypothesis is accepted. There is no significant relationship between gender and level of satisfaction of pasteurized packaged milk. Thus, two attributes such as gender and level of satisfaction are not associated and independent.

### FINDINGS

1. Majority 36% of the respondents belongs to the age group between 21-30.
2. 47% of the respondents were Graduates.
3. 49% of Respondents earning range is between 5,001 to 10, 000.
4. Majority 86% of the Respondents were satisfied with the Quality of pasteurized packaged milk.
5. 40% of the Respondents are normal in the satisfaction level on the price of the branded milk.

### SUGGESTIONS

1. The consumer is the king in the market. So all the consumers are wanted more awareness about their branded milk; they are educated or uneducated. The milk producers have to improve promotional activities, it establishes their brand among consumers, it induces sale and build image of milk.
2. 86% respondents are satisfied with the quality of milk. Many respondent's opinion that the price of the products is high. They expect the reduction of price of product. The price of products where create a positive word-of-mouth communication that improves results of sale.
3. All branded milk make effort to satisfy all their consumers. It may provide with less cost, extra taste, easy availability, and perish ability of the products, festival offers and free gift coupons while the consumers purchase the products

### CONCLUSION

This study is aims to focuses on consumer preference towards pasteurized packaged milk in Gudalur residents. Generally, the consumers change their attitude frequently on the basis of new trend and fashion. In selected 100 Respondents nearly 34% of the respondents preferring to purchase Aavin milk. Milk producers must meet consumers' demand for milk when there is demand in order to remain competitive. They well know their needs and wants, so gather information about products and also compare its price, quality, taste and other attributes. If the consumers are not satisfied they shift one brand to another brands. However, the data shows the consumers buy the Aavin milk for its quality and taste. It has to be point out that milk consumers prefer taste over than the price. Many respondents feel the price of Aavin products is too high than other brands. If the Aavin take necessary steps to satisfy their consumers, it creates invariant place in mind.

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**ASSESSING THE POTENTIALITY OF RAINWATER HARVESTING SYSTEMS IN PUNE CITY****RAJESHWARI SHINDE****RESEARCH SCHOLAR****SINHGAD INSTITUTE OF BUSINESS ADMINISTRATION****SINHGAD COLLEGE OF COMMERCE & RESEARCH****KONDHWA (BK)****DR. VIJAYA S. NAWALE****VICE PRINCIPAL****SINHGAD INSTITUTE OF BUSINESS ADMINISTRATION****SINHGAD COLLEGE OF COMMERCE & RESEARCH****KONDHWA (BK)****ABSTRACT**

*Water is a very critical for improved health and for the pursuit of various socio-Economic activities. Despite its immense usefulness, we fail to conserve the most valuable resource. Rainwater harvesting is increasingly viewed as a major strategy for enhancing the present condition of water crises specially in the dry seasons. PUNE is blessed with abundance of rains; the only concern is to tap this valuable resource water which pours in the form of rains during the rainy season. While this technology is being promoted and initiated by the PMC as a compulsion to meet the daily requirement of water by the urban population of the city, the effective implementations and working of the systems is still a big question? The purpose of this paper is to study rainwater harvesting and its sustainability and effectiveness, for residential complexes in PUNE city. An attempt is made by the researcher to identify affordability, constraining bottle necks and the efficacy of the system. A questionnaire survey was conducted amongst the registered rainwater harvesting system users under the PMC. The study concludes that adoption of rainwater harvesting technologies has certainly made the residential societies self-sustainable and is need of the hour to meet the increasing need of the growing population. Convenient sampling technique is been adopted for the purpose of the survey.*

**KEYWORDS**

registered Rwhs under PMC, residential complexes, non portable use, sustainability, water shortage.

**ACRONYMS**

<b>RWH</b>	Rainwater harvesting
<b>RHWS</b>	Rainwater harvesting systems
<b>MLD</b>	Million liters per day
<b>GEF</b>	Green Energy Foundation
<b>mm</b>	millimeter
<b>PMC</b>	Pune municipal corporation
<b>Sq m</b>	square meter
<b>TMC</b>	Thousand Metric Cubic feet

**INTRODUCTION**

**W**ater shortage is considered one of the most important and sensitive issues these days. Where increasing water deficiency and quality deterioration of the available water is evident. The majority of fresh water supplies in the world and scarce groundwater resources have to be very meticulously used to preserve this commodity for the alarming population growth. Future population growth and its associated water demands are expected to place severe pressure on these limited water reserves. Consequently, rainwater harvesting becomes of great importance in the socio-Economic development of the city like PUNE, where water sources are scarce or polluted. We today wholly and solely depend upon the dams for our day to day water supply. Yes!!! The government has shouldered the responsibility by making necessary compliances for the builders who build the housing societies with regards to Rain Water Harvesting (RWH).

The rain-gods have begun smiling on PUNE, but Puneites are not counting their blessings. Despite there being water scarcity in many parts of the city, citizens don't seem keen to harvest rainwater. The city has saved only 12 million litres a day (MLD) of water through rainwater harvesting. This came to light from a study conducted by the Green Energy Foundation (GEF). But there still is space to aggravate the use of rain water through efficient conservation of rainwater through Rain water harvesting systems (RHWS).

Water shortage is one of the critical problems in PUNE City. This problem is not new one, and it cannot be solved overnight. The water table is lowering day by day, and the recharge of groundwater table is facing difficulties because of the pavements and concrete roads. Rainwater harvesting is an effective option not only to recharge the groundwater aquifer but also to provide adequate storage of water for future use. Certainly this reservoir of water underneath the ground could be of great use for flourishing days, as well critical period of the year. This system is a suitable sustainable option for providing water. It is almost the only way to upgrade one's community water supply. The installers of RWHS have installed the RWHS to meet the compliance put forth by the government for housing societies build up after 2008. But meeting this compliance has certainly helped in bringing about the natural researching of the water table beneath the ground.

**LITERATURE REVIEW****WHAT IS RAINWATER HARVESTING?**

Rainwater harvesting is a gathering, collection and storing, of rainwater. It is used to provide water for both portable as well as non portable use. Rainwater is collected from the roofs of houses, housing societies, tents and local institutions, or from specially prepared areas of ground. Roof rainwater is usually of good quality compared to land surface and does not require treatment before consumption. Household rainfall catchment systems are appropriate in areas with an average rainfall of greater than 200mm per year, and no other accessible water sources.

Thus an attempt was made by the researcher to understand the efficacy of rainwater harvesting systems in PUNE city.

**BENEFITS OF RAINWATER HARVESTING**

Rainwater harvesting is a simple and primary technique of collecting water from natural rainfall. At the time of a water crisis, it would be the most easily adaptable method of mitigating water scarcity. The system is applicable for both critical and normal situations. It is an environmentally friendly technique that includes efficient collection and storage that greatly helps local people. The associated advantages of rainwater harvesting are that

- i. It can curtail the burden on the public water supply, which is the main source of city water

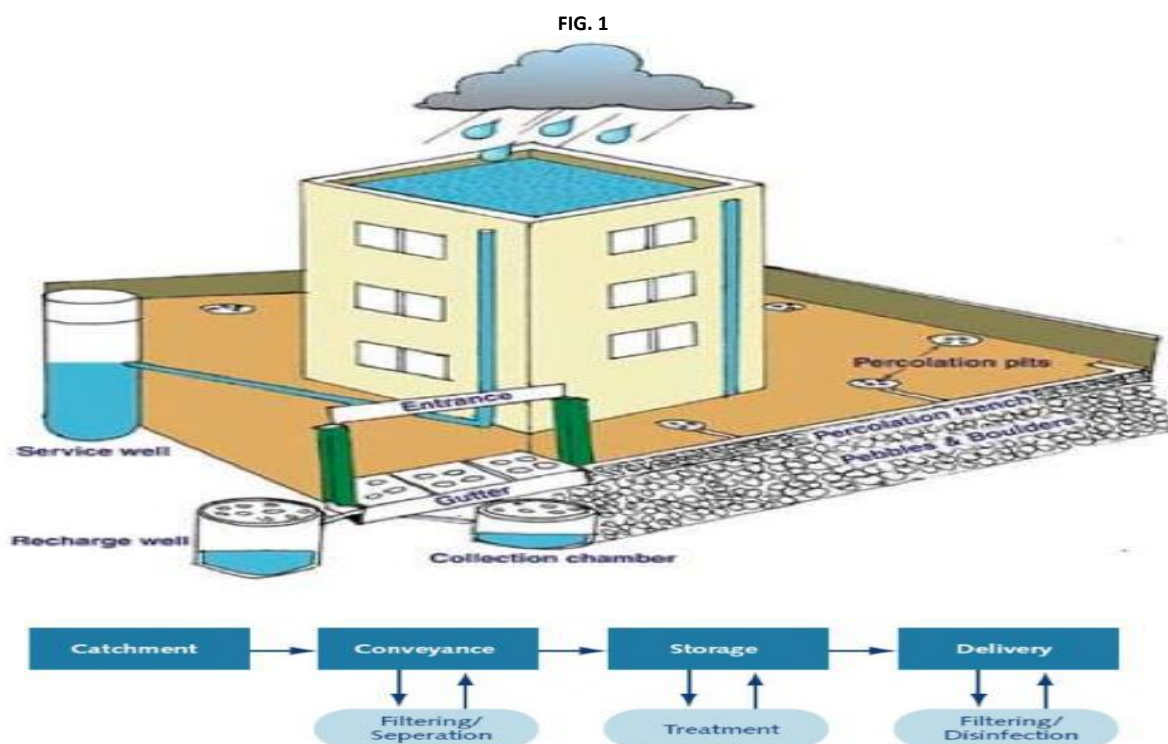
- ii. It has both potable as well as non potable usage
- iii. Its cost of installation is low compared to the water purchased by the housing societies by the tankers in the lean season
- iv. Groundwater level is highly recharged during rainfall.
- v. It brings about sustainability despite of adversities.

**RWHS:** Rainwater harvesting is the collection and storage of rainwater for reuse on-site, rather than allowing it to run off. These stored waters are used for various purposes.

1. Rainfall is the main source of water which is to be preserved for future use.
2. Catchments: The catchment of a water harvesting system is the surface which directly receives the rainfall and provides water to the system. It can be a paved area like a terrace or courtyard of a building, or an unpaved area like a lawn or open ground.
3. Coarse mesh at the roof to prevent the passage of debris.
4. Delivery systems (gutters) to transport the water from the roof or collection surface to the storage reservoir.
5. First-flushing A first flush device is a valve that ensures that runoff from the first spell of rain is flushed out and does not enter the system. This needs to be done since the first spell of rain carries a relatively larger amount of pollutants from the air and catchment surface.
6. Filter The filter is used to remove suspended pollutants from rainwater collected over roof. A filter unit is a chamber filled with filtering media such as fibre, coarse sand and gravel layers to remove debris and dirt from water before it enters the storage tank or recharges structure. Charcoal can be added for. Additionally there are a wide variety of systems available for treating water either before, during and/or after storage (e.g. biosand filter, SODIS, chlorination; or in general HWTS).
7. An extraction device (depending on the location of the tank) may be a tap, rope and bucket, or a pump or a infiltration device in the case the collected water is used for well or groundwater recharge
8. Storage facility there are various options available for the construction of these tanks with respect to the shape, size and the material of construction.

\*Shape: Cylindrical, rectangular and square.

\*Material of construction: Reinforced cement concrete, (RCC), ferrocement, masonry, plastic (polyethylene) or metal (galvanised iron) sheets are commonly used.



**PMC initiative:** PUNE Municipal Corporation (PMC) introduced rain harvesting under the Eco-housing project scheme. The scheme was introduced in 2008. Rainwater harvesting is mandatory for all buildings that are being constructed on plots that are more than 5,000 sq m in size. PMC is doing its part by promoting rainwater harvesting by offering 10 per cent rebate in property tax to citizens who implement the technique.

As per the GEF report, the city consists of 6.40 lakh housing units. Out of that, only 479 townships (Housing societies) are saving water through the rainwater harvesting system. The city needs 590 Thousand Metric Cubic feet (TMC) of water per day. Currently, PMC supplies only 512 TMC. If people save rainwater, they will collect 112 to 115 TMC extra water per day. GEF founder Sharmila Oswal said, "If we assume that 50 per cent of the PMC area is being developed with 40 per cent of it as open area/pavement, and the city collects 40 per cent of rain falling over it, the quantity of rainwater that can be harvested through surface run-off harvesting, works out to 68 MLD which is 11 per cent of the total water demand. By using percolation tanks, the ground water level can be increased up to 1 meter for an area of 1 sq km. totally, around 32 per cent of the total water requirement in PMC areas can be met through rainwater harvesting."

"The city needs rainwater to be harvested. For this, the PMC has to create awareness about this system through the proper media. We have conducted a study throughout the city area. We collected data on rainfall, water supply in every area and so on. We have sent a proposal to PMC asking that a committee for rainwater harvesting, be set up," she added.

She further said, "Due to lack of awareness, people in PUNE are not interested in rainwater harvesting. Builders take rebates in development charges by implementing the project. But no one maintains it and so the system has failed. We have submitted our report to PMC and hope to promote awareness, education and implementation of rainwater harvesting in PUNE with the help of PMC. To tackle the water problems of the city, we have to take initiative now." (*Published in e paper of Times of India 13/06/2010*)

### NEED/IMPORTANCE OF THE STUDY

the research study at hand will help the society as well as the government in the following manner,

1. Help in identifying the defaulter.
2. Furnish information to the government in framing improvised policies related to RWHS.
3. Difficulties confronted by the installers in the functioning of the system will be better understood and ways to overcome these bottlenecks could be generated.
4. The perception of the end users and the use of RWH could be identified.

**STATEMENT OF THE PROBLEM**

“Assessing the Potentiality of Rainwater Harvesting Systems in PUNE city”. The research study tried to focus upon the effectiveness of RWHS in bringing sustainability in the supply of water, to the housing societies in PUNE city.

**OBJECTIVES OF THE STUDY**

The objectives of this study are as follows:

- 1) To know the general benefits and limitations of rain water harvesting.
- 2) To identify the causes for adoption of RWHS.
- 3) To study Rainwater Harvesting Systems with regards to ;
  - Cleaning
  - Maintenance
  - Usage
- 4) To identify challenges in managing such systems.

**HYPOTHESIS**

The below mention hypothesis was considered for the study.

**Ho:** Registered and installed under the PMC are not utilized.

**H1:** Registered and installed under the PMC are effectively utilized.

**RESEARCH METHODOLOGY**

For the purpose of the study the following research methodology was taken in consideration

**Sample size:** 12 RWHS in PUNE city which are registered under PMC.

**Sampling Technique:** Convenient Sampling was been adopted for the purpose of the study.

**Tool for collection of data:** A structured questionnaire was used which was framed taking into consideration the view point of the experts of RWHS.

**RESULTS & DISCUSSION**

The structured questionnaire shed light on the functionality of the RWHS

**1) Is your RWHS system in Use**

	Yes	No
Is your RWHS system in Use	11	1

**Interpretation:** - Almost all of the RWHS installers have been using the system. This is clearly indicated by 92% of the respondents.

**2) Why was the RWHS installed (Multi choice)**

	Seasonal scarcity of water, Conservation of depleting ground water resources	To meet government compliance	Seasonal scarcity of water, Unreliable PMC water supply	Seasonal scarcity of water	Seasonal scarcity of water, To meet government compliance
Why was the RWHS installed	2	6	1	1	1

**Interpretation:** - Most of the housing societies have opted for RWHS in order to meet the compliance. But at the same, a few have installed the system to meet the water scarcity.

**3) Source of water frequently used**

	Borehole/well	Municipal tap..	Rainwater harvested	Tap(PMC supply) & rain water harvested
Source of water frequently used	4	1	2	4

**Interpretation:** - Most of the housing societies have been using PMC as well as RWH. At the same a large no of the housing societies are also residing on only the bore well and a small percent uses rainwater occasionally and relies completely on PMC for water supply.

**4) Have you faced water crisis despite of RWHS?**

	Yes	No	To some Extent
Have you faced water crisis despite of RWHS?	2	6	3

**Interpretation:** - It is very much evident from the above analysis that despite the presence of RWHS, there still is the shortage of water for use.

**5) Are you aware of any regulations, permit requirements, or incentive programs within your jurisdiction related to rainwater harvesting?**

	Yes	No
Are you aware of any regulations, permit requirements, or incentive programs within your jurisdiction related to rainwater harvesting	5	6

If yes mention	Reasons
Tax Benefits	4

**Interpretation:** Nearly 55% of the respondents are not aware of the incentive rules and regulations with regards to RWHS, may be they were the ones who are mostly the plumbers or the care takers who looked after the water supply to the housing societies. Whereas some 45% are aware of tax rebate they get due to installation and working of the RWHS.

**6) What type of rainwater harvesting is in use**

	Surface runoff is collected	Roof rainwater	Both surface and roof water is collected
What type of rainwater harvesting is in use	1	2	8

**Interpretation:** Mostly the housing societies prefer both surface as well as roof rainwater harvesting methods for collecting the rain water, which is indicated by 73% of the respondents

7) How long can the rain water harvested can be used

	Available till the next rains	Finished before dry season starts
How long can the rain water harvested can be used	7	3

**Interpretation:** The rainwater harvested is available up to the next rains. So, one can conclude that it is the best source of water supply during the deficit time of the year. This is indicated by 70% of the respondents.

8) Is the rainwater harvested used for potable use?

Portabel use of rainwater harvestd	Use	Don't use
	0	11

**Interpretation:** - From the above analysis it is very much clear that the rain water harvested is not been used for potable use which is indicated by 100% of the respondents.

9) What are your intended uses for the rainwater harvested water? (Check all that apply)

	Response
Washing cars,	11
Toilet flushing	9
Washing Clothes	9
Gardening and for landscape	11
Washing utensils	9
Cleaning of floors	9
Any other (fire extinguishing)	1

**Interpretation:** From the above analysis it is very much clear that non portable use of Rain water harvested is mainly for landscaping and washing of cars which is emphasized by 19% of the respondents respectively.

10) To what level is the RWHS satisfactory

To what level is the RWHS satisfactory [Quality is good]	Response
Highly satisfied	6
Satisfied	6
Partially Satisfied	1

**Interpretation:** From the above analysis it is very much evident that the functionaries are satisfied towards the quality working of the system.

11) What type of storage been used to store the rain water harvested?

If yes what type of storage tank is been used	Response
Plastic	
Metal	Nil
Concreter	9
Any other	Nil

**Interpretation:** The above analysis indicate that concrete tanks are been used in order to store the rainwater which is harvested. But it is as much evident that a small percentage has been using the water harvested directly when required by using the borwell.

12) How frequently is the storage tank of RWHS been cleaned

How frequently is the storage tank of RWHS been cleaned	Response
Annually	1
Twice a year	9
Other	2

**Interpretation:** Cleaning of the tank is done twice a year by majority of the RWHS installers.

13) How frequently is the catchment area been cleaned

Cleaning of the catchment area	Response
Throughout the year	3
Once in six months	2
Once in three months	5
Before the onset of rainy season	1

**Interpretation:** The catchment area i.e. the floors as well as the terrace and gutters are cleaned regularly at an interval of 3 months or through the year whenever there is the need to clean it which is indicated by 46% and 27% respectively.

14) Is it difficult to clean inside the jar/storage tank?

	Agree	Disagree	Neither agree nor disagree
Is it difficult to clean inside the jar/storage tank ?	3	5	0

**Interpretation:** - There is a mix response when it comes to cleaning of the storage. Some are of the view that, it is difficult to clean where as some claim that there is ease in cleaning interiors of the tank

15) Level of Users satisfaction towards RWH systems

Overall user satisfaction	Response
Highly satisfied	6
Satisfied	5

**Interpretation:** The above analysis it is very much clear that the installers are highly satisfied with the RWHS.

16) Filtration procedure before entering the tank

Filtration procedure of RWHS before entering the storage tank	
Not filtered	2
using bio filters	1
using net	0
using sedimentation tank	8

**Interpretation:** The RWHS which are installed generally go for sedimentation tanks for filtration before entering the storage tanks. At the same it is worth to be noted that some go for non-filtered water may be they are the ones who treat the water later on before usage.

**17) What is the impact of rainwater harvesting in your dug well/tube well/hand pump?**

What is the impact of rainwater harvesting in your dug well	
yes	11
no	0

**Interpretation:** The water table has certainly increased where rainwater harvesting is done. This is indicated by 100% of the respondents.

**18) Social, traditional beliefs have an impact on RWH water usage**

Does the tradition, social culture belief obstruct you	Yes	No
	1	9

**Interpretation:** Social, traditional, and cultural factors hardly have any impact on the usage of Rainwater which is used.

**19) Level of Users satisfaction towards RWH systems**

	highly satisfied	satisfied	dissatisfied	highly dissatisfied
Quality (level of user satisfaction towards RWHS system)	3	5	2	0

**Interpretation:** The above analysis indicates that the housing societies are satisfied with the Quality of output brought about by the RWHS. Which has been concluded by a majority of the respondents. But one has to note that there is slight dissatisfaction towards the system by the end users of RWHS which is indicative of the fact that a good no of end users is dissatisfied.

**FINDINGS**

*Above analysis sheds light on the below mention facts:* No matter the installers of RWHS have installed the system in order to meet the compliance put forth by the government. They have been regularly utilizing the water harvested by the RWHS as they found the system offers sustainability towards the supply of water through the year. But at the same it was noted that they have been using it for only non portable use. And at regular intervals there is the cleaning and maintenance which is given due preference by the end user. Thus it is evident from the above analysis that the users are satisfied as it mitigates the water crises situation.

**RECOMMENDATIONS/SUGGESTIONS**

The following are the recommendation the researchers would like to propose,

- 1) The quality of water should be upgraded so that portable use can be done.
- 2) Moreover, guidelines and education should be given to the caretakers of the system.
- 3) Regular monitoring should be done by the PMC.
- 4) A separate committee needs to be appointed by the PMC who tries to understand the problems faced by the installers and according rigorous research should be done in order to improve the quality and quantity of water extracted.
- 5) The best utilizers of the system should also need to be appreciated for conserving this resource effectively and using the scarce resource efficiently.

**CONCLUSION**

The RWHS are effectively utilized. Water is collected in a well maintained catchment system from the rains during the rainy. The water later is used for non portable use. The overall quality of RHWS was quite satisfactory and most of them are in working conditions No matter most of the installers have installed the RWHS to meet the compliance put forth by the government in housing societies build up after 2008. The systems are well maintained because of its effectiveness in giving sustainable dependency for the water requirement is proven. The effective utilization of RWHS is proved on the basis of,

- Purpose of installation of the RWHS by the end user.
- Use of rainwater for various non portable usages.
- Sufficiency of the RWH during the scarcity of water supply.

Which proves alternative hypothesis stated by the researcher, it also indicates that RWHS has good potential for sustainable water supply.

**LIMITATION OF THE STUDY**

Reluctance and non-availability of the concern persons who could give the information on behalf of the Housing Societies which are registered under PMC for installation of the Rainwater Harvesting.

**SCOPE FOR FURTHER RESEARCH**

Rainwater is one of the advantageous methods of using natural water in a sustainable manner. Rain is a blessing of nature. Densely populated cities like PUNE with a water crisis and adequate rainfall should adopt this technology. Cities like PUNE, where water is a major concern during summers, should introduce this system along with its traditional water supply system. Natural recharging through RWH is the only answer to the water crises in the city. Regular maintenance of harvested water might make it suitable for daily consumption. Water shortages will become the most concerned issue all around the world in the future. Therefore, city planners should rethink of the possibilities, outcome, and benefits of a rainwater harvesting system and should create policies to make the system easily available to everyone. The following research could be made in future.

1. This study focused only on rainwater harvesting system on a small scale basis. Further research could be performed on large scale residential, commercial or industrial sector
2. Case studies could be investigated to evaluate the effectiveness of RWHS.
3. A comprehensive cost-benefit analysis should be performed on different climate regions to get essential insight on the Economic viability of rainwater harvesting system (RWHS).
4. Research could also be done to enhance the quality of rainwater harvested and increase its potable use.

**ACKNOWLEDGMENT**

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## PROFITABILITY ANALYSIS OF SELECTED AUTOMOBILE COMPANIES IN INDIA

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### ABSTRACT

*The automobile industry in India is one of the largest in the world with an annual production of 23.37 million vehicles in FY 2014-15, following a growth of 8.68 per cent over the last year. The automobile industry accounts for 7.1 per cent of the country's gross domestic product (GDP). The research paper mainly focuses on analyses of profitability of selected automobile companies in India during period of 2012 to 2016, the tools used for analysis are mean, standard deviation, co-efficient of variation and compound annual growth rate, the study found that the profitability position of Bajaj Auto is satisfactory when compare to other companies.*

### KEYWORDS

CAGR, PV, CVs.

### INTRODUCTION

India's automobile industry is playing an important role of its economy, providing employment to more than a million people, directly or indirectly. The Two Wheelers segment, with 81 per cent market share, is the leader of the Indian Automobile market, owing to a growing middle class and a young population. Moreover, the growing interest of companies in exploring the rural markets further aided the growth of the sector. The overall Passenger Vehicle (PV) segment has 13 per cent market share. India is also a prominent auto exporter and has strong export growth expectations for the near future. In FY 2014-15, automobile exports grew by 15 per cent over the last year. In addition, several initiatives by the Government of India and the major automobile players in the Indian market are expected to make India a leader in the Two Wheeler (2W) and Four Wheeler (4W) market in the world by 2020. The industry produced a total 14.25 million vehicles including PVs, commercial vehicles (CVs), three wheelers (3W) and 2W in April–October 2015, as against 13.83 in April–October 2014, registering a marginal growth of 3.07 per cent, year-to-year. The sales of PVs grew by 8.51 per cent in April–October 2015 over the same period in the previous year. The overall CVs segment registered a growth of 8.02 per cent in April–October 2015 as compared to same period last year. Medium & Heavy Commercial Vehicles (M&HCVs) registered very strong growth of 32.3 per cent while sales of Light Commercial Vehicles (LCVs) declined by 5.24 per cent during April–October 2015, year-to-year. In April–October 2015, overall automobile exports grew by 5.78 per cent. PVs, CVs, 3Ws and 2Ws registered growth of 6.34 per cent, 17.95 per cent, 18.59 per cent and 3.22 per cent, respectively, in April–October 2015 over April–October 2014.

### OBJECTIVES OF THE STUDY

1. To assess the profitability position of selected automobile companies in India.
2. To examine the growth of selected automobile companies in India.

### REVIEW OF LITERATURE

**Mr. Mohan Kumar M S and Mr. Safeer Pasha M (2015)** in their paper "Profitability analysis of select cement companies in India" the main objective of this research paper is to analyze the profitability position of the selected cement companies for 10 years (2005-2014). The study based on the secondary data, the tools used for analysis are Mean, Standard deviation, co-efficient of variation and compound annual growth. The study ascertains the Ambuja cement Company shows satisfactory performance in concern with profitability.

**Dr. M. Thyagarajan and Mr J. Uday Kumar (2015)** in their paper "Profitability analysis of select aluminum companies in India" the main objective of this research paper is to analyse the profitability position of the selected aluminum companies for 10 years (2005-2014). The study based on the secondary data, the tools used for analysis are Mean, Standard deviation, co-efficient of variation and compound annual growth. The study ascertains the National Aluminum Company Limited shows satisfactory performance in concern with profitability.

**Dr. Shishir Pandey and Vikas Kumar Jaiswall (2014)** in their paper "Comparative Study of Profitability Analysis of Indian Aluminum Industries between public and private sector" the main objective of this research paper is to analysis the profitability position of the selected Aluminium companies for 5 year (2008-2014). the study based on the secondary data the tools used for the analysis is different profitability ratio and regression analysis, the study found that Aluminium industries in India shows Satisfactory performance in concern with profitability.

**Dr Pratibha Jain & Prof. Megha Mehta (2013)** In their study on financial performance of automobile companies finds that Hero Honda company performed well because of its usage of latest technology and Tata motors weak performance due to increased manufacturing overheads and company's inability to face competition.

**Dr. Nabi Rasool et al. (2013)** in their study identified that Net profit; EPS & Return on total assets are the responsible factors which will have significant influence on ROE of the companies Even that some authors.

**Abdul Raheman and Mohamed Nasr (2007)** are of the opinion that the working capital management is significantly affects the profitability of the business concerns. In some cases, even the in efficiency of the management (**Dr. Monica Tulsian (2014)**) can held responsible for the lower profitability of the company.

**Dr. T. Srinivasan Dr.M.Thiru Narayanasamy (2015)** in their study has found that better utilisation of the resource can lead for enhance profitability of the organisation apart from customer satisfaction through quality service, cutting off expenses etc. clear that profitability.

**Usman Dawood (2014)** in his research paper on Factors influencing profitability of commercial banks believe that there no relationship between the cost efficiency and profitability but observes that capital adequacy and deposits do support in profitability whereas size of the bank doesn't help in profitability.

**METHODOLOGY**

**SAMPLE DESIGN:** The present study has drawn a sample of five companies whose securities are listed in Indian stock exchange. The various ratios are calculated on the basis of annual reports of the companies for the period of 5 years 2012 to 2016.

**SOURCE OF DATA:** The financial data for the study are drawn purely from the secondary data i.e., money control.com and annual reports of the companies.

**TOOLS OF DATA ANALYSIS:** The study used the various tools of descriptive analysis like Mean, Standard Deviation, co-efficient of variance and compound annual growth rate.

**DATA ANALYSIS****TABLE 1: ANALYSIS OF OPERATING PROFIT RATIO FROM THE YEAR 2012 TO 2016**

Year	Tata Motors	Mahindra & Mahindra	Maruti Suzuki India	Hero MotoCorp	Bajaj Auto
2012	7.69	11.83	7.06	13.46	19.04
2013	3.81	11.64	9.7	15.34	18.17
2014	-2.65	11.65	11.66	13.81	20.37
2015	-3.4	10.71	13.43	14	19.04
2016	5.46	11.17	15.54	12.84	21.06
<b>Mean</b>	<b>2.18</b>	<b>11.4</b>	<b>11.48</b>	<b>13.89</b>	<b>19.54</b>
<b>SD</b>	<b>4.96</b>	<b>0.46</b>	<b>3.28</b>	<b>0.92</b>	<b>1.16</b>
<b>CV</b>	<b>227.12</b>	<b>4.01</b>	<b>28.57</b>	<b>6.65</b>	<b>5.93</b>
<b>CAGR</b>	<b>0.089</b>	<b>0.015</b>	<b>-0.179</b>	<b>0.012</b>	<b>-0.025</b>

Source: Secondary Data

The above table No. 01 reveals operating profit ratio of selected automobile companies, the Mean operating profit ratio of Bajaj auto is having highest ratio of 19.54 and lowest mean of 2.18 of Tata Motors, the compound annual growth rate of operating profit ratio was 0.089 of Tata Motors in the highest and -0.025 of Bajaj Auto being the lowest.

**TABLE 2: ANALYSIS OF NET PROFIT RATIO FROM THE YEAR 2012 TO 2016**

Year	Tata Motors	Mahindra & Mahindra	Maruti Suzuki India	Hero MotoCorp	Bajaj Auto
2012	2.28	9.03	4.59	9.93	15.38
2013	0.67	8.29	5.48	10.08	15.21
2014	0.97	9.27	6.36	8.91	16.09
2015	-13.05	8.52	7.42	8.34	13.01
2016	0.55	7.74	7.91	8.64	16.09
<b>Mean</b>	<b>-1.72</b>	<b>8.57</b>	<b>6.35</b>	<b>9.18</b>	<b>15.16</b>
<b>SD</b>	<b>6.37</b>	<b>0.61</b>	<b>1.36</b>	<b>0.78</b>	<b>1.27</b>
<b>CV</b>	<b>-371.40</b>	<b>7.08</b>	<b>21.46</b>	<b>8.51</b>	<b>8.35</b>
<b>CAGR</b>	<b>0.427</b>	<b>0.039</b>	<b>-0.127</b>	<b>0.035</b>	<b>-0.011</b>

Source: Secondary Data

The above table No. 02 shows the Mean net profit ratio of selected automobile companies are fluctuating trend during the study period Bajaj Auto has the highest Mean of 15.16 and Tata Motors has the lowest Mean of -1.72 the compound annual growth rate of Net profit ratio was negative in the case of Maruthi Suzuki and Bajaj Auto and the rest of the companies is Positive during the study period.

**TABLE 3: ANALYSIS OF RETURN ON NET WORTH RATIO FROM THE YEAR 2012 TO 2016**

Year	Tata Motors	Mahindra & Mahindra	Maruti Suzuki India	Hero MotoCorp	Bajaj Auto
2012	6.33	24.08	10.76	55.43	49.72
2013	1.57	22.88	12.87	42.31	38.51
2014	1.74	22.39	13.26	37.66	33.75
2015	-31.93	17.25	15.65	36.47	26.31
2016	1.04	14.59	16.92	39.42	29.71
<b>Mean</b>	<b>-4.25</b>	<b>20.24</b>	<b>13.89</b>	<b>42.26</b>	<b>35.60</b>
<b>SD</b>	<b>15.62</b>	<b>4.10</b>	<b>2.42</b>	<b>7.68</b>	<b>9.11</b>
<b>CV</b>	<b>-367.51</b>	<b>20.25</b>	<b>17.45</b>	<b>18.18</b>	<b>25.60</b>
<b>CAGR</b>	<b>0.571</b>	<b>0.133</b>	<b>-0.107</b>	<b>0.089</b>	<b>0.137</b>

Source: Secondary Data

The above table No 3 reveals the return on net worth of selected Automobile companies in India, the Mean return on net worth is fluctuating trend during the study period Hero MotoCorp has the highest mean of 42.26 and Tata Motors has the lowest mean of -4.25. The compound annual growth rate of return on net worth is negative in case of Maruthi Suzuki and rest of the companies shown Positive during year 2012-2016.

**CONCLUSION**

After the analysis of various data, related to selected Automobile companies in India it is founded in theoretical statement, it is clear that profitability more or less depends upon the better utilization of resources, cutoff expenses and quality of management function in the products, customer services and to manpower and goodwill and market share. It is worthwhile to increase production capacity and use advance technology to cut down cost of production and wage cost in order to increase profitability, not only against the investment, but also for investor's return point of view. These programs are helpful to increase profitability of selected steel companies in India in future prospects. It is founded in numerical statement that Bajaj Auto the profitability position as shown satisfactory when compares to other companies. The compound annual growth rate as shown satisfactory in Tata Motors while compare to other companies hence all the Automobile companies should concentrate on modern techniques of production and different marketing strategies to increase the positive growth rate and profitability.

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**THE COMPARATIVE ADVANTAGE OF NORTH CYPRUS IN THE GREEN LINE TRADE: EMPIRICAL ANALYSIS  
DURING PERIODS OF 2005- 2013**

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**ABSTRACT**

**Aim (Background):** The aim of the study is to analyse and find out the comparative advantage of the NC in the Green Line Trade (GLT). Trade is one of the most important sector for NC as other small economies. However, limited trade volume because of embargoes has a negative impact on the NC economy. GLT is an important achievement to improve trade volume and stimulate Economic growth. It is essential to know the comparative advantage of a country to increase efficiency and prevent inefficient use of resources. This study will be the first academic study on comparative advantage of NC in GLT.

**Materials and Methods:** Balassa's Revealed Comparative Advantage (RCA) and Vollrath's three indices which are relative trade advantage (VRC1), relative export advantage (VRC2) and revealed competitiveness (VRC3), used to measure the comparative advantage of the NC in the Green Line Trade.

**Results:** NC has comparative advantage in plastic products, articles of stone, vegetable products, base metals and articles, miscellaneous products and textile and textile articles in Green Line Trade. On the other hand, the NC has comparative disadvantage in chemical products, prepared foodstuff machinery and mechanical appliances and wood and articles of wood in the Green Line Trade.

**Conclusion:** To increase trade volume of NC the products have comparative advantage should be produced more and limitations on GLT has to be removed.

**KEYWORDS**

competitiveness, green line trade, revealed comparative advantage, vollrath indices balassa index.

**JEL CLASSIFICATION**

F1

**1. INTRODUCTION**

Cyprus is a small island and North Cyprus (NC) is the only unrecognized part of the island which South Cyprus (SC) represents the whole island known as Cyprus Republic. Unrecognized North Cyprus has been struggling with Economic embargoes for more than 40 years. This political problem is the main restriction on trade and Green Line Trade agreement with South can be seen as an important achievement for the North economy. *Green Line Regulation* came into force on 1 May 2004 and the implementation of Green Line Trade from North to South has started on 20 August 2004 (Adaoğlu, 2005: 17-19) and trade of goods from South to North has started in May 2005 (Hatay et. al., 2008: 19). The products which were produced in whole Cyprus was under "preferential tariff" for Europe from 1972 to 1994. Nevertheless, European Court of Justice decided to restrict its imports from North Cyprus in 1994. This decision changed the NC's direction of trade from Europe to Turkey and to different countries. Therefore, after Green Line Regulation, South Cyprus has become the third trade partner for NC after Turkey and England (Kuzey Kıbrıs Türk Cumhuriyeti'nde Sürdürülebilir Ekonomik Büyüme, 2015: 132-134).

Small states have a fragile Economic structure and they depend relatively on few sectors. Trade is very important for those economies as they have small market and high production costs. Therefore, external trade takes an important role for small countries (Katircioglu & Katircioglu, 2011: 281). Openness of small countries will help to minimize the cost of trade and to improve their economies; however, embargoes prevented NC to increase its trade volume. As a small country NC can compete with other countries only on the products that can be produced cheaper. In other words, NC should export the products that are comparatively advantageous. Another reality makes this situation very difficult; many countries, besides Economic embargoes, also apply trade barriers on the products that they import from NC. As a main trade partner of NC, Turkey does not apply embargoes to NC but because Turkey is a member of CU (Custom Union) since 1996 they import products from NC under the CU regulation that includes many trade barriers to non-member countries. In March 2016 tons of NC potatoes returned from Turkey because of "low" quality. Standards and quality are widely used methods of trade barriers under EU law. Under these circumstances trade with South Cyprus has become a very important alternative for NC. SC is a EU member since 2004 and they have the chance to trade freely with EU member states. After this brief explanation it can be understood that Green Line Regulation proposed by EU with the membership of SC to EU as an apology to North Cypriots after leaving them out of the EU membership. This reality does not make GLT less valuable for NC.

The study will try to find out the main sectors that have comparative advantage on GLT as there is no similar study in the literature for NC, but there are limited studies that analysis the importance of GLT for Cyprus. There are some political discussions but Economic studies are very limited. One of the Green Line Trade study was carried by Gokcekus et.al. (2012). There is not any study to introduce the comparative advantage of the NC in GLT by using RCA model in the literature. However, it is important to know that comparative advantage of NC to be ready and more powerful in the competitive world after the solution of Cyprus problem. After the settlement of the peace process of Cyprus, NC can be recognized by other world countries.

The aim of the paper is to analyze and interpret the comparative advantage of NC in Green Line Trade under Economic and political embargoes. Comparative advantage is one of the most widely used methods to show the sectors and products that a country has advantage in trade. By this way each country can maximize its benefit by focusing on the right products that they have advantage. And at the same time this would result with efficient use of scarce resources. This reality makes this study important for NC with its limited export volume it is essential to know the products that has comparative advantage. By this way efficiency and gain from trade will increase. South Cyprus is not the only trade partner of NC but because cross border trade plays an important role for closed economies comparative advantage of North Cyprus in Green Line Trade has become very important. This enable the study to indicate if NC creates comparative advantage or disadvantage by employing only or substantially its domestic factors of production.

The study will continue with theoretical framework and literature review. Theoretical framework will focus on comparative advantage theory. As there are limited studies on NC the literature part will include mainly the worldwide studies related with the topic and the model which is used in the study. The third section will try to explain the methodology and the analysis of the study. Section four will illustrate the empirical findings of the study and the findings of the study will be discussed in discussion part. The last part will be the conclusion of the study.

## 2. THEORETICAL FRAMEWORK

There are two important theories on trade. First one is the comparative advantage theory and the second one is absolute advantage theory. This study will use comparative advantage theory to analyse and find out which products have comparative advantage in GLT for NC. The theoretical framework does not include absolute advantage theory as it is not used in the study.

Comparative advantage theory states that a country can produce efficiently produced products by utilizing its abundant resources and export it, while a country cannot produce products which are inefficiently produced due to the lack of resources and hence, it will import it from foreign countries. The factor abundance is based on labour-abundant or capital-abundant. Therefore, a labour-abundant country produces labour-abundant goods efficiently while the capital-abundant countries produce capital-abundant products efficiently. Hence, Leisner (1958:215) first put forward an idea to determine factor intensities of countries by observing their exports. Bela Balassa (1965: 99-100) further developed this idea and invented the Balassa Index which reveals the comparative advantage of nations using post-trade data. Then, Vollrath (1987: 1-2; 1989: 4-5), developed three indices which are *relative trade advantage* (VRC1), *relative export advantage* (VRC2) and *revealed competitiveness* (VRC3) to determine the comparative advantage of nations. These three indices eliminate the double counting effects by indicating the differences between all commodities and specific commodity. Fortunately, as the Vollrath indices are consistent with the neoclassical theory; the results of three indices by Vollrath are close to real comparative advantage of a nation (Vollrath, 1991:276).

The comparative advantage theory was even stated as static terms by Ricardo, but the comparative advantage theory is a dynamic concept in the real world. The changes in the resource endowments demand patterns, technology, government policies and business practices explain the shifts in the comparative advantage of a nation. Exporting similar products due to the similar patterns expresses broad part of intra- industry trade among industrialized nations. Hence, the domestic firms continuously provide resources and promote development for their production to become more competitive in the international market. Domestic firms would specialize themselves within the industries that have comparative advantage, firms would like to be stronger in the world market therefore, firms reach competitive advantage in producing differentiated products than other firms within the industry (intra-industry trade). Thus the technological differences, demand patterns, resources and trade enhancing policies are playing important roles in determining the comparative advantage. Trading with developed and developing countries differ from each other. Trade among developing countries is based on intra- industry trade and competitive advantage of nations prevail the market. In other words, the firm level qualifications are more dominant than country level qualifications. Trade among developed and developing countries is based on the comparative advantages of nations, hence inter-industry trade prevails the market, and country level qualifications are more dominant than the firm level qualifications (Guptan, 2009: 7-8).

There are different methods in the theory to measure the comparative advantage of a country. This study will use Ballassa's Revealed Comparative Advantage and Vollrath's Revealed Comparative Advantage methods that are widely used in the literature.

### 2.1. Ballassa's Revealed Comparative Advantage (RCA)

The comparative/ competitive advantage of the nations is determined by the revealed comparative advantage method (Altay & Gurpinar, 2008: 262). In spite of confronting with post- trade prices as in the real world, the comparative advantage theory expresses the pre-trade prices (Hillman, 1980: 315). Hence, it is difficult to calculate the comparative advantage of nations with Ricardo and Heckscher – Ohlin theories. If the pre-trade prices are not known, the post-trade prices are used to determine the comparative advantage of a nation (Utkulu, 2005: 14). The analysis of export is based on the same industry in the group of reference countries. The calculation of the Balassa Index (Balassa, 1965: 106) is as follows:

$$BI^A(RCA_j) = (X_j^A / X_{AT}^A) / (X_j^{REF} / X_{REF,T}^{REF}) \quad (1)$$

According to formula 1; 'J' is the industry of specific good, T is a set of industries, A is a country, 'X<sub>j</sub><sup>A</sup>' is country A's amount of export value of industry. 'REF' is a group of reference country (ies), X<sub>j</sub><sup>REF</sup> is the export value reference country (ies) of industry J. BI<sup>A</sup> is country A's Balassa's revealed comparative advantage coefficient. The result of the BI<sup>A</sup> can be explained in a short statement as; if the BI<sup>A</sup> exceeds 1 country A has comparative advantage in the production of industry J, if the BI<sup>A</sup> is smaller than 1, country A does not have comparative advantage in production of industry J. (Hinloopen & Marrewijk, 2000:4). Comparisons between countries can be difficult. Therefore, the Balassa Index is divided in four classes to make it easier to interpret (Erkan, 2012: 3);

Classification 1: 0 < RCA ≤ 1: Without Comparative Advantage

Classification 2: 1 < RCA ≤ 2: Weak Comparative Advantage

Classification 3: 2 < RCA ≤ 3: Medium Level Comparative Advantage

Classification 4: 4 < RCA: Strong Comparative Advantage

Balassa Index determines the export specialization level of a country (Stangaciu & Eugenia, 2013: 587). The limitations among countries reveal which countries have comparative advantage and which are not within a specific sector. On the other hand, the sector which has a specific degree of comparative advantage helps to determine the cross- sector and cross – country rankings for each country (Beneditis & Tamberi, 2001: 6).

### 2.2. Vollrath's Revealed Comparative Advantage (VRC)

The Ballassa and Vollrath Indices are not the same concepts, and they cannot be easily compared. The big difference between the Ballassa and Vollrath indices is that Vollrath's Revealed Export Advantage (RXA) is different from the original Ballassa's RCA because Vollrath's RXA is eliminating the double accounting affects while practicing indices. Fortunately, it prevents problematic results while analyzing aggregated products of the Green Line Trade. The results of the three Vollrath indices can be interpreted as follows: the positive results of the Vollrath indices mean country has revealed comparative advantage which reveals comparative advantage of the country. On the other hand, the negative results of the Vollrath indices mean that the country has revealed comparative disadvantage which reveals comparative disadvantage (Utkulu & Seymen, 2004; 9-10).

Vollrath (1991: 275) examined international competitiveness, "revealed comparative advantage" by representing three alternative definitions about revealed comparative or competitive advantage which are; *relative trade advantage* (VRC<sub>1</sub>), *relative export advantage* (VRC<sub>2</sub>) and *revealed competitiveness* (VRC<sub>3</sub>);

$$VRC_1 = RXA - RMA \quad (2)$$

Where;

$$RXA = (X_{AJ} / X_{AT}) / (X_j^{REF} / X_T^{REF}) \quad (3)$$

$$RMA = (M_{AJ} / M_{AT}) / (M_j^{REF} / M_T^{REF}) \quad (4)$$

$$VRC_2 = Ln(RXA) \quad (5)$$

$$VRC_3 = Ln(RXA) - Ln(RMA) \quad (6)$$

Where;

RXA= Relative Export Advantage

RMA= Relative Import Advantage

X<sub>AJ</sub>= Export value of Country A of Industry J

X<sub>AT</sub>= Total Export value of Country A

M<sub>AJ</sub>= Import value of Country A of Industry J

M<sub>AT</sub>= Total Import value of Country A



### 3. LITERATURE REVIEW

Several studies have been done in the literature about revealed comparative advantage of countries. The revealed comparative advantage theory was used by Wolf (2000) to explain the trade between 14 OECD (Organization for Economic Co-operation and Development) countries. The study covered 33 types of products between the periods from 1970 to 1997. The future prospect of specialization rate of Canada and USA was predicted by this study. By the way, the results of this study proved that USA is specialized in production on aircraft, professional goods, and petroleum and coal products. On the other hand, Canada is specialized in the production of transport equipment, railroad equipment, motor vehicles, non-ferrous metals and wood products. According to Ferto and Hubbard (2002), the Hungarian agri-food sector was analyzed for the period from 1992 to 1998 using the revealed comparative advantage theory. The study covered 22 types of products and Hungary has comparative advantage of 11 types of products out of 22. These products are livestock, meat, cereals, vegetables, fruit, sugar, beverages, oilseeds, cork, wood, animal and vegetable materials, oils and fats. Utkulu and Seymen (2004) in their research they compared Turkey with EU-15 countries on sectoral levels using RCA indices. Serin and Civan (2008) analyzed the comparative advantage between Turkey and the EU using revealed comparative advantage theory. This study covered trade between Turkey and the EU from 1995 to 2005. According to the study findings Turkey has comparative advantage in production of tomatoes, olive oil and fruit juice. Kosekahyaoglu and Ozdamar (2009) examined the competitiveness of Turkey in the EU market using Balassa Index from 1991 to 2005. The results of the study prove that Turkey has comparative advantage of SITC 6 and SITC 8 and has comparative disadvantage in the other product groups. The wage rate and size of the domestic market of Turkey are the advantages of the country. One study which evaluated both inter and intra trade competitiveness between Turkey and EU-15 was calculated by RCA index and it proved that Turkey has comparative advantage of low value added goods (Altay et.al., 2009). Turkey's competitiveness in the EU market was also analyzed by Simsek, Seymen and Utkulu (2010) with RCA indices, Vollrath's Revealed Competitiveness Index. This study emphasized the comparison of the Turkish industry competitiveness in the EU market from 1993 to 2008, and explained the intra-industry and inter-industry trade between Turkey and the EU.

This results of the study showed that Turkey has comparative advantage in raw materials and labour intensive goods and it has comparative disadvantage in the research intensive goods. There are other studies which analyzed the competitiveness of Turkey with other countries. The study that analyzed the competitiveness of Turkey, China and India using Balassa Index found that Turkey has comparative disadvantage in labour intensive goods and easy-to-imitate goods compared with China. At the same time, Turkey has comparative advantage in capital intensive goods and it has comparative disadvantage in raw materials intensive goods compared with India (Kosekahyaoglu & Ozdamar, 2011). The cross border trade between Turkey and Syria has been explained by Erkan (2012) using Balassa Index, which showed that Turkey has strongly comparative advantage against Syria except the group of food and livestock and dairy products, birds and eggs. The comparison of Turkey with selected Middle East countries was also done from 1999 to 2009. According to the results, Turkey should work with the capital intensive goods to increase the competitiveness of this field (Cestepe, 2011). The revealed comparative advantage of Sub-Saharan Africa and South Asia is assessed by Beyene (2014). The international trade commonly occurs between high income countries and this prevents Sub-Saharan Africa and South Asia to integrate with the other countries. This study shows; Sub-Saharan Africa has higher and robust comparative advantage than South Asia for the merchandise products which are food, agricultural raw materials, fuels, ores and metals. Stariene and Remiekiene (2014) investigated the revealed comparative advantage of Lithuanian industry during the periods of 2007 to 2011. Lithuanian industry has robust revealed comparative advantage on food, chemicals, wood and textile products in the world market. Sarker and Ratnasena (2014) assessed the competitiveness of Canadian wheat, beef and pork sector during the periods of 1961 to 2011. The results state that Canada has only competitive advantage in wheat sector. Mzumara et.al. (2012) investigated the intra-regional trade competitiveness among North American Free Trade Agreement (NAFTA) member states. USA is found as the most competitive country and Canada is the second and Mexico is the least competitive member state of NAFTA. Although, Mexico is the least competitive country interestingly it benefitted most, where US benefitted least from intra-regional trade. There are several studies that have been done in the literature about the trade of NC. Katircioglu (2010) analyzed the relationship between trade and Economic growth of NC. This study concludes that NC has export oriented Economic growth but its Economic growth is not affected by its imports. Katircioglu and Katircioglu (2011) also analyzed the import oriented growth of NC. The cointegration analysis concludes that there is long term relationship between imports and growth in the income of NC. On the other hand, the causality test concludes that there is no causal relationship between imports and growth in the income of NC. Gokcekus et.al. (2012) analyzed the impediments to trade across the Green Line in Cyprus. The analysis of the trade was based on the gravity model and the study showed that there is an observable gap between actual and potential volumes of trade. The reasons of the gap between potential and actual volumes of trade were analyzed and interpreted. The results of the study showed that only 10% of trade has reached its potential, the other factors are 35% of missing trade, the extra transportation costs at 5% and immeasurable subjective barriers such as personal perspective or social-psychological barriers are between at 48% - 60%. Hatay et. al. (2008) emphasized consumer perception about the Green Line Trade. The consumer perception about the Green Line Trade was affected from the events occurred between 1963 and 1974. The obstacles, oppositions and psychological barriers of the customers are defined. The results showed that the identical barriers, permission of the narrow product range in the GLT, additional taxation, checks on persons and transport, and difficulties in telecommunications between the two nations decreased the potential volume of the Green Line Trade and crossings.

### 4. MATERIALS AND METHODS

The empirical analysis of the study is based on the Balassa and Vollrath contributions. It was aimed to find out the comparative/competitive (dis) advantage of the NC in the Green Line Trade. Ballassa's RCA index and three of Vollrath indices are used which are explained in the theoretical framework.

All statistical data about the Green Line Trade was taken from the Turkish Cypriot Chamber of Commerce (TCCoC), and product groups are listed similar to what TCCoC has already done. All product groups are given in detail the appendix section. On the other hand, the product intensity classification is important for the results of the study in order to clarify and explain the results. Hence, the Standard International Trade Classification (SITC) Revision 3 product classification determines material intensity of products in trade. The determination of the digit level is difficult while adopting TCCoC classification to SITC Revision 3 because some of products are 2 digit level and some of them are 3 digit levels in accordance with TCCoC classification compared to SITC Rev. 3. The electricity trade was excluded from the TCCoC statistical data.

All classifications are given in the appendix section. 20 product groups are listed, hence one<sup>1</sup> of the product groups is excluded and 19 product groups are used for analysis between 2005 -2013. The basis of Balassa and Vollrath indices are different from each other. Therefore, they cannot be compared directly (Utkulu, 2005: 5).

### 5. EMPIRICAL FINDINGS

#### 5.1 RESULTS OF BALASSA INDEX (RCA)

Table 1 illustrates the results of revealed comparative advantage (RCA) of the NC in the Green Line Trade using Balassa Index. The measurement of Balassa Index was conducted for 19 product groups from 2005 to 2013. The red highlighted areas show the comparative advantage of the NC, which are revealed by the Balassa Index for each product group and each year. Bilateral trade did not exist in the specific years and specific products. Hence, Balassa Index cannot be measured mathematically, for the areas which are indicated as "none" on the table.

<sup>1</sup>Product group of "Transportation Vehicles" is excluded from the calculation of indices. It does not show the real comparative advantage of NC. Neither the NC nor the SC supplies cars or any other transportation vehicles domestically.



TABLE 1: RESULTS OF THE NC RCA INDEX

PRODUCT GROUPS	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Livestock&Animal Products	0,00	0,00	None	None	None	1,78	0,38	0,78	None
2. Vegetable Products	8,68	17,35	1,79	1,71	7,31	1,33	0,17	2,79	0,61
3. Animal or Vegetable Fats	None	None	None	None	None	None	None	None	None
4. Prepared Foodstuff	None	0,00	None	0,00	0,07	0,59	0,03	0,01	0,05
5. Mineral Products	None	1,54	1,16	2,50	0,00	0,57	3,84	4,76	0,00
6. Chemical Products	0,12	0,51	0,31	0,26	0,27	0,16	0,03	0,01	0,00
7. Plastic Products	2,40	8,25	2,09	2,34	13,14	46,86	1,10	6,41	14,38
8. Wood& Articles of Wood	0,09	0,28	0,00	None	None	None	0,09	4,97	0,53
9. Paper & Paper board	5,19	1,45	0,26	0,18	0,03	0,10	0,02	0,09	0,43
10. Textile& Textile Articles	8,99	1,39	None	None	None	None	None	None	None
11. Articles of Stone	3,75	1,58	2,12	1,11	1,45	1,34	0,24	0,50	0,38
12. Base Metals & Articles	0,79	9,85	16,95	10,45	12,67	13,32	2,64	3,31	4,69
13. Machinery&Mechanical Appliances	0,09	0,17	0,05	0,00	0,00	0,01	0,00	0,07	0,29
14. Miscallenous Manufactured Articles	2,59	0,00	31,72	None	None	None	0,06	None	None
15. Works of Art	None	None	None	None	None	None	None	None	None
16. Furniture	None	26,63	None	None	None	None	None	None	None
17. Saddlery& Harness	None	None	None	0,15	None	None	None	None	None
18. Optical Appliances	None	None	0,00	0,00	None	None	None	None	None
19. Handicraft Products	None	None	None	None	None	None	None	None	None

5.2 RESULTS OF VRC1

Table 2 illustrates the results of one of the Vollrath indices which indicated “relative trade advantage” of the NC in the Green Line Trade. The relative trade advantage was abbreviated as “VRC1” to make it easy for readers to understand. The calculation of VRC1 was applied to 19 specific product groups and from 2005 to 2013. The NC has revealed comparative advantage in the red highlighted areas in Table 2. Bilateral trade did not exist in some years for the specific product groups. Hence, the calculation of the VRC1 cannot be measured mathematically which is indicated as “none” on the table.

TABLE 2: RESULTS OF THE NC VRC1 INDEX

Product Groups	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Livestock &Animal Products	None	None	None	None	None	1,21	-2,28	-0,50	None
2. Vegetable Products	8,56	16,77	1,24	1,13	7,17	0,58	-5,69	2,44	-1,01
3. Animal or Vegetable Fats	None	None	None	None	None	None	None	None	None
4. Prepared Foodstuff	None	-344,76	None	-1372,65	-14,80	-16,84	-31,57	-140,83	-20,97
5. Mineral Products	None	0,89	0,31	2,10	None	-1,18	3,58	4,55	-648,47
6. Chemical Products	-8,21	-1,47	-2,92	-3,57	-3,50	-6,19	-29,80	-117,09	-1935,78
7. Plastic Products	1,98	8,12	1,61	1,91	13,06	46,84	0,18	6,25	14,31
8. Wood & Articles of Wood	-11,31	-3,33	None	None	None	None	-11,02	4,77	-1,34
9. Paper & Paper board	5,00	0,77	-3,61	-5,49	-36,46	-9,80	-42,13	-11,24	-1,90
10. Textile & Textile Articles	8,88	0,67	None	None	None	None	None	None	None
11. Articles of Stone	3,49	0,95	1,65	0,20	0,76	0,59	-3,94	-1,49	-2,28
12. Base Metals & Articles	-0,47	9,75	16,90	10,35	12,59	13,24	2,26	3,01	4,47
13. Machinery & Mechanical Appliances	-10,70	-5,79	-19,82	-501,94	None	-109,02	None	-15,16	-3,22
14. Miscallenous Manufactured Articles	2,20	None	31,69	None	None	None	-17,40	None	None
15. Works of Art	None	None	None	None	None	None	None	None	None
16. Furniture	0,00	26,59	None	None	None	None	None	None	None
17. Saddlery & Harness	0,00	None	None	-6,65	None	None	None	None	None
18. Optical Appliances	None	None	None	None	None	None	None	None	None
19. Handicraft Products	0,00	None	None	None	None	None	None	None	None

5.3 RESULTS OF VRC2

Table 3 illustrates the results of one of the Vollrath indices which indicated “relative export advantage” of the NC in the Green Line Trade. The relative trade advantage was abbreviated as “VRC2” to make it easy for readers to understand. The calculation of VRC2 was applied to 19 specific product groups from 2005 to 2013. The NC has revealed comparative advantage in the red highlighted areas in Table 3. Bilateral trade did not exist in some years for specific product groups. Hence, the calculation of the VRC2 cannot be measured mathematically which is indicated as “none” in the table.

TABLE 3: RESULTS OF THE NC VRC2 INDEX

Product Groups	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Livestock & Animal Products	None	None	None	None	None	0,57	-0,98	-0,25	None
2. Vegetable Products	2,16	2,85	0,58	0,54	1,99	0,29	-1,77	1,03	-0,49
3. Animal or Vegetable Fats	None	None	None	None	None	None	None	None	None
4. Prepared Foodstuff	None	-5,84	None	-7,22	-2,70	-2,83	-3,45	-4,95	-3,05
5. Mineral Products	None	0,43	0,15	0,92	None	-0,56	1,34	1,56	-6,47
6. Chemical Products	-2,12	-0,68	-1,17	-1,34	-1,32	-1,85	-3,40	-4,76	-7,57
7. Plastic Products	0,87	2,11	0,74	0,85	2,58	3,85	0,09	1,86	2,67
8. Wood & Articles of Wood	-2,43	-1,28	None	None	None	None	-2,41	1,60	-0,63
9. Paper & Paper board	1,65	0,37	-1,35	-1,73	-3,60	-2,93	-3,74	-2,43	-0,85
10. Textile & Textile Articles	2,20	0,33	None	None	None	None	None	None	None
11. Articles of Stone	1,32	0,46	0,75	0,10	0,37	0,29	-1,43	-0,69	-0,98
12. Base Metals & Articles	-0,23	2,29	2,83	2,35	2,54	2,59	0,97	1,20	1,54
13. Machinery & Mechanical Appliances	-2,38	-1,78	-2,99	-6,22	None	-4,69	None	-2,72	-1,25
14. Miscallenous Manufactured Articles	0,95	None	3,46	None	None	None	-2,86	None	None
15. Works of Art	None	None	None	None	None	None	None	None	None
16. Furniture	None	3,28	None	None	None	None	None	None	None
17. Saddlery & Harness	None	None	None	-1,92	None	None	None	None	None
18. Optical Appliances	None	None	None	None	None	None	None	None	None
19. Handicraft Products	None	None	None	None	None	None	None	None	None

## 5.4 RESULTS OF VRC3

Table 4 illustrates the results of one of the Vollrath indices which indicated "revealed competitiveness" of the NC in the Green Line Trade. The relative trade advantage was abbreviated as "VRC3" to make it easy for readers to understand. The calculation of VRC1 was applied to 19 specific product groups and from 2005 to 2013. The NC has revealed comparative advantage in the red highlighted areas in Table 4. Bilateral trade did not exist in some years for specific product groups. Hence, the calculation of the VRC1 cannot be measured mathematically which is indicated as "none" on the table.

TABLE 4: RESULTS OF THE NC VRC3 INDEX

Product Groups	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Livestock & Animal Products	None	None	None	None	None	1,15	-1,96	-0,50	None
2. Vegetable Products	4,32	3,40	1,17	1,08	3,98	0,57	-3,54	2,05	-0,98
3. Animal or Vegetable Fats	None	None	None	None	None	None	None	None	None
4. Prepared Foodstuff	None	-11,69	None	-14,45	-5,40	-5,65	-6,91	-9,90	-6,09
5. Mineral Products	None	0,86	0,30	1,83	None	-1,12	2,69	3,12	-12,95
6. Chemical Products	-4,24	-1,36	-2,35	-2,68	-2,65	-3,70	-6,79	-9,53	-15,14
7. Plastic Products	1,75	4,22	1,47	1,70	5,15	7,69	0,18	3,72	5,33
8. Wood & Articles of Wood	-4,87	-2,57	None	None	None	None	-4,82	3,21	-1,25
9. Paper & Paper board	3,29	0,75	-2,70	-3,47	-7,19	-4,59	-7,48	-4,86	-1,69
10. Textile & Textile Articles	4,39	0,66	None	None	None	None	None	None	None
11. Articles of Stone	2,65	0,92	1,50	0,20	0,75	0,58	-2,86	-1,38	-1,95
12. Base Metals & Articles	-0,47	4,57	5,66	4,69	5,08	5,18	1,94	2,39	3,09
13. Machinery & Mechanical Appliances	-4,76	-3,57	-5,98	-12,44	None	-9,38	None	-5,45	-2,51
14. Miscellaneous Manufactured Articles	1,90	None	6,91	None	None	None	-5,72	None	None
15. Works of Art	None	None	None	None	None	None	None	None	None
16. Furniture	None	6,56	None	None	None	None	None	None	None
17. Saddlery & Harness	None	None	None	-3,83	None	None	None	None	None
18. Optical Appliances	None	None	None	None	None	None	None	None	None
19. Handicraft Products	None	None	None	None	None	None	None	None	None

Four theoretical models are used in this study which are the Ballasa's Revealed Comparative Advantage Index and the others are the Vollrath's three indices. The results of the study will state the importance of the NC in the Green Line Trade and the comparative (dis)advantage of the NC based on its factor intensities. All results of RCA, VRC1, VRC2, and VRC3 support each other and give the same results. All bold areas in the table show comparative advantages of the NC.

## 6. DISCUSSION

As many other small economies NC depends on trade. Green Line Trade is a kind of free trade agreement between NC and SC and this makes SC a special trade partner. This is why the study focused only to understand the comparative advantage of NC on GLT. It is important to know the products that have comparative advantage on GLT. This will allow using resources efficiently and increasing trade volume.

According to the results obtained from the analysis, NC had comparative advantage in plastic products from 2005 to 2013, which is easy to imitate research intensive goods. The results show that the NC had comparative advantage in articles of stone from 2005 to 2010, which is a labour intensive good. The Economic crisis slowed down the construction sector in SC and this led to decline in the sales of the articles of stone (Commission of European Communities, 2012:7). Cyprus stone is a natural resource and it is available in NC with a lower price. It is not sustainable export product and it should not be taken as a comparative advantage as it is disadvantage for a country which does not have alternatives other than selling its limited natural resources. There isn't any law or regulation to restrict that kind of export in NC but a possible EU membership of the NC will terminate the illegal use of natural resources within the north part of the island. On the other hand, every natural resource is limited and comparative advantage of NC in articles of stone is limited by its capacity of natural resources. NC had comparative advantage in base metals & articles of metals from 2006 to 2013, which are capital intensive goods. The comparative advantage in mineral products existed from 2006 to 2008 and from 2011 to 2012, of which product group covered both labour intensive and raw material intensive goods<sup>2</sup>. NC had comparative advantage in vegetable products from 2005 to 2010 and in 2012, which are classified as raw material intensive goods. The decline in the sales of potatoes also affected the volume of vegetable products in the Green Line Trade. Potato sale across the Green Line represented 30% of the Green Line Trade until 2010, however after SC has increased its local potato production potato sales declined to less than 1% of overall Green Line Trade (Commission of European Communities, 2012:7). This affected the comparative advantage of NC in the Green Line Trade and it transformed into comparative disadvantage. Furniture trade only existed in 2006 and the NC had comparative advantage in furniture which is a labour intensive product. IKEA a multinational furniture company opened its first store in SC by 2007 and it became impossible for NC furniture companies to compete with IKEA. Miscellaneous manufactured articles group is generally composed of prefabricated building goods traded from NS to SC. The NC had comparative advantage in miscellaneous manufactured articles in 2005 and in 2007 which are labour intensive products. In textile & textile articles which are labour intensive products, NC had comparative advantage in 2005 and 2006. In paper & paperboard products NC had comparative advantage in 2005 & 2006 and it had comparative disadvantage from 2007 to 2013 which are labour intensive goods. The comparative advantage in wood and articles of wood only existed in 2012, and had disadvantage in other years, which are raw material intensive goods. In livestock and animal products, NC had comparative advantage only in 2010, and had comparative disadvantage in other years which were raw material intensive goods.

NC had comparative advantage in prepared foodstuff<sup>3</sup>, which were raw material intensive goods and capital intensive goods from 2005 to 2013. Yet, the NC did not have comparative advantage in chemical products which are easy to imitate research intensive goods from 2005 to 2013. NC had comparative disadvantage in machinery and mechanical appliances which are difficult to imitate research intensive goods from 2005 to 2013 and optical appliances which are difficult to imitate research goods in 2008. The NC had comparative disadvantage in livestock and animal products which are raw materials intensive goods from 2005 to 2006 and from 2011 to 2012 and in saddlery and harness which are labour intensive goods in 2008.

According to Mzumara et.al. (2012), the weak country gains more from trade even it does not have comparative advantage in most of the product lines in border trade. We can conclude that NC also benefitted from trade without taking into consideration of trade balances of NC because, when trade introduced to closed economy it necessarily gains from trade. However, the degree of the gains from trade is not within the scope of this study. Additionally, there is an important point that differentiates this paper is the comparative advantage of cross border trade in closed economy is investigated. On the other hand, the free trade between each community of the island is limited by the Green Line Trade regulations. Thus, this study can also conclude most reliable results if the free trade among SC and NC is allowed a GLT can be able to reach its potential.

<sup>2</sup> According to SITC REV. 3 classification, the mineral oils and salt, sulphur, lime cement etc. belong to different product groups: mineral oils belong to raw material intensive goods and salt, sulphur, lime, cement belong to labour-intensive good classification. Hence, in accordance with the TCCoC product classification the mineral product group covered both of them.

<sup>3</sup> According to SITC Revision 3 classification the beverages belongs to the capital intensive goods and the pastry cook's products, jams, fruit jellies etc. belong to the raw material intensive goods. Hence, in accordance with TCCoC product classification the prepared foodstuff product group is covered both of them.

There were difficulties faced during the study. Turkish Chamber of Commerce product lines are categorized different than SITC Rev. 3 product lines. Therefore, the product classification is converted similar to SITC Rev. 3 with small differences (see Appendix 1, 2). In addition, bilateral trade did not exist and indices could not be calculated in most of the product groups of GLT. The absence of bilateral trade or unwillingness of trading among each community is related with some barriers which are assessed by Hatay et.al (2008) and Gokcekus et.al. (2012). The barriers that need to remove by each community are indicated as Economic, legal and psycho-social barriers. A solution of these barriers increases the potential volume of GLT and increases the competitiveness of each community in GLT.

## 7. CONCLUSION

In this study, the comparative advantage of NC in the Green Line Trade was measured using the Ballassa's Revealed Comparative Advantage Index and Vollrath's three indices. The observation of the Green Line Trade between the northern and the southern part of Cyprus showed that the fluctuations in the flow of the goods from the Green Line Trade limited the measurement of the competitiveness of all product groups.

On the other hand, all indices are based on post trade data and these indices are easily affected by government interventions which mean according to the Green Line Regulation, any custom duties and any other related barriers should not be imposed on the sales of goods across the borders.

The results show that NC has comparative advantage in plastic products, vegetable products, base metals & articles and miscellaneous products, textile & textile articles and furniture in the Green Line Trade.

The results of the indices may change if the negative effects on the Green Line Trade are eliminated. The Green Line Trade is limited by two reasons. The first one is psychological reasons which are based on each nation's identity. SC do not want to buy products which are produced in NC. At the same time, the products of the NC are branded as it is in SC market and this is a big discouragement to the SC producers who sold their products to the SC. On the other hand, the SC is afraid of being pilloried in the SC market. Hence, the events of 1963-1974 continue to affect both communities of the island psychologically. The other effects on the Green Line Trade are the EU limitations on the Green Line Trade. The accompanying document should be taken from TCCoC (for NC) and CCCI (for SC) for each product being sold in GLT. Additionally, photo sanity and veterinary certificates are needed. On the other hand, some of the products are prohibited in the Green Line Trade by EU regulations. EU only allows the trade of selected products in the GLT. All of these limit the potential volume of the Green Line Trade. These barriers should be eliminated between both community and all of the limitations which are imposed by the EU should be removed to achieve the real potential volume of the Green Line Trade.

There are many problems waiting for solution which many of them are directly related with political problems. However, this study showed that NC has comparative advantage on few products and NC has to increase its trade volume by increasing the export of these products. As GLT is an important advantage for NC that suffers from embargoes, researches has to be done to understand how NC could gain comparative advantage for other processed products. NC has specific characteristic differences than other small economies but the importance of trade is common for all small economies. 11% trade volume as a share of the GDP can be increased by increasing the GLT to SC.

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**APPENDIX**

**APPENDIX 1: PRODUCT GROUPS**

<b>1. Articles of Stone</b>	Building stone, articles of cement, of concentrate or artificial stone, glass & glassware, ceramic products/ refractory products,roof tile,pavement products,asphalt products
<b>2. Mineral Products</b>	Salt, sulphur, earths and stone; plastering materials; lime and cement,sand,raw marble,LPG Gas.
<b>3. Base Metals &amp; Articles</b>	Aluminum products,articles of metal,iron & steel products,miscellaneous articles of base metals,diggers, anchors & rakes,signboards
<b>4. Chemical Products</b>	Miscellaneous chemical products,backfilling plastering material,cosmetic products,washing up materials,detergent raw material,calcium carbide,raw materials of dye,chemical products,resinated paste,cement based adhesive,water softener products.
<b>5. Machinery &amp; Mechanical Appliances: Electrical Equipment</b>	Electrical machinery & equipment & parts thereof,machinery & mechanical appliances,packaging machine and its assemblies,industry machines,salvage accumulator,motors,heat machines,spraying machines,probing machines,dairy machines and appliances,hay machines,parts and pieces,printing machines,diggers,anchors,rakes,pumps,cash register machine,generator,solar Energy Systems
<b>6. Furniture</b>	Wooden furniture & parts,other furniture & parts,articles of bedding and similar furnishing.
<b>7. Livestock/Animal Products</b>	Fish, (frozen) fish fillets
<b>8. Miscellaneous Manufactured Articles</b>	Miscellaneous manufactured articles, prefabricated buildings,fisher products,bolls.
<b>9. Paper &amp; Paperboard</b>	Articles of paper & paperboard,printed books, newspapers, pictures and other products of printing industry,hygienic buffers,paper tissue and towel,etiquette
<b>10. Plastic Products</b>	Plastic and articles, raw plastic, plastic pipes, sponges, external tires of bus and truck, silicon, plastic connection pieces, plastic kitchen products, plastic construction products, polythene and its products, other plastic articles.
<b>11. Prepared Foodstuff</b>	Beverages, sprints & vinegar, pastry cook's products,residues and waste from food industries,jams, fruit jellies, marmalades, fruit or nut puree and fruit or nut pastes, obtained by cooking, whether or not containing added sugar or other sweetening matter, whisky, vine, brandy, other alcohol products, fishmeal, animal food additive products.
<b>12. Saddlery and Harness</b>	Saddlery & hardness
<b>13. Textile &amp; Textile Articles</b>	Articles of apparel and clothing accessories, other textile articles
<b>14. Vegetable Products</b>	Live plants, vegetables, fruits, miscellaneous grains, seeds and fruits.
<b>15. Animal or Vegetable Fats and Oils and their Cleavage Products</b>	Animal or vegetable fats and oils and their cleavage products
<b>16. Wood and Articles of Wood</b>	Manufactures of straw, wood and articles of wood, builders' joinery and carpentry of wood, charcoal, wood construction products.
<b>17. Works of Art, Collector Pieces &amp; Antiques</b>	Works of art
<b>18. Optical Instruments &amp; Appliances</b>	Medical appliances, other instruments and appliances
<b>19. Transportation Vehicles (excluded)</b>	Agricultural tractor, vehicle parts, fisher ships, Jeep, Land Rovers, Hyundai, Renault, Dorse

Sources: Own study based on TCCoC

## APPENDIX 2: THE CLASSIFICATION OF SITC REVISE 3

<b>Raw Materials Intensive Goods</b>	
SITC 0	Food & Livestock
SITC2 (Except 26)	Crude Materials, inedible, except fuels
SITC 3 (Except 35)	Mineral Fuels, lubricants & related materials
SITC 4	Animal and vegetable oils & related materials
SITC 56	Fertilizers
<b>Labour Intensive Goods</b>	
SITC26	Textile Fibres
SITC 6 (Except 62,67, 68)	Manufactured Goods Classified Chiefly by Material
SITC 8	Miscellaneous Manufactured Goods
<b>Capital Intensive Goods</b>	
SITC 1	Beverages & Tobacco
SITC 35	Electric Current
SITC 53	Dyeing, Tanning & Coloring Materials
SITC 55	Essential Oil & Resinoids and Perfume Materials
SITC 62	Rubber Manufactures
SITC 67	Iron & Steel
SITC 68	Non- Ferrous Metals
SITC 78	Road Vehicles
<b>Easy-to-Imitate Research Intensive Goods</b>	
SITC 51	Organic Chemicals
SITC 52	Inorganic Chemicals
SITC 54	Medicinal & Pharmaceutical Products
SITC 58	Plastics in Non- Primary Forms
SITC 59	Chemical Metals & Products
SITC 75	Office Machines & Automatic Data Processing Machines
SITC 76	Telecommunications & Sound-Recording
<b>Difficult –to- Imitate Research Intensive Goods</b>	
SITC 57	Plastics in Primary Forms
SITC 7 (except 75,76,78)	Machinery & Transport Equipment
SITC 87	Professional, Scientific & Controlling Instruments
SITC 88	Photographic Apparatus, Equipment & Supplies

Source: (Erkan, 2012: 215).



## ANALYSIS THE INFLUENCE OF MACROECONOMIC VARIABLES ON JAKARTA COMPOSITE INDEX AND SECTORAL INDEX STOCK RETURN

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### ABSTRACT

*Macroeconomic variables become an important factor in investment activity because it might influence investor decision. This study aims to analyze the short-term relationship between macroeconomic variables on JCI stock returns and sectoral index stock returns. This research used time series data and analyzed by Structural VAR method (SVAR). The results of this study indicate that the oil price and the gold price have positive effect on agricultural and mining sectors. While, the interest rate has negative effect on JCI stock return and exchange rate has negative effect on JCI stock returns and all sectors index except mining sector. Investor in agriculture and mining sector should be more consider about oil prices and gold prices movement.*

### KEYWORDS

macroeconomic variables, stock return, structural VAR.

### INTRODUCTION

Investment is one aspect in that can improve the Economics by capital market. Capital market in Indonesia as shown by trading volume in the stock market. The trading volume of Jakarta Composite Index (JCI) and sectoral index from 2007 to 2014 was increasing, but in 2008, it was decreasing (IDX 2015). This decline was caused by subprime mortgage crisis and European crisis. The aim of investors in their investment activity is to get profit that can calculated by stock return. JCI stock returns is fluctuating in every year. The highest stock return occurs in 2009, while the lowest return in 2008 (IDX 2015). The decline was also cause by the subprime mortgage crisis and European crisis in 2008.

Stock returns have a positive relationship with the risk to be received by the investors (high risk high return). Some factors that affected the risk and return, there are internally and externally factor. Prihantini (2009), Hardiningsih (2001), and Faried (2008) explained that good performance of internally factors would be increasing the stock return. Externally, there are many factors that can affect stock returns. Macroeconomic factors are among the factors should be considered by investors in making investment decision because it can be causing the fluctuations in price and stock return (Law 2014, Rachman 2012).

Research on the effect of macroeconomic variables on stock returns mostly focus in global and regional scope. El-Nader and Alraimony (2012), Namini and Nasab (2015), Fatima and Bashir (2014), Riman et al. (2014), Nantwi et al. (2011), Mazuruse (2014) investigated the effect of macroeconomic in global scope, while Bhatti et al. (2015), Zare (2015) and Law (2014) in regional scope. In general, the results of these studies indicate that macroeconomic variables have impact to the stock returns. However, according Kirui et al. (2014) found that macroeconomic variables do not have a significant effect on stock returns. The variety of the result is due to differences in the structure of capital markets in each country.

In Indonesia studies by Sodikin (2007), Rachman (2012), and Inspiration (2014) shows that mostly of macroeconomic variables influence the stock return. However, from found that there is difference results between macroeconomic variable, because the variance of country and sectors classified.

### REVIEW OF LITERATURE

Some research has been investigated the effect of macroeconomic variables on stock returns JCI and sectoral index stock return. Bhatti et al. (2015) was using Structural VAR (SVAR) and focus on four different variables: international, house property, monetary, and fiscal. Variables consist of international oil prices and gold prices. Oil price and house property has positive effect, while gold price and government spending has a negative effect on stock returns in Malaysia. Zare (2015) also showed that short-term interest rates and oil prices have a negative effect on stock prices and money supply has a positive influence on stock prices Malaysia.

According to Cankal (2015) that using SVAR method, share price in Turkey responsive to shocks in exchange rates, interest rates, and inflation. The variables consist of exchange rates, interest rates, inflation, and ISE 100 (Istanbul Stock Exchange Market). Hatipoglu et al. (2014) investigated stock return by using SVAR method and including variable exchange rate, gold price, interest rate, leading indicators index, GDP, BIST-100 index. The result shows that the relationship between stock prices and real variables are substantially stronger than the relationship between stock prices and key investment such as interest rates, gold investment and exchange rates.

El-Nader and Alraimony (2012), Nantwi and Kuwornu (2001), applied OLS and ARCH / GARCH shows that macroeconomic variables such as money supply, exchange rates, and interest rates have a negative effect on the Amman Stock Market (ASE). Moreover, in Ghana's Gross Domestic Product (GDP) has a positive effect on return ASE. The result indicates that there is a significant relationship between stock returns by the CPI, while oil price, exchange rates, and T-Bill have no significant effect to the stock returns in Ghana.

Kirui et al. (2014) using TGARCH method that shows the volatility of macroeconomic variables such as Gross Domestic Product (GDP), inflation, T-Bill, and exchange rate have no significant effect to the stock return in Kenya. On the other hand, Javed & Akhtar (2012) using GARCH, and found that of money supply has a positive



effect, while exchange rate and used term structure had a negative effect on the risk in the stock market. Yasmina (2014) using GARCH conclude that macroEconomic variables have no impact to the at all stock return volatility in Tunisia financial markets.

**OBJECTIVES OF THE STUDY**

The main objectives of this paper are:

1. To analyze the effect of macroEconomic variables on JCI and sectoral index stock return listed on the Indonesian Stock Exchange.
2. To analyze changes in the response of stock returns JCI and sectoral index stock return caused by macroEconomic variables.
3. To analyze the contribution of macroEconomic variables in influencing the JCI and sectoral index stock return.

**HYPOTHESES**

Based on the previous research, the hypothesis of this research are:

1. The depreciate of exchange rate has negative effect on JCI and Sectoral index stock return
2. The inflation has negative effect on JCI and Sectoral index stock return
3. The oil price has negative effect on JCI and Sectoral index stock return
4. The gold price has negative effect on JCI and Sectoral index stock return
5. The interest rate has negative effect on JCI and Sectoral index stock return
6. The money supply has negative effect on JCI and Sectoral index stock return
7. The fiscal deficit has negative effect on JCI and Sectoral index stock return
8. The government debt has negative effect on JCI and Sectoral index stock return
9. The trade balance has positive effect on JCI and Sectoral index stock return

**RESEARCH METHODOLOGY**

**DATA DESCRIPTION**

The data used in this research is secondary data quarterly time series from January 2000 to December 2014. The data used is shows in Table 1.

**TABLE 1: TYPE AND SOURCE OF DATA**

Variable	Unit	Data Source
JCI Closing price	Rupiah	Bloomberg
Sectoral index closing price	Rupiah	Bloomberg
Inflation	%	Bank Central of Indonesia
Exchange rate	IDR/USD	Bank Central of Indonesia
Interest rate	%	Bank Central of Indonesia
Money supply	Billion Rupiah	Bank Central of Indonesia
Oil price	USD/Barrel	indexmundi
Gold price	USD/Troy Ounce	indexmundi
Fiscal deficit	% to PDB	Bank Central of Indonesia
Government debt	Trillion Rupiah	Ministry of Finance Republic of Indonesia
Trade balance	US \$	Statistics Indonesia

**METHODOLOGY**

**a. Pre-estimation test**

Before applying SVAR method, there are some step of pre-estimation test. Data including root test, stability VAR, and determining the optimal lag.

**b. Structural Vector Autoregression (SVAR)**

SVAR method used in research as appropriate for time series data and appropriate to address the problems that have been formulated. This research also applied Impulse Response Function (IRF) and analysis of Forecast Error Variance Decomposition (FEDV).

**c. SVAR Model**

The research model was adopted from Ali *et al.* (2014). The general form of Structural VAR (p) is presented in the following:

$$A_0 Y_t = c_0 + \sum_{i=0}^p A_i Y_{t-1} + \varepsilon_t \tag{1}$$

Where  $Y_t$  is a column vector of variables,  $A_0$  is the square matrix of simultaneous coefficients,  $A_i$  is the squared matrix of auto-regression coefficients, and  $\varepsilon_t$  is the column vector of structural disturbances. The general form model in equation (1) will be converted into reduced form model by multiply the equation by  $A_0^{-1}$  and shown as:

$$Y_t = a_0 + \sum_{i=1}^p B_i Y_{t-1} + e_t \tag{2}$$

In this equation,  $Y_t$  includes variables (Inoil, Ingold, Ininflasi, fiskal, Inm2, birate, Inkurs, Indebt, Intrade, Inrtn). So that,  $\varepsilon_t = A_0 e_t$ ,  $B_i = A_0^{-1} A_i$  and  $a_0 = A_0^{-1} c_0$ .

We imposed appropriate restrictions on to acquire structural disturbances. The short run restrictions are imposed in the model in the following way:

$$\begin{bmatrix} \varepsilon_{inoil} \\ \varepsilon_{ingold} \\ \varepsilon_{ininflasi} \\ \varepsilon_{fiskal} \\ \varepsilon_{inm2} \\ \varepsilon_{birate} \\ \varepsilon_{inkurs} \\ \varepsilon_{indebt} \\ \varepsilon_{intrade} \\ \varepsilon_{inrtn} \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \alpha_{21} & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \alpha_{31} & \alpha_{32} & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \alpha_{41} & \alpha_{42} & \alpha_{43} & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ \alpha_{51} & \alpha_{52} & \alpha_{53} & \alpha_{54} & 1 & 0 & 0 & 0 & 0 & 0 \\ \alpha_{61} & \alpha_{62} & \alpha_{63} & \alpha_{64} & \alpha_{65} & 1 & 0 & 0 & 0 & 0 \\ \alpha_{71} & \alpha_{72} & \alpha_{73} & \alpha_{74} & \alpha_{75} & \alpha_{76} & 1 & 0 & 0 & 0 \\ \alpha_{81} & \alpha_{82} & \alpha_{83} & \alpha_{84} & \alpha_{85} & \alpha_{86} & \alpha_{87} & 1 & 0 & 0 \\ \alpha_{91} & \alpha_{92} & \alpha_{93} & \alpha_{94} & \alpha_{95} & \alpha_{96} & \alpha_{97} & \alpha_{98} & 1 & 0 \\ \alpha_{101} & \alpha_{102} & \alpha_{103} & \alpha_{104} & \alpha_{105} & \alpha_{106} & \alpha_{107} & \alpha_{108} & \alpha_{109} & 1 \end{bmatrix} \begin{bmatrix} e_{inoil} \\ e_{ingold} \\ e_{ininflasi} \\ e_{fiskal} \\ e_{inm2} \\ e_{birate} \\ e_{inkurs} \\ e_{indebt} \\ e_{intrade} \\ e_{inrtn} \end{bmatrix}$$

Where ( $\varepsilon_{inoil}$ ,  $\varepsilon_{ingold}$ ,  $\varepsilon_{ininflasi}$ ,  $\varepsilon_{fiskal}$ ,  $\varepsilon_{inm2}$ ,  $\varepsilon_{birate}$ ,  $\varepsilon_{inkurs}$ ,  $\varepsilon_{indebt}$ ,  $\varepsilon_{intrade}$ ,  $\varepsilon_{inrtn}$ ) are showing the structural disturbances from oil prices, gold price, inflation, deficit of fiscal balance, Inm2 money supply, interest rate, exchange rate, government debt, trade balance, and stock returns respectively. As proxy of stock return, we used JCI stock return and sectoral indexes stock return consist of the agricultural sector (LNPERTANIAN), mining (LNPERTAMBANGAN), basic industry and chemical (LNINDDASAR), consumer goods industry sector (LNKONSUMSI), financial sector (LNKEUANGAN), sector property, real estate, and construction sector (LNPROPERTI), infrastructure, utilities, and transportation sector (LNINFRASTRUKTUR), trade, services and investment sector (LNPERDAGANGAN) as well as the manufacturing sector (LNMANUFAKTUR). On the other hand,  $e_{inoil}$ ,  $e_{ingold}$ ,  $e_{ininflasi}$ ,  $e_{fiskal}$ ,  $e_{inm2}$ ,  $e_{birate}$ ,  $e_{inkurs}$ ,  $e_{indebt}$ ,  $e_{intrade}$ ,  $e_{inrtn}$  are the residual of reduced of equations that measure the unexpected movement of variables separately with the information given in the system.

## RESEARCH RESULT

**Test Pre-estimation**

Before applying the SVAR method, we need to do the pre-estimation test. Unit root test shows that all variables used in this study is not stationary at level, so that needs to be done on a first difference stationary test indicating the entire data stationary at first difference. Therefore, the data used in this study is first difference then be processed using SVAR. Lag used in this study is 0, which is based on Schwarz information criterion (SC) shown in Appendix 1. VAR stability test indicates the range of modulus values generated on the system equation VAR model for JCI stock returns and sectoral index stock return shows a stable state.

**Structural VAR**

Table 2 presents the influence between macroEconomic variables and return in JCI and sectoral index. Oil prices, gold prices, interest rates, and the exchange rate have an influence on JCI and sectoral index stock returns.

**a. The influence of oil prices on JCI and sectoral index stock returns**

The oil price has a positive effect on stock returns for agriculture and mining sectors. The increase of stock returns in mining sector due to companies, which producing oil. So when oil price rises, would be increasing the profit of the company. According Papiez (2014) and Nazlioglu *et al.* (2012) shows the influence of the agricultural sector on oil price changes on agriculture. The high correlation occurred between agriculture and oil prices are the biofuels industry (Bakhat and Wurzburg 2013). In Indonesia, one of the largest biofuel contribution is derived from palm oil that is about 34% (World Growth 2011). The rapid growth of palm oil industry has a major contribution in the world biofuel market, so that, it is causing the world's palm oil trade increase because of the world demand of oil. An increasing demand of biofuel would make the company to fulfill it by increasing their supply. So that, it would be increasing company's profit. According to Thobarry (2009), the increasing of company's profits will boost the stock price followed by the increase in stock returns.

**b. The influence of gold price on JCI and sectoral index stock return.**

Gold prices variable have a positive effect on stock returns of agriculture, and mining sector. The increase in the mining sector due to a metal mining sub-sector and other minerals consist of companies that produce gold, so the increasing of gold prices will boost profits of companies. The gold price has a positive effect on agricultur stock return because high gold price is causing investor to choose agriculture sector in stock market for their investment.

TABLE 2: RESULT OF STRUCTURAL VAR MODEL

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Oil price	0.069	0.459**	-0.344	-0.042	0.458**	-0.467*	-0.226	-0.423*	-0.004	-0.212
Gold price	0.155	1.100**	-0.224	-0.356	1.162**	-0.105	-0.016	-0.026	0.272	0.104
Inflation	0.038	0.103	-0.255	-0.095	-0.079	0.049	-0.052	-0.188	-0.139	-0.069
Fiscal deficit	12.888	39.72	-11.587	16.921	63.629	3.117	35.356	-46.523	36.644	10.808
Money supply	0.251	0.479*	0.452	0.496	0.227	0.197	0.237	0.836*	0.339	0.443
Interest rate	-5.759**	-4.790	3.885	5.223	-2.625	2.569	2.478	6.047	1.014	2.164
Exchange rate	-0.833**	-1.194**	-3.569**	-3.381	-1.254**	-4.620**	-2.469**	-4.093**	-1.970**	-2.857**
Government debt	0.389	0.026	-2.369	-1.007	-0.426	-2.774	0.088	-2.181	0.09	-0.786
Trade balance	-0.088*	-0.132*	-0.011	0.067	-0.156	0.136	0.052	-0.029	-0.110	-0.032

\*\* = signifikan pada taraf 5%

Desription:

- (1) JCI stock index
- (2) Agriculture stock index
- (3) Finance stock index
- (4) Trade, services and investment stock index
- (5) Mining stock index
- (6) Property, real estate, and construction stock index
- (7) Consumer goods industry stock index
- (8) Chemical and basic industry stock index
- (9) Infrastructure, utility, and transportation stock index
- (10) Manufacture stock index

**a. The influence of interest rate on JCI and sectoral index stocks return**

Interest rates variable has a negative effect on JCI stock returns showed that the lower interest rates, JCI stock returns will increase, and vice versa. This result is similar with previous research conducted by Rachman (2012), and Witcaksono (2010). According to Kewal (2012), if the company has a debt, the high interest rates can lead to high pay interest on the debt of the company. Increasing of pay such interest may lead to decreasing of profit companies that ia declining the stock returns (Riantani and Tambunan 2013).

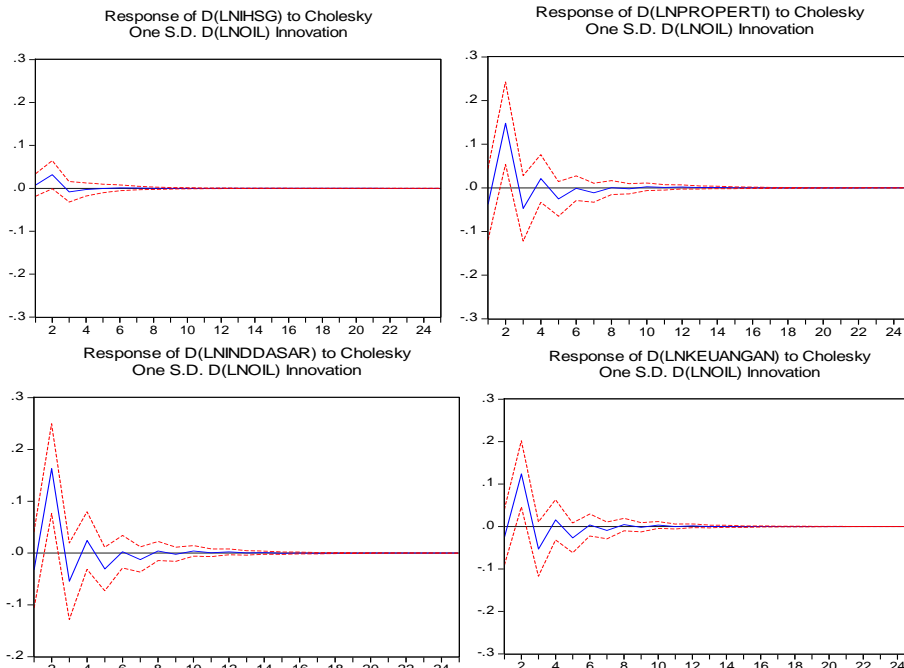
**b. The influence of exchange rate on JCI and sectoral index stocks return**

Exchange rates variable has a negative effect on JCI stock returns and all sectoral index stock returns except in trade, services and investment sector. It shows that the depreciation of the Rupiah to US Dollar would increase the JCI stock returns and all sectoral index stock returns, and to the contrary. Exchange rate depreciation would be decreasing the relative price of export and would be increasing export competitiveness. Furthermore, it would be increasing volume of export (Kewal 2012). So that, it would improving the cash flow of export oriented companies, and later increase its profit.

**Impulse Response Function (IRF)****a. Response of JCI and sectoral index stock returns to oil prices shock**

Response JCI stock returns and sectoral index stock returns to shocks in oil prices during the quarter 25 is presented in Figure 1. Generally, Oil price shocks is increasing of one standard deviation in the first quarter occurred JCI stock returns and index of agriculture sector, mining sector, trade, services and investment sector, and infrastructure sector about 1.3% to 3.78%. While, oil price shocks are decreasing of the standard deviation in the first quarter occurred in the stock return in basic industry and chemical sector, consumer goods industry sector, property sector and manufacturing sector with about 0.3% to 7.68%. Agriculture stock return is the fastest sector that stable in response of oil price shocks in sixth quarter and finance stock return is the longest sector that stable in response of oil price shock in 14<sup>th</sup> quarter.

FIGURE 1: THE RESULT RESPONSE OF JCI AND SECTORAL INDEX STOCK RETURNS TO OIL PRICES SHOCK

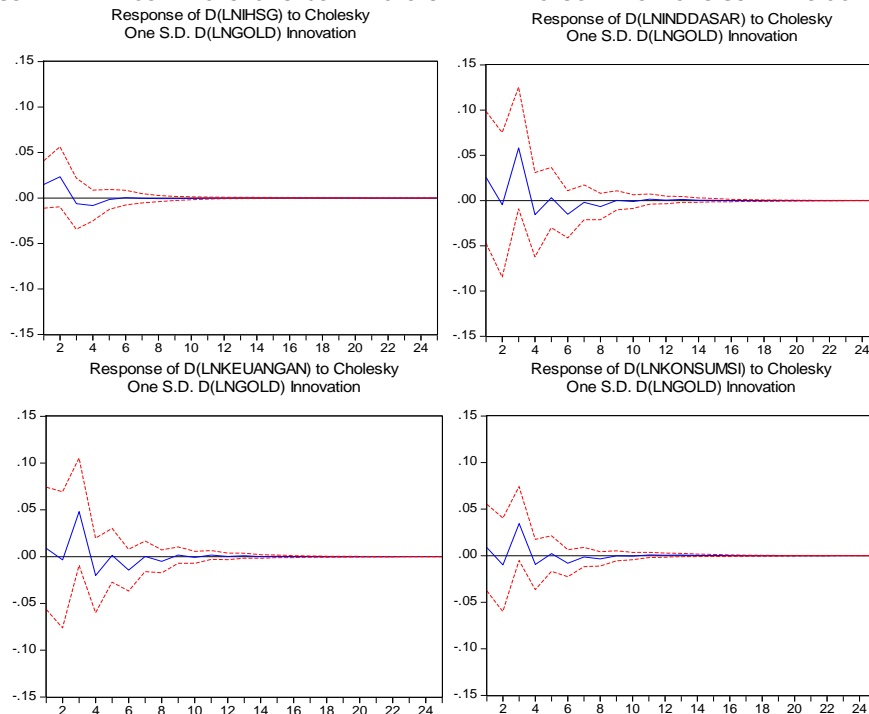


\*Complete results are available from the authors upon request

**b. Response of JCI and the sectoral index stock returns to gold prices shocks**

Response JCI stock returns and sectoral index led to price shocks of gold price during the 25 quarters is presented in Figure 2. Generally, gold price shocks on JCI stock returns and sectoral index led to an increasing of one standard deviation at the first quarter on the return of JCI and all stock in sectoral index about 0.27% to 7.49%. Agriculture stock return is the fastest sector that stable in response of oil price shocks in fifth quarter and mining stock return is the longest sector that stable in response of oil price shock in 9<sup>th</sup> quarter.

FIGURE 2: THE RESULT RESPONSE OF JCI AND SECTORAL INDEX STOCK RETURNS TO GOLD PRICES SHOCK

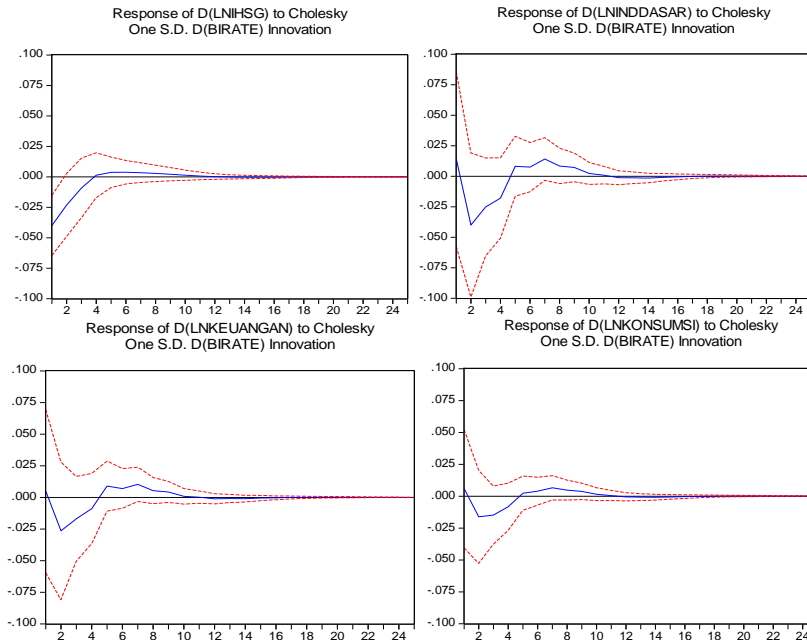


\*Complete results are available from the authors upon request

**c. Response of JCI and the sectoral index stock returns to interest rate shocks**

Response JCI stock returns and sectoral index to shocks interest rate for 25 quarters is presented Figure 3. Generally, interest rate shocks is increasing of one standard deviation in the first quarter occurred finance sector, consumer goods industry sector, trade, services, and investment sector, basic industry and chemical sector, and manufaktur sector with about 0.1% to 1.4%. While, interest rate shocks is decreasing of the standard deviation in the first quarter occurred JCI stock returns and index of agriculture sector, mining sector, property, real estate, and construction building sector, and infrastructure, utility and transportation sector about 0.3% to 3.99%. finance stock return is the fastest sector that stable in response of interest rate shocks in 10<sup>th</sup> quarter and basic industry and chemical stock return is the longest sector that stable in response of interest rate shock in 15<sup>th</sup> quarter.

FIGURE 3: THE RESULT RESPONSE OF JCI AND SECTORAL INDEX STOCK RETURNS TO INTEREST RATE SHOCK

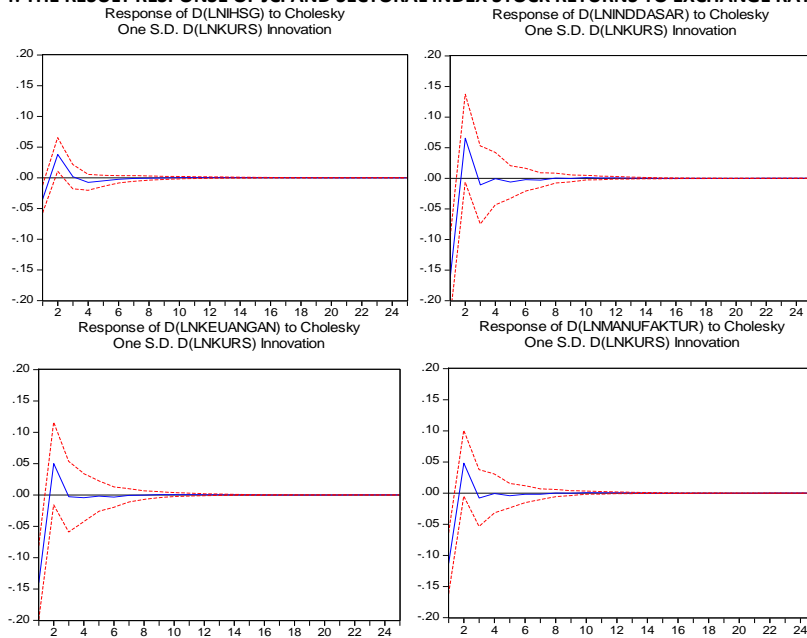


\*Complete results are available from the authors upon request

**d. Response of JCI and the sectoral index stock returns to the exchange rate shocks**

Response JCI stock returns and sectoral index to exchange rate shocks during for 25 quarters is presented in Figure 4. Generally, exchange rate shocks resulted in a decreasing in the stock return of JCI and all sectoral index about 3.4% to 17.7%. Infrastructure, utility, and transportation stock return is the fastest sector that stable in response of exchange rate shocks in fourth quarter and trade, services, and investment stock return is the longest sector that stable in response of exchange rate shock in 7<sup>th</sup> quarter.

FIGURE 4: THE RESULT RESPONSE OF JCI AND SECTORAL INDEX STOCK RETURNS TO EXCHANGE RATE SHOCK

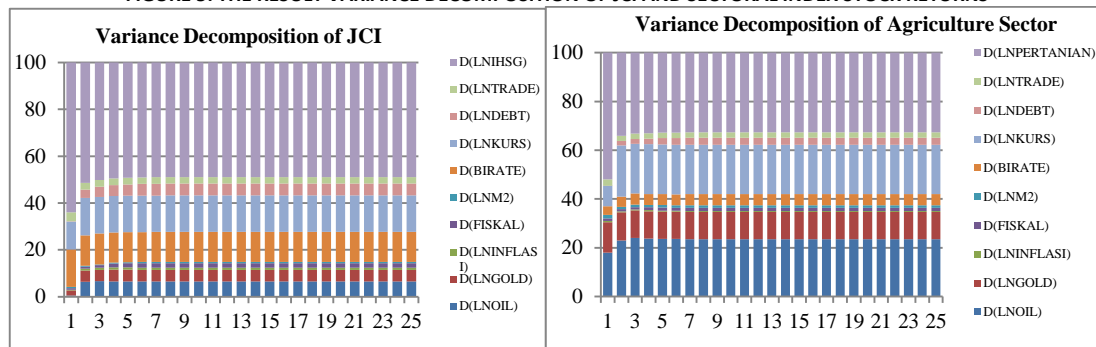


\*Complete results are available from the authors upon request

**Forecast Error Variance Decomposition (FEVD)**

Figure 5 shows the result variance decomposition of JCI and sectoral index stock returns. The results of variance decomposition JCI stock returns can be seen in the first quarter to quarter 25. In the first quarter, variability of JCI stock return is itself about 63.95%. The large variability in the first period is interest rate and exchange rate in the amount 15.91% and 11.91%.

FIGURE 5: THE RESULT VARIANCE DECOMPOSITION OF JCI AND SECTORAL INDEX STOCK RETURNS



\*Complete results are available from the authors upon request

The result of the decomposition of the variance in sectoral index stock returns are divided into three sector, that is primary sector (agriculture and mining), secondary sector (basic industry and chemical, consumption goods industry sector, and manufacturing sector) and the tertiary sector (property, real estate and building construction sector, infrastructure, utility, and transportation sector, financial sector, and the trade, services and investment sector). The largest contribution is caused by the shock from stock returns each sectoral index itself. In the primary sector, the first quarter the variability of primary sector is the stock return of the agricultural and mining sector itself that is equal to 51.92% and 59.83%. the large of variability are oil price, exchange rates and gold prices are respectively 17.98%, 8.26% and 12.45%. In the secondary sector and the tertiary sector, the largest contribution is itself. The other large contribution is giving by exchange rate and oil price around 26.46% to 32.66% and -23.94% to 1.04%. Based on this analysis, international variables, such as exchange rates, oil price and gold price have a large impact to sectoral index stock returns. This is due to mostly traders in the Indonesian Stock Exchange are foreign investors in the amount of 64% (KSEI 2015).

## SUGGESTION

Based on the result of this research, there are some managerial implication that can be considered are as follows:

- For investors, they need should be considering about the condition of macroEconomic and stock return for all sectors in stock market. MacroEconomic factors that must be considered including oil price, gold prices, and exchange rate. In addition, investor also need to monitors the movement of oil prices and gold prices. This is necessary because when oil price and gold price declined by the decreasing of oil prices and gold price will lead to lower stock returns of agriculture and mining sectors. Therefore, when a decline in oil prices and gold prices as well as rising interest rates and exchange rate is increasing then they should sell shares of agriculture and mining. In contrary, if there is an increasing in oil prices and gold prices as well as lower interest rates and the exchange rate then investor should buy shares of agriculture and mining as well as the investors who are interested in the property sector stocks, real estate, and construction and basic industry sectors and chemical should sell the stock.
- For issuers, should pay attention to the influence of macroEconomic factors, especially the oil price, the gold price and the exchange rate. If there is a shocks on these variables, the listed companies in the sectoral index on the Indonesia Stock Exchange should to hedging to anticipate and minimize losses in the event of shocks to the variable.

## CONCLUSION

MacroEconomic variables which have short-term impact to JCI stock returns and sectoral index stock returns are oil prices, gold prices, interest rate, and exchange rate. Oil prices and gold price variables have a positive effect on stock returns of agriculture sector and mining sectors. Interest rates variable has negative effect on JCI stock return and exchange rate has negative effect on JCI stock returns and sectoral index stock returns except trade, services and investment sector.

MacroEconomic shock is causing different responses depend on JCI stock returns and sectoral index stock returns. Overall, shocks in macroEconomic variables that affect JCI stock returns and sectoral index stock returns are the oil price, gold price, interest rat, and exchange rate. FEVD found that the three largest contributions on the JCI stock return are exchange rate and interest rates. While the three largest contribution to the sectoral index stock return are exchange rate, oil prices, and gold price.

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## APPENDIX

APPENDIX 1: RESULT OF OPTIMAL LAG TEST

	Lag (Schwarz information criterion (SC))				
	0	1	2	3	4
LN IHSG	<b>-36.45324</b>	-34.26356	-30.90293	-27.95460	-30.30076
LN PERTANIAN	<b>-35.44084</b>	-32.95271	-29.67818	-26.46229	-27.21188
LN KEUANGAN	<b>-34.40790</b>	-32.13032	-29.58287	-26.75489	-27.92426
LN PERDAGANGAN	<b>-34.52988</b>	-32.31978	-29.37328	-26.23643	-27.28122
LN PERTAMBANGAN	<b>-35.19239</b>	-32.42313	-29.16268	-26.20010	-26.84660
LN PROPERTI	<b>-34.06444</b>	-31.73139	-29.05082	-25.83490	-27.67259
LN KONSUMSI	<b>-35.11443</b>	-32.78903	-29.90253	-26.85446	-26.90099
LN INDDASAR	<b>-34.2156</b>	-31.99511	-29.32906	-26.22762	-27.28367
LN INFRASTRUKTUR	<b>-35.54970</b>	-33.10449	-29.82951	-26.17815	-28.42671
LN MANUFaktur	<b>-34.78300</b>	-32.50050	-29.60714	-26.64812	-26.70442

Note: **Bold** entries are the minimum number of optimal lag



**INDUCEMENT OF WOMEN ENTREPRENEURS ON BEAUTY PARLOUR BUSINESS IN SIVAGANGA DISTRICT**

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**ABSTRACT**

*The purpose of this paper is to observe the factors which look at the inducement that encourage women entrepreneurs on beauty parlour business in sivaganga district. In total, 80 beauticians were interviewed using an interview schedule method. The inspiration needs of women entrepreneurs; and the factors influencing the motivational needs of women entrepreneurs. This paper has found that women entrepreneurship can be motivated by a wide range of factors, including: Own Interest, Family Business, Ideas from friends and Relatives, Previous Experience, Business opportunities, Desire to be Independent, Situation of Factor, To Prove Oneself.*

**KEYWORDS**

women entrepreneurs, demographic profile, motivation factors.

**INTRODUCTION**

"A creative man is motivated by the desire to achieve, not by the desire to beat others".

- Ayn Rand

This article looks at the factors which motivate women beauty parlour entrepreneurs in Sivaganga District. Empirically it builds upon interviews conducted with female beauty parlour business entrepreneurs in the state of Tamilnadu in the district of Sivaganga. 'Entrepreneur' denotes a person who discharges the entrepreneurial function of coordination, organization, supervision and risk-bearing (Say, 1827). An entrepreneur by elaborating his qualities as an innovator, a Calvinist, a man with unusual will and energy and a man with no capital but endowed with an unusually strong character, clarity of vision and an ability to act. He highlighted the importance of strong willpower.

**REVIEW OF LITERATURE**

A study on women entrepreneurs in beauty parlour services at sivakasi by T.Palaneeswari and P.Renugadevi (2012) reported that the challenges and opportunities provided to the women of digital era is growing rapidly that the job seekers are turning into job creditors. Increasing socio-Economic awareness, need for additional income, utilization of spare time, and constant motivation by the government institutions, education, social status and the impact of role models are some of the factors responsible for the development of women entrepreneurship in India.

Khan (1997) in his book, "Women Entrepreneurship", suggested a training course to help potential women entrepreneurs to imbibe entrepreneurial identity. Moli P. Koshy and T. Mary Joseph (2000) in their article, "Growth Pattern of Small Scale Units of Women Entrepreneurs: A Study of Ernakulam District – Kerala", found that the overall growth rate of the sample units was satisfactory even though there was much more potential to grow.

S.K. Dhameja (2004) in his book, "women Entrepreneurs Opportunities, Performance and Problems", analysed entrepreneurial performance and problems of women in business in the states of Punjab and Hariyana.

Nayan Barua and Aparajeeta Burka Koty (2005) in their book, "Women entrepreneurship", analysed the impact generated by entrepreneurship development programmes on women entrepreneurs in the state of Assam.

**METHODOLOGY**

The inducement of women entrepreneurs on beauty parlour business is descriptive in nature. It is based on primary data. The primary data were collected from selected women entrepreneurs in beauty parlour business in Sivagangai District. They required data is collected through an interview schedule.

**TOOLS OF THE ANALYSIS**

1. Garrett's Ranking
2. Percentage and Standard Deviation

**GARRETT RANKING**

To find out the most significant factor which influences the respondent, Garrett's ranking technique was used. As per this method, respondents have been asked to assign the rank for all factors and the outcomes of such ranking have been converted into score value with the help of the following formula

$$100(R_{ij}-0.5)$$

$$\text{Percent position} = \frac{100(R_{ij}-0.5)}{N_j}$$

Where

$R_{ij}$  = Rank given for the  $i^{\text{th}}$  variable by  $j^{\text{th}}$  respondents

$N_j$  = Number of variable ranked by  $j^{\text{th}}$  respondents

With the help of Garrett's Table, the percent position estimated is converted into scores. Then for each factor, the scores of each individual are added and then total value of scores and mean values of score is calculated. The factors having highest mean value is considered to be the most important factor.

**PERCENTAGE**

Percentage analysis refers to a special kind of ratio percentage is used in making comparison between two or more series of data. Percentage are used describe relationships, some of the percentage reduced everything to common base, (say 100), it allows a meaningful comparisons to be made.

$$\text{Percentage} = \frac{\text{No. of Respondents}}{\text{Total No. of Respondents}} \times 100$$

**DEMOGRAPHIC PROFILE OF THE RESPONDENTS**

The demographic profile variable includes Religion, Age, Marital Status, Family type, Educational Qualification, Family Size, Monthly Income, Business Experience Years and Investment.

**TABLE 1**

Demographic Variables	N	frequency	Percentage	Mean	Standard Deviation
<b>Religion</b>	80			1.51	0.85
1.Hindu		58	72.50		
2.Christian		3	03.75		
3.Muslim		19	23.75		
<b>Age</b>	80			2.52	0.82
1.Below 20 years		1	1.25		
2.20 – 30 years		52	13.75		
3.30 – 40 years		11	20.00		
4.Above 40 years		16	65.00		
<b>Marital Status</b>	80			1.80	0.95
1.Married		46	57.50		
2.Divorcee		4	5.00		
3.Widow		0	00.00		
4.Unmarried		30	37.50		
<b>Family Type</b>	80			1.43	0.499
1.Nuclear		45	56.25		
2.Joint		35	43.75		
<b>Educational Qualification</b>	80			3.72	1.30
1.Up to 10 <sup>th</sup> Standard		5	6.25		
2.12 <sup>th</sup> Standard		13	16.25		
3.ITI/Diploma		12	15.00		
4.Under graduate		19	23.75		
5.Post graduate		31	38.75		
<b>Family Size</b>	80			2.53	0.88
1.Upto 2		3	03.75		
2.3 – 4		49	12.50		
3.5 – 6		10	22.50		
4.Above 7		18	61.25		
<b>Monthly Income (In Rupees)</b>	80			2.91	1.42
1.Rs Less than Rs 20,000		16	20.00		
2.Rs 20,000 to Rs 40,000		18	22.50		
3.Rs 40,000 to Rs 60,000		21	26.25		
4.Rs 60,000 to Rs 80,000		7	08.75		
5.Above Rs 80,000		18	22.50		
<b>Business Years Experiences</b>	80			2.83	1.06
1.Less than 2 years		10	12.50		
2.2 to 4 years		22	36.25		
3.4 to 6 years		19	23.75		
4.Above 6 years		29	27.50		
<b>Investment</b>	80			2.97	1.11
1.Up to Rs 50,000		12	15.00		
2.Rs 50,000 to Rs 1,00,000		14	17.50		
3.Rs 1,00,000 to Rs 1,50,000		18	22.50		
4.Above Rs 1,50,000		36	45.00		

Source: Primary Data

From the above table, it represents the descriptive statistics of demographic variable such as Religion, Age, Marital Status, Family type, Education Qualification, Family Size, Monthly Income, Business Experiences years and Investment. Among the religion variable 72.5 % of the respondents belong to the Hindu category and 3.75 % of the respondents belong to the Christian category and 23.75% of the respondents belong to the Muslim category. The mean score of the Religion category was found to be 1.51 and standard deviation of the Religion category was found to be 0.85.

Among the age variable 1.25 % of the respondents belong to the below 20 years category and 13.75 % of the respondents belong to the 20 to 30 years category and 20.00% of the respondents belong to the 30-40 years category and 65.00 of the respondents belong to the above 40 years category. The mean score of the age category was found to be 2.52 and standard deviation of the age category was found to be 0.82.

Among the marital status variable 57.50 % of the respondents belong to the Married category and 5.00 % of the respondents belong to the Divorcee category and 0% of the respondents belong to the Widow category and 37.50 of the respondents to the unmarried category. The mean score of the Marital Status category was found to be 1.80 and standard deviation of the Marital Status category was found 0.95.

Among the Family type variable 56.25 % of the respondents belong to the nuclear category and 43.75 % of the respondents belong to the Joint category. The mean score of the family type category was found to be 1.43 and standard deviation of the Family type category was found 0.49.

Among the Education Qualification variable 6.25 % of the respondents belong to the upto 10<sup>th</sup> standard category and 16.25 % of the respondents belong to the 12<sup>th</sup> standard category and 15% of the respondents belong to the ITI/Diploma category and 23.75 of the respondents to the above Under Graduate category. The mean score of the Education Qualification category was found to be 3.72 and standard deviation of the education Qualification category 1.3

Among the family Size variable 3.75 % of the respondents belong to the upto 2 category and 12.50 % of the respondents belong to the 3-4 family size category and 22.50% of the respondents belong to the 5-6 family size category and 61.25 of the respondents to the above 7 family size category. The mean score of the Family Size category was found to be 2.53 and standard deviation of the Family size category 0.88

Among the Monthly income variable 20 % of the respondents belong to the Rs Less than Rs 20,000 category and 22.50 % of the respondents belong to the Rs 20,000 to Rs 40,000 category and 26.25% of the respondents belong to the Rs 40,000 to Rs 60,000 category and 8.75 of the respondents to the Rs 60,000 to Rs

80,000 category and 22.50% of the respondents belong to the above Rs 80,000. The mean score of the monthly income category was found to be 2.91 and standard deviation of the monthly income category 1.42.

Among the Business Years Experiences variable 12.50 % of the respondents belong to the Rs Less than 2 years category and 36.26 % of the respondents belong to the 2 to 4 years category and 23.75% of the respondents belong to the 4 to 6 years category and 27.25% of the respondents to the above 6 years category. The mean score of the business years experiences category was found to be 2.97 and standard deviation of the business years experiences category 1.11.

**MODE OF INSPIRATION OF BUSINESS**

The women entering the beauty parlour business by various aspects such as Own Interest, Family Business, Ideas from friends and relatives, previous experience, Business opportunity, Desire to Independence, Situation factor, to prove oneself. The inspiration of the business the researcher has used Garrett ranking method.

**TABLE 2: MODE OF INSPIRATION OF BUSINESS**

S.No	Reasons	Rank								TR	TS
		1	2	3	4	5	6	7	8		
1	Own Interest	44	12	8	3	4	2	2	5	80	5409
2	Family Business	1	20	6	10	5	7	10	21	80	3583
3	Ideas from friends and Relatives	3	4	29	12	11	10	11	0	80	4167
4	Previous Experience	3	7	2	18	13	13	14	10	80	3582
5	Business opportunities	7	4	7	10	18	12	15	7	80	3740
6	Desire to be Independent	7	15	14	10	0	18	8	8	80	4104
7	Situation of Factor	5	4	4	5	12	15	17	18	80	3260
8	To Prove Oneself	10	12	10	12	17	3	3	13	80	4130

Source: Primary Data

\*TR - Total Respondents

TS - Total Score

The above table observed from the highest Total Score is 5409 as own interest and following by Total Score is (4167) Ideas from friends and relatives, (4130) To prove oneself, (4104) Desire to be independent, (3740) Business opportunities, (3583) Family Business, (3582) Previous experience, (3260) Situation of factor.

$$100(Rij-0.5)$$

Percent position =

$$\frac{\text{Nj}}{\text{N}}$$

**TABLE 3: GARRETT RANKING CONVERSION TABLE-PREFERENCE BY THE RESPONDENTS THROUGH RANKING TECHNIQUES**

Rank	% Position	Calculate Value	Table Value
1	100(1-0.5)/8	6.25	80
2	100(2-0.5)/8	18.75	68
3	100(3-0.5)/8	31.25	60
4	100(4-0.5)/8	43.75	53
5	100(5-0.5)/8	56.25	47
6	100(6-0.5)/8	68.75	41
7	100(7-0.5)/8	81.25	32
8	100(8-0.5)/8	93.75	20

Source: Primary Data

The above table 3 observed the calculate value is 6.25 as the table value is 80 and followed by calculate value is 18.75 as the table value is 68, calculate value is 31.25 as the table value is 60, calculate value is 43.75 as the table value is 53, calculate value is 56.25 as the table value is 47, calculate value is 68.75 as the table value is 41, calculate value is 81.25 as the table value is 32, calculate value is 93.75 as the table value is 20.

**TABLE 4: RANKING METHOD ADOPTED BY THE RESPONDENTS FOR CHOOSING BEAUTY PARLOUR BUSINESS**

S.No	Reason	Total Score	Mean Score	Rank
1	Own Interest	5409	67.61	I
2	Family Business	3583	44.79	VI
3	Ideas from Friends and Relatives	4167	52.09	II
4	Previous Experience	3582	44.78	VII
5	Business Opportunities	3740	46.75	V
6	Desire to be Independent	4104	51.30	IV
7	Situation of Factor	3260	40.75	VIII
8	To Prove Oneself	4130	51.63	III

Source: Primary Data

It is observed from Table 4 that 'Own Interest' has been ranked as the first. 'Idea from Friends and Relatives' has been ranked second. 'To Prove oneself' third position, 'Desire to be Independent' is in fourth rank with 'Business Opportunities' ranked as the fifth position, 'Family Business' ranked as the sixth position, 'Previous experience' ranked seventh position and last rank is assigned to 'Situation of Factors'.

**CONCLUSION**

On the basis of these research we can conclude that the inducement of women entrepreneurs is the First motivation by Own Interest flowed by Ideas from Friends and Relatives, To Prove Oneself, Desire to be Independence, Business Opportunities, Family Business, Business Experience and finally Situation Factors. In this study in recently, most of the beauty parlours motivated by own interest starting from primary education to university level courses is highly motivated.

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**A STUDY OF MARKETING MIX STRATEGIES ON THE INDIAN UPVC WINDOW MARKET****K. SATYA SUBRAM****RESEARCH SCHOLAR, DEPARTMENT OF BUSINESS ADMINISTRATION, ALIGARH MUSLIM UNIVERSITY, ALIGARH  
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HYDERABAD****ABSTRACT**

*The present study focuses on providing a general overview of some marketing strategies that are strongly influencing the Indian UPVC door and windows market. As the UPVC windows (Unplasticized poly vinyl chloride windows) are new entrant to Indian market, there were no significant studies. For the purpose of conducting this study the researchers collected primary data by survey method in a time span of four months. This was conducted by visiting architects and builders in Hyderabad market with the help of a structured questionnaire. In this study the researchers followed a judgmental sampling technique. The result of the study reveals that Installation/fixing (service) is one of the important product related marketing strategies in the doors and windows market of India and in addition to Country of origin (COO). Service is the vital element in sustaining in the market. Researchers felt that as the value of the service component in the total product value is only 10% and hence lot of fabricators are neglecting or diluting the importance of service which is affecting the customer Retention. The study also reveals that word of mouth, personal selling and exhibitions/meets are important promotional strategies influenced the consumers in their doors and windows purchase. The researchers felt that payment period is the critical element for the buying decision as the product is generic in nature. Freedman's test was used to rank intensity of marketing mix elements effect on Upvc windows sales volume. The outcome of the Chi-square test shows that there is enough evidence to indicate that the brand preference is dependent on market segment in UPVC windows in Hyderabad market. If marketers successfully create a brand that tap into consumers' emotional states, then branded products retain some degree of product differentiation, even if the products themselves are copied by competitors.*

**KEYWORDS**

elements of marketing mix, marketing strategies, construction industry, upvc windows.

**INTRODUCTION**

**M**arketing deals with the activities that direct the flow of goods and services from producer to consumers. Identifying and meeting the human and social needs fall under its ambit. The present business situation is characterized by consumer oriented market. Immense competitions, rapid strides in technology and liberalization, privatization and globalization have become the major points in competitive edge in the market. In these circumstances the survival and growth of a business firm essentially depends on a marketing strategy which results in broadening the customer bases as much as possible by not only creating new customer bases but also retaining existing customers. The researchers was fascinated by the new developments and trends in the marketing field of India. After conducting preliminary survey, it was decided to focus on the fast growing construction industry.

There is no correct data available on the size of the doors and windows market in India, as majority of the players earlier were of small scale and from unorganized industry. But with rough estimates from the senses of housing and from plan approvals for new constructions data, it was estimated that Indian door and window market is about 12000 cr size and mainly dominated by unorganized and low quality products.

From last four years, the doors and windows market significantly changed and due to the government's ban on wood, non-availability of quality carpenters for the growing needs of Indian real estate market, builders are looking at UPVC windows and initially importing from European market. The UPVC windows entered in India long back, but the customer reluctance from shifting the material from wood forced the upvc windows as failure initially. The quality of the windows was also not good as they are not UV resistant windows and not suggestible for exterior application. But with technological developments and introduction of UV resistance PVC windows, lot of players entered into India.

Windows are no longer an object to fill the openings in the Building envelope. Today's windows are expected to perform various functions such as letting in light, keeping out heat/cold, noise attenuation, as well as being aesthetically attractive, needing lower maintenance and using energy saving/efficient materials/processes in place of scarce/energy efficient conventional materials. UPVC Windows/Door profiles are made from Poly Vinyl chloride resin, one of the most extensively used thermoplastics finding end uses in diverse sectors such as infrastructure, agriculture, healthcare etc. UPVC Windows/Doors are extensively used in other countries, and are currently at a growth stage in India. Much needs to be done in marketing of these products by showcasing the advantages of these products to the builders, architects and common man which includes the major advantage of energy saving i.e. reduction in air conditioning bills up to 20-30% as well as saving of wood (in turn-forests) and energy intensive materials like Aluminum

Hence the researchers took the decision to strategize the study in relation to vibrant market. Marketing strategies selected for this study include product strategies, pricing strategies, place strategies, promotional strategies. The study seeks to formulate a suitable strategy to fill up the gap and to take care of future needs of consumers. The introductory part deals with the following elements of the study as: Significance of the study, Objectives of the study, Hypothesis of the study and finally Reviews of literature.

**SIGNIFICANCE OF THE STUDY**

Windows form the major input in the construction industry. The Indian market which is traditionally driven and culturally bonded, housing forms becomes a major insignia for taste and living habits. Wood continues to play a major role in the housing industry. In the modern era of depleting natural resources and environmental

imbalances, introduction of alternatives for the traditional wood with other products is much necessary and becomes a social need. UPVC windows their introduction, proving as successful alternative to wood, penetrating the markets and their sustainability is the need of the hour. UPVC Window and Door Profiles provide a lucrative investment opportunity in India – it is an attractive project that offers high value addition and returns. The Indian market size for windows and doors is approx. Rs 12000 crore (Source: Long, Kenneth. World Windows and Doors. Study. The Fredonia Group) with the predominant material of constructions being Timber (in rural and in upper end constructions), MS (in low cost housing) and Aluminum (in urban constructions). Out of approx. Rs 12000 crore market for windows, approx Rs. 1000 crore exists for UPVC windows.

Reliance in India is promoting large extent UPVC windows and encouraging the manufacturers to start extrusion of UPVC window sections. The market is growing at considerable pace and in Hyderabad itself more than 40 fabricators started selling UPVC windows with different brand names. The number of players are increasing considerably as the product is accepted by the market and apart from metros / state capitals, lot of fabricators started in district headquarters level also. The numbers of players in south India are in huge number and trends are showing that there is going tough competition in the industry. Hence the researchers felt that there is a need to study the marketing strategies which will be helpful to the small fabricators to sustain in the market.

## LITERATURE REVIEW

*Marketing is still an art, and the marketing manager, as headchef, must creatively marshal all his marketing activities to advance the short and long term interests of his firm.* -NEIL H. BORDEN

Borden (1965) claims to be the first to have used the term “marketing mix” and that it was suggested to him by Culliton’s (1948) description of a business executive as “mixer of ingredients”. An executive is “a mixer of ingredients, who sometimes follows a recipe as he goes along, sometimes adapts a recipe to the ingredients immediately available, and sometimes experiments with or invents ingredients no one else has tried” (Culliton, 1948).

Borden’s original marketing mix had a set of 12 elements namely: product planning; pricing; branding; channels of distribution; personal selling; advertising; promotions; packaging; display; servicing; physical handling; and fact finding and analysis. Frey (1961) suggests that marketing variables should be divided into two parts: the offering (product, packaging, brand, price and service) and the methods and tools (distribution channels, personal selling, advertising, sales promotion and publicity). McCarthy (1964) refined Borden’s (1965) idea further and defined the marketing mix as a combination of all of the factors at a marketing manager’s command to satisfy the target market. He regrouped Borden’s 12 elements to four elements or 4Ps, namely product, price, promotion and place at a marketing manager’s command to satisfy the target market.

Especially in 1980s onward, number of authors proposes new ‘P’ into the marketing mix. Judd (1987) proposes a fifth P (people). Booms and Bitner (1980) add 3 Ps (participants, physical evidence and process) to the original 4 Ps to apply the marketing mix concept to service. Kotler (1986) adds political power to the Ps concept. McGrath (1986) suggests the addition of 3 Ps (personnel, physical facilities and process management). Vignalis and Davis (1994) suggest the addition of S (service) to the marketing mix. Goldsmith (1999) suggests that there should be 8 Ps (product, price, place, promotion, participants, physical evidence, process and personalization).

A manager must devise a mix of procedures that fit these resources. If his firm is small, he must judge the response of consumers, trade, and competition in light of his position and resources and the influence that he can exert in the market. He must look for special opportunities in product or method of operation. The small firm cannot employ the procedures of the big firm. Though he may sell the same kind of product as the big firm, his marketing strategy is likely to be widely different in many respects. The marketing mix of a firm in large part is the product of the evolution that comes from day-to day marketing. At any time the mix represents the program that a firm has evolved to meet the problems with which it is constantly faced in an ever changing, ever challenging market. There are continuous tactical maneuvers: a new product, aggressive promotion, or price change initiated by a competitor must be considered and met; the failure of the trade to provide adequate market coverage or display must be remedied; a faltering sales force must be reorganized and stimulated; a decline in sales share must be diagnosed and remedied; an advertising approach that has lost effectiveness must be replaced; a general business decline must be countered. All such problems call for a management’s maintaining effective channels of information relative to its own operations and to the day to- day behavior of consumers, competitors, and the trade.

Accordingly, when we think of the marketing mix, we need to devise a mix based on long-range planning that promises to fit the world of five or ten or more years hence. Provision for effective long-range planning in corporate organization and procedure has become more and more recognized as the earmark of good management in a world that has become increasingly subject to rapid change. Fisk (2006) in his book ‘Marketing Genius’ attempted to show that marketing strategies gave the perspective and focus to create lasting competitive advantages. In yet another study Prabhu (2006) suggested that an effective strategy was the unique formula for success that forms the foundation of a business plan as well as governing day to day operations. However, Saraswathy (2006) was of opinion that the four P’s of marketing – price, product, place and promotion- are not much useful in developing marketing strategies.

### Product

In the context of developed economies, Pan, Sheng, and Xie (2012) find that the perceived value of products and product quality are positively related to customer loyalty. Parasuraman, Zeithaml, and Berry (1988) find that customer loyalty is established when a customer’s evaluation of specific attributes of products or services exceeds his or her prior expectations. Furthermore, when perceived value of the products is low, researchers have found that consumers switch to a competing brand, resulting in the decline of customer loyalty (Anderson and Srinivasan 2003). Typically, customers compare the benefits of each product they use and then decide on their final choice of purchase. Lai, Griffin, and Babin (2009) find that the costs and benefits of using the products actually determine the customer’s purchase intention.

From a behavioral viewpoint, the purchases of convenience products (i.e., consumer products that are bought frequently and with minimum effort, such as groceries, coffee, and magazines) are typically very high. Given that consumers of these products are already “behaviorally” loyal, the researcher believe that in emerging economies, these products are prime candidates for cultivating attitudinal loyalty as well. This can be achieved by stressing the product’s core benefit or service. To differentiate themselves, many companies have changed the way their products have been positioned, by either emphasizing special ingredients (e.g., Colgate toothpaste containing salt) or attaching a sentiment to the product (e.g., Nescafé’s “Refresh and renew yourself” Brazilian slogan, indicating a refreshing day with a cup of coffee). By focusing on the products’ core benefits (such as protection and refreshment in the previous examples), it is possible to create customer loyalty for such products.

In the era of global marketing, corporations have to keep an eye on the marketing environment to survive in the long run. Branding strategies, as the key role in the marketing mix, are increasingly viewed as a powerful tool to obtain sustainable competitive advantages, to fully utilize available resources and to avoid bleeding price competitions (Aaker and Keller, 1990). Brand equity is widely acknowledged as an index of measuring the effectiveness of branding strategies. However, while facing numerous unfamiliar brands, consumers may fall into the dilemma. Therefore, the country-of-origin (COO) becomes a critical external cue for consumers to depend on.

### Price

Price premium reflects the brand’s ability to command a price higher than its competitors. The price premium construct is consequently important for all types of brands, despite their actual positioning within a category (Chattopadhyay, Shivani and Krishnan, 2009).

From the literature, researchers did not find any relationship between price and brand awareness the characterization of equilibrium probability distribution over a range of prices has been defined as price promotion. The same can be implemented over a large number of periods where the demands over subsequent periods are independent of each other (Lal and Villas-Boas, 1996). Past research, has studied the effect of such factors as inventory carrying costs, usage rates, number of loyal consumers on the price promotional strategies used by competitive brands. Blattberg, Briesch and Fox (1985) showed that retailers used price promotional strategies to reduce their inventory carrying costs. Works by Raju, Srinivasan and Lal (1990) showed that if some consumers had a lower inventory carrying costs than the retailers, then the optimal strategy for the retailer would be to offer periodic price discounts. Price discounts are likely to have a negative influence on perceptions of quality (Blattberg and Neslin, 1990), because a consumer who purchases a discounted product often “attributes” the fact of discounting to it being a poorer quality product (Dodson, Tybout and Sternthal, 1978).



**Place**

Consumers are expected to be more satisfied, when a product is available in a greater number of stores. Intensive distribution reduces the time the consumers spend searching for the stores and travelling to and from the stores, provides convenience in purchase, and makes it easier to avail services of the products bought. The increased value results mostly from the reduction of sacrifices the consumers must make to acquire the product (Yoo, Donthu and Lee, 2000). Accordingly, increased distribution is likely to develop a positive perceived quality of the consumer towards the product. Distribution intensity helps develop brand awareness and recognition (Smith, 1992). A wide variety of possible distribution channels can improve the awareness of brands amongst potential consumers.

Store image encompasses characteristics such as physical environment, service levels, and merchandise quality (Baker, Grewal Parasuraman, 1994; Zimmer and Golden, 1988). The influence of today's channels on brand equity is beyond the "availability" factor in the marketing share equation, and retailers' brand equity has been found to enhance the equity of the brands they carry based on the value the retailers provide to their customers (Srivastava and Shocker, 1991). Grewal, Krishnan and Borin (1998) found that store image provides tremendous amount of information to consumers about store environment, customer service, and product quality; and the perceived quality of the brand was found to have a positive relationship with store image. A positive store image can increase a brand's level of exposure in the marketplace, which can improve brand and recognition and awareness. The distribution channel can directly affect the equity of the brands it sells by its supporting actions. However, when Ahmed and Astous (2004) investigated Indian consumers' judgments of apparel products made in highly and newly industrialized states; they found that store type did not have a significant impact on judgments of perceived quality. They explained that the channels of distribution in emerging economies like India were establishing themselves as product promotional tools; so, the negligible effect of store type was understandable.

Perceived fit is an attitudinal measure of how appropriate a certain channel of distribution is for a specific product. Morrison and Roberts (1998) found that consumer's perception of the fit between a service/product and a channel is very influential in determining whether they will consider using that channel for a specific service. In fact, perceived fit was found to be more important than consumer's preferences for the distribution method or service.

**Promotion**

The greatest challenge faced by companies today is holding and increasing their market share and value. This is always a strenuous exercise and one of the tools for the same is marketing. There is no specific game rule available for using these marketing tools. The reason is: each promotional tool has its own characteristics. The studies reviewed predominantly concentrate on the literature related to the influence of various promotional strategies existing in the form of theoretical and conceptual frame work.

In an article coauthored by Gupta and Varma (2000), it was pointed out that marketer's design promotional strategies to reach members of families. Kumar and Leone (1988) and Walter (1991) found a significant impact of promotions on store switching. Prasad and Nataraj (2006) in their article observed that marketing and advertising today had become as important as manufacturing and production due to the increasing competition and awareness among consumers.

Similarly, Poul (2001) in his doctoral thesis opined that advertising is an important marketing communication strategy in marketing mix. In a study, Cramphorn (1996) emphasized that the prevalent belief that successful advertising represents successful communication with consumers. In a study by Jha (1997) it was mentioned that even the ordinary people of India understand the information contained in advertisements and they even find the same as a sort of entertainment. Kim and David (2008) pointed out that the Indian respondents have a positive attitude towards advertising in general.

Varies studies conducted by researchers proved that customer loyalty is very import factor to sustain in the market for long run profit and growth of the business are stimulated primarily by customer loyalty. Customer loyalty is a direct result of customer satisfaction. Customer satisfaction is largely influenced by the value of service provided by the firm to customer

Studies of Guseman and Murrey and Schlacter demonstrated that services are perceived to be more risky then goods. Further because services tend to be transitory and varied, their evaluation may occur primarily after the purchase and consumption.

One of the major contributors to brand equity is advertising (Aaker and Biel, 1993). Lindsay (1990) argued that the greatest source of added value is consumer perceptions of the product or brand, which came from advertising that built a brand image. Maxwell (1989) further suggested that advertising is vital for creating a consistent flow of sales for brands, rather than relying on the artificial peaks and valleys of price promotion. Advertising can influence brand equity in a number of ways. Across both service and product category research, Cobb-Walgren, *et al* (1995) found that the brand with the higher advertising budget had substantially higher levels of awareness. In other words, advertising creates awareness and increases the probability of the brand being included in the consumer's choice set. According to Rice and Bennett (1998), effective advertising increases the level of brand awareness and improve attitudes toward the brand. Studies have demonstrated that heavy advertising improves perceived quality (Nelson 1974) and higher levels of advertising signal higher brand quality (Milgrom and Roberts, 1986). Kirmani and Wright (1989) suggested that the perceived expense of a brand's advertising campaign could influence consumers' expectations of product quality. Klein and Leffler (1981) found that advertising levels were positively related to quality. Works by Philip P Abey (2007), revealed a strong bi-directional relationship between advertising and consumption pattern in emerging markets like India. This study measures the advertising frequency of a brand as perceived by the consumers across all advertising media that the consumer's might consume.

**CRITICISM ON MARKETING MIX**

4Ps delimits four distinct, well-defined and independent management processes. Despite the consistent effort by many physical businesses to deal with the 4P in an integrated manner, the drafting but mainly the implementation of the P policies remains largely the task of various departments and persons within the organization. Even more significant thought is the fact that the customer is typically experiencing the individual effects of each of the 4Ps in diverse occasions, times and places, even in case that some companies take great pains to fully integrate their marketing activities internally (Constantinides, 2002; Wang, Wang and Yao, 2005). However, a study by Rafiq and Ahmed (1995) suggested that there is a high degree of dissatisfaction with the 4Ps framework. Even, overall these results provide fairly strong support Booms and Bitner's (1981) 7P framework should replace McCarthy's 4Ps framework as the generic marketing mix. Development of marketing mix has received considerable academic and industry attention. Numerous modifications to the 4Ps framework have been proposed, the most concerted criticism has come from the services marketing area (Rafiq and Ahmed, 1995).

The introductory marketing texts suggest that all parts of the marketing mix (4Ps) are equally important, since a deficiency in any one can mean failure (Kellerman, Gordon and Hekmat, 1995). Number of studies of industrial marketers and purchasers indicated that the marketing mix components differ significantly in importance (Jackson, Burdick and Keith, 1985). Two surveys focused on determination of key marketing policies and procedures common to successful manufacturing firms (Jackson, Burdick and Keith, 1985). Udell (1964) determined that these key policies and procedures included those related to product efforts and sales efforts. This followed in order by promotion, price, and place. In a replication of this survey, Robicheaux (1976) found that key marketing policies had changed significantly. Pricing was considered the most important marketing activity in Robicheaux's (1976) survey, although it ranked only sixth in Udell's (1964) survey. Udell (1968) found that sales efforts were rated as most important, followed by product efforts, pricing, and distribution. LaLonde (1977) found product related criteria to be most important, followed by distribution, price, and promotion. Perreault and Russ (1976) found that product quality was considered most important, followed by distribution service and price. McDaniel and Hise, (1984) found that chief executive officers judge two of the 4 Ps, pricing and product to be somewhat more important than the other two – place (physical distribution) and promotion. Kurtz and Boone (1987) found that on the average, business persons ranked the 4 Ps to be of most importance in the following order: price, product, distribution, and promotion. Thus, it appears from these studies that business executives do not really view the 4 Ps as being equally important, but consider the price and product components to be the most important (Kellerman, Gordon and Hekmat, 1995). The concept of 4Ps has been criticized as being a production-oriented definition of marketing, and not a customer-oriented (Popovic, 2006). It's referred to as a marketing management perspective. Lauterborn (1990) claims that each of these variables should also be seen from a consumer's perspective. This transformation is accomplished by converting product into customer solution, price into cost to the customer, place into convenience, and promotion into communication, or the 4C's.

Even, a study by Rafiq and Ahmed (1995) found that there is a high degree of dissatisfaction with the 4Ps; however, 4Ps is thought to be most relevant for introductory marketing and consumer marketing. The result also suggests that the 7Ps framework has already achieved a high degree of acceptance as a generic marketing mix among our sample of respondents. Rafiq and Ahmed (1995) also highlighted the strengths and weaknesses of the 4Ps and 7Ps mixes

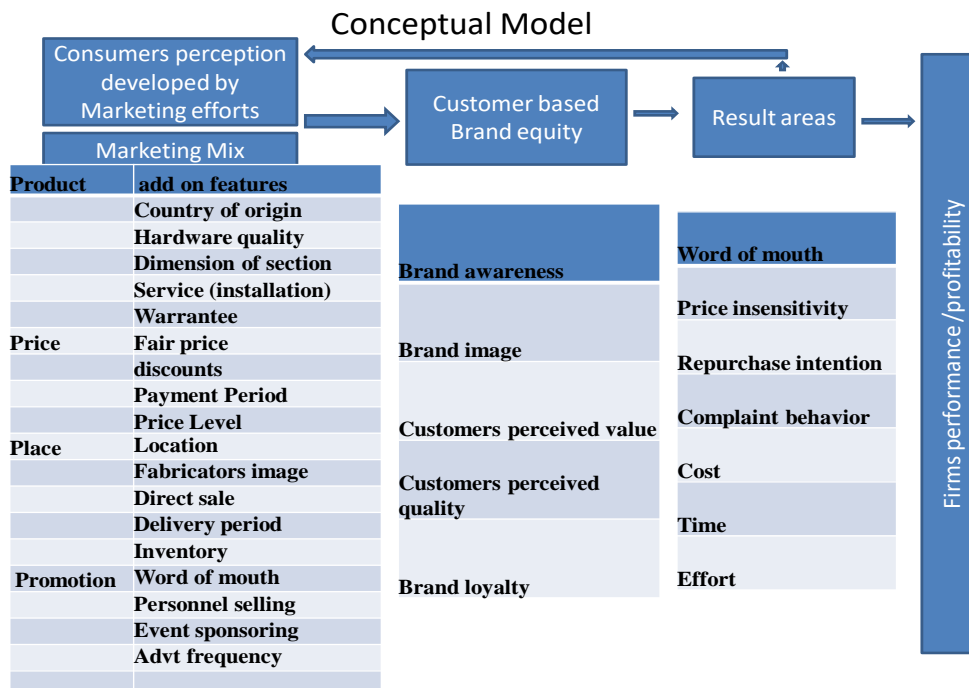


**RESEARCH OBJECTIVES**

For the purpose of conducting this study some objectives have been formulated. They are:

- To identify the influence of various product-related marketing strategies on consumers’ in the Indian UPVC doors and windows market.
- To examine the influence of place (Physical distribution)-related marketing strategies on consumers’ purchasing behavior in the Indian UPVC doors and windows market.
- To ascertain the effect of price-related marketing strategies on consumers’ purchasing behavior in the Indian UPVC doors and windows market.
- To identify the impact of various promotional marketing strategies on consumers’ purchasing behavior in the Indian UPVC doors and windows market.

FIG. 1



**RESEARCH HYPOTHESES**

Based on research conceptual model and framework as well as factors which should be considered to estimate these effects, following hypotheses are set for study

- H1: Product mix has significant effect on upvc windows sale
- H2: Price mix has significant effect on upvc windows sale
- H3: Place mix has significant effect on upvc windows sale
- H4: Promotion mix has significant effect on upvc windows sale
- H5: Marketing mix elements have significant effect on upvc windows sale.
- H6: Brand preference in UPVC windows is independent of the market segment.

**RESEARCH METHODOLOGY**

The study is primarily empirical in nature. The required information has been collected with the help of primary and secondary sources. To evolve an appropriate methodology for the study and to formulate a conceptual frame work for the study, the secondary data are immensely helpful. The primary data have been collected with the help of a consumer survey method by visiting different architects (influencers) and builders in Hyderabad city. Properly designed and pretested interview schedules were used for the collection of primary data. The population to be covered was large, Judgmental sampling techniques were resorted to as the sampling procedure for collecting data. The builders list collected from builders association of India, CREDAI, and APIRDA. Total sample size selected for the study was 58 architects and 60 builders chosen from association list. Proper care was taken to see that the selected sample is aware of upvc windows and used the windows earlier. Finally, the data collected were analyzed with the help of statistical tools (chi- square and Excel). Statistical techniques such as scaling and scoring techniques are used for the analysis of the data. Liker’s scaling technique has been used to analyze the attitude of respondents. The hypothesis formulated for the study was tested with the help of Chi square test the results of the analysis have been presented by means of tables whenever it was found necessary. Marketing Mix elements were analyzed with Rank order scaling. Friedman Test was used to test elements ranks within each block. Validity was confirmed by experts. The results demonstrate that the measures used in the current study all exceed the commonly accepted standard of coefficient alpha 0.7 for measure reliability.

**RESULTS AND DISCUSSIONS**

Data analysis and discussion gives an idea about the various marketing strategies of UPVC window fabricators for acquiring and retaining consumers of the Indian doors and window market.

**A. HYPOTHESES TEST**

To test research hypotheses, one sample t test is used and the results for each hypothesis are shown in table 1. The statistical hypotheses of on sample t test are as follow:

TABLE 1: RESULTS OF ONE SAMPLE T TEST FOR RESEARCH HYPOTHESES

Hypothesis number	size	Mean	s.d	d.f	t	sig	result
H1	118	1.52	.502	117	-32.101	.000	support
H2	118	1.63	.567	117	-26.309	.000	support
H3	118	2.67	.641	117	-5.598	.000	support
H4	118	3.62	.896	117	7.503	.000	Support
H5	118	1.19	.391	117	-50.368	.000	Support

As you can see in table 1, result of one sample t test for all hypotheses was in significant level. Thus the null hypothesis was rejected and alternative hypothesis were accepted, significant at 5% level. Therefore, all research hypothesize base on each one of the Marketing mix elements has significant effect on upvc windows sale volume are supported by 95% confidence level.

H6: brand preference is independent of the market segment

Chi-square test

There is enough evidence to indicate that brand preference is dependent in the market segment. So the management can go for different sales and marketing policy. Based on the survey, the researchers investigated the relationship between brand preference and the market segment. The result of the Chi-square test clearly reveals that, at 95% confidence level, the critical value obtained from the chi-square table is 7.8147 and calculate as 14.1698, which is more than the tabular value and falls in the rejected region. Hence the null hypothesis is rejected and alternative hypothesis is accepted. There is enough evidence to indicate that brand preference is dependent in the market segment. So the management can go for different sales and marketing policy. The researchers further investigated and found that the builder who is more price conscious preferred low price brand and architect who is of more quality conscious, preferred brand which is offering better hardware and good service there is enough evidence from the survey that brand image is positive when perceived service quality improves.

**B. RANKING INTENSITY OF MARKETING MIX ELEMENTS EFFECT ON UPVC WINDOWS SALE VOLUME**

Freedman's test was used to rank intensity of marketing mix elements effect on Upvc windows sales volume. Its results are shown in table 2. The statistical hypotheses of Freedman's test are as follow:

H0: The grades of examined elements is equal.

H1: The grades of examined elements isn't equal.

**TABLE 2: RESULTS OF FREEDMAN'S TEST AND RANKING ELEMENTS**

Elements	Product Mix		Price Mix		Place mix		Promotion mix	
Rank Mean	1.74	1.59(Ar)	1.63	1.66(Ar)	2.97	2.95(Ar)	3.66	3.81(Ar)
priority	2	1	1	2	3	3	4	4
Test statistic	Chi-square: 206.51		d.f.:3		N:118		Sig: .000	

As seen in table 2, calculate chi-square (x2) for all four variables is significant at freedom degree 3 and 0.05 of determination level. Therefore, statistical null hypothesis regarding non-difference between the grades of examined elements is refused with 95% probability. Therefore, elements are ranked in above table based on ranks average. It is also established that there is variation in the architects and builders segments. Rank mean with (Ar) is the mean of the element of architect segment

**C. Ranking intensity of effect of each one of the variables of marketing mix elements on Upvc windows sale volume**

**i. Product Mix**

**TABLE 3: RESULTS OF FREEDMAN'S TEST AND RANKING PRODUCT MIX VARIABLES**

Elements	Add-on features		Country of origin		Hardware quality		Dimension of the section		Service (Instalation)		Warrantee	
Rank Mean	4.10	4.22 (Ar)	2.94	2.47 (Ar)	2.87	3.21 (Ar)	3.84	3.95 (Ar)	2.40	1.84 (Ar)	4.85	5.31 (Ar)
Priority	5	5	3	2	2	3	4	4	1	1	6	6
Test statistics	Chi-square: 142.02				Df: 5				N:118		Sig: .000	

As seen in table 3, calculate chi-square (x2) for all variables of product mix is significant at freedom degree 5 and 0.05 of determination level. Therefore, statistical null hypothesis regarding non-difference between the grades of product mix variables is refused with 95% probability. Therefore, variables are ranked in above table based on ranks average. The Service (installation/fixing) has more important role than other variables followed by country of origin in case of architects segment and overall service followed by hardware quality. Rank mean with (Ar) is the mean of the element of architect segment

**INFLUENCE OF THE PRODUCT-RELATED MARKETING STRATEGIES**

A well accepted product is core to the marketing operations in any business. In this section an attempt is made to deal at length with all the selected product related strategies namely, features of UPVC windows specially with hardware quality, add on features like Grill and mesh, country of origin, warrantee and instalation /fixing of the product been taken into consideration for the study.

Majority of the respondents are felt that they are fed up with the non-availability of carpenters and delay in execution in wooden windows and hence they are shifting to UPVC windows for the better service and timely execution. The features liked by most respondents are service, hardware quality followed by the elegance of the product. In generic products where there is little scope for the product improvements. We can have USP with the service.

Customer's perception towards window in India is different from the rest of the world. They want window to have more life. The purpose of window is to provide lighting and ventilation apart from this grill (guard bars) are integral part of windows. Majority of respondents felt that grill is integral part of the window. Hence grill is going to be the add on feature which companies need to focus. Architrave profile is one more add on feature customers are expecting.

Some of the Respondents felt that German made or Indian made UPVC windows are better than china made UPVC windows. quality. The researchers felt that COO, is going to be the differentiators from one manufacturer to other to build the brand image.

**ii. Price Mix**

**TABLE 4: RESULTS OF FREEDMAN'S TEST AND RANKING PRICE MIX VARIABLES**

Elements	Fair price		discounts		Payment period		Price level	
Rank Mean	2.75	2.33(Ar)	2.63	2.72(Ar)	2.17	2.64(Ar)	2.45	2.31(Ar)
priority	fourth	second	third	third	first	fourth	second	first
Test statistics	Chi-square:13.64		N:118		Df:3		Sig: .000	

As seen in table 4, calculate chi-square (x2) for all variables of price mix is significant at freedom degree 3 and 0.05 of determination level. Therefore, statistical null hypothesis regarding non-difference between the grades of price mix variables is refused with 95% probability. Therefore, variables are ranked in above table based on ranks average. The payment period of suppliers has the most important of variables for overall sample but architect segment look for price level and payment period is least as they are not the end customer and only influencers for the customer's decision. Rank mean with (Ar) is the mean of the element of architect segment

**INFLUENCE OF PRICE-RELATED MARKETING STRATEGIES ON CONSUMERS**

It is irrefutable that a good and proper pricing strategy employed may help the UPVC window manufacturer to achieve a predetermined share of the market. Here the researchers have taken into account some selected pricing strategies resorted to by the merchant for increasing market share and profit maximization in the market. This can be achieved mainly through differential pricing strategy.

Payment period is one of the important elements for price related strategy, especially for builder segment payment period is going to be the game changer. Builders are looking upvc window suppliers as one of the source for their finance due to stringent credit policies to real estate sectors from the banks. Product being generic in nature, it was observed that brand shift is there if supplier is not giving good payment period.

It was noticed from the survey data that the price expectation of different segments was varying to large extent. Around 61% of the respondents are expecting the price at Rs 350/- or below (97% of the builder segment) and balance 39% are expecting the price range as above 350/- (60% of architects segment). This clearly indicates the manufacturer need to have differential pricing strategy to different segments. But it will be difficult for the manufacturer to have differential pricing to different segments with the same product where each will interact with other segment. Hence it is suggested that the differential pricing has to be adopted with add on features like architrave profile, elegant hardware, and different services.

It was also noticed that about 72% of the respondents are placing orders of less than 20 lacs worth and the expected pricing is low for the bigger orders and vice versa hence the pricing strategy should be different for bulk order i.e. more than 20 lacs worth (project order) and retail order. Bulk order with low margin and retail order with high margin.

### iii. Place Mix

**TABLE 5: RESULTS OF FREEDMAN'S TEST AND RANKING PLACE MIX VARIABLES**

Elements	Location		Fabricators image		Direct sale		Delivery period		Inventory	
Rank Mean	3.69	4.26(Ar)	2.19	1.45(Ar)	2.08	1.79(Ar)	2.42	2.84(Ar)	4.63	4.66(Ar)
Priority	fourth	fourth	second	First	First	Second	third	third	fifth	Fifth
Test statistics	Chi-square:234.12		N:118		Df:4		Sig:000			

As seen in table 5, calculate chi-square ( $\chi^2$ ) for all variables of place mix is significant at freedom degree 4 and 0.05 of determination level. Therefore, statistical null hypothesis regarding non-difference between the grades of place mix variables is refused with 95% probability. Therefore, variables are ranked in above table based on ranks average. The direct sale, (directly from the company) is the most important of variables followed by fabricators image and inventory is the least important. Rank mean with(ar) is the mean of the element of architect segment.

#### INFLUENCE OF PLACE -RELATED MARKETING STRATEGIES ON CONSUMERS

The place or physical distribution of a product is, arguably, the most essential and dominant element in the marketing mix. Distribution of product is one of the important rudiments in the marketing mix and it is the method of getting the product from the producer to the ultimate consumer. In this study, the researchers have made an attempt to find out the influence of place or distribution-related marketing strategies on the UPVC window market.

It was found that small builders prefer purchases from local fabricators and big builders (whose order size is more than 50 lacs) are preferring purchases from Indian manufacturers like Fenesta, Wintech brand etc. the researchers analyzed that major builders are having their presence in various places and they are preferring the purchases from one manufacturer in all the places.

The ideal distribution related strategy for the section manufacturer is to appoint more fabricators in different major towns and promote the brand by advertising aggressively about the channel partners

### IV. PROMOTION MIX

**TABLE 6: RESULTS OF FREEDMAN'S TEST AND RANKING PROMOTION MIX VARIABLES**

Elements	Word of mouth		Personnel selling		Event sponsoring		Advt frequency	
Rank Mean	1.56	1.72(Ar)	1.79	1.55(Ar)	3.17	3.09(Ar)	3.48	3.64(Ar)
Priority	First	Second	Second	First	Third	Third	Fourth	Fourth
Test statistics	Chi-square:198.68		N:118		Df:3		Sig:000	

As seen in table 6, calculate chi-square ( $\chi^2$ ) for all variables of place mix is significant at freedom degree 3 and 0.05 of determination level. Therefore, statistical null hypothesis regarding non-difference between the grades of promotion mix variables is refused with 95% probability. Therefore, variables are ranked in above table based on ranks average. The information of table show that word of mouth is the most important of promotion mix variable followed by event sponsorship. Rank mean with(Ar) is the mean of the element of architect segment

#### INFLUENCE OF PROMOTIONAL MARKETING STRATEGIES ON CONSUMERS

In the doors and windows market, the concept of promotion aims at reaching out to the desired consumers and persuades them to act. We know that promotional strategies play a very crucial role in promoting generic product like UPVC windows. Promotional strategies help the manufacturers to make sure that consumers are aware of their full range of products and services and create opportunities to generate repeat and higher value purchases. Here the researchers have made an enquiry to find out the level of the awareness of the respondents with respect to the promotional strategies. The analysis reveals that brand recall of Fenesta is very high when compared to other players. The strategy followed by Fenesta is advertisements in trade magazines like Inside outside, A+D, Better interiors. The right promotional strategy is one to one marketing and participating in trade fairs where in manufacturer can display entire product range.

### RESEARCH LIMITATION

Researchers identified that apart from the 4p's of marketing mix, service is the vital element in sustaining in the market. Researchers felt that as the value of the service component in the total window value is on 10% and hence lot of fabricators are neglecting or diluting the importance of service hence they are losing the customers. Brand image is enhanced with the ability to do the installation of windows. Customer retention and customer loyalty substantially increases based on the ability to do the service. Hence it is advised to the fabricators that in upvc window market service is going to be USP.

From the survey, it was clear that the USP is going to be the service and add on features to the product and it was also observed that lot of the respondents want written warranty for the UPVC windows which clearly states that physical evidence is another marketing tool required by the manufacturer. At the same time 79% of the respondents are not looking for the test certificates.

We need to study the influence of Physical Handling—policies and procedures relating to: a) Warehousing. b) Transportation. c) Inventories. The researchers felt that as lots of fabricators are depending on importing the sections from china, we need to study the above elements to understand and formulate the procedures. Customers from metro's and customers from B towns may differ and as the study is limited to only Hyderabad, we need to study in B-towns also to formulate and implement the marketing mix strategies

### CONCLUSION

In the light of the above disquisition, it is obvious that this research adds a new dimension to our perception of the attitude of UPVC windows consumers towards the different marketing strategies in the Indian market. The primary data was collected from 118 respondents from two different segments with the help of a survey method in Hyderabad. In this study the researchers provide an overview of the influence of various marketing strategies on consumers in the Indian doors and window market. There is no denying the fact that UPVC windows market is one of the growing sectors in India, especially in south India and it is going to have sustained growth. In the doors and windows market, the manufacturer should be keeping themselves updated with the dynamic of Economic and market environment conditions, and also expertise in market research. They have to formulate result-oriented and workable marketing strategies in such a scenario. They not only develop marketing strategies but also evaluate existing ones, identifying problems and giving proper solutions. While developing marketing strategies, they mainly focus on understanding the current and emerging needs of customers, opportunities available in market and how they can grab these opportunities to achieve marketing goals and business objectives.

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**CONSUMER PERCEPTION TOWARDS MARKETING OF TANTEA PRODUCTS****S. DEEPA****RESEARCH SCHOLAR****ASST. PROFESSOR****RESEARCH CENTRE IN COMMERCE****THE STANDARD FIREWORKS RAJARATNAM COLLEGE FOR WOMEN****SIVAKASI****M. JAYALAKSHMI****ASSOCIATE PROFESSOR****RESEARCH CENTRE IN COMMERCE****THE STANDARD FIREWORKS RAJARATNAM COLLEGE FOR WOMEN****SIVAKASI****ABSTRACT**

*Consumer perception analysis aims to ultimately improve business performance through an understanding of past and present consumers so as to determine and identify future consumers and their perception. Perception is defined as “the process by which people select, organize and interpret information to form a meaningful picture of the world”. In this paper, results relating to consumers perception on Tamilnadu Tea Plantation Corporation Limited (TANTEA) products in respect of various elements of marketing mix includes product, price, place/physical distribution and promotion are discussed.*

**KEYWORDS**

consumer perception, marketing, marketing mix, TANTEA.

**INTRODUCTION**

Tamilnadu Tea Plantation Corporation Limited - TANTEA is an undertaking of the State Government of Tamilnadu, India. A Vision that took root in 1968, to rehabilitate Sri Lankan repatriates trained in the fine art of tea culture. TANTEA is one of the biggest black tea producers in India with high quality clonal tea plantations spread over nearly 4500 ha. in Nilgiris and Coimbatore districts of Tamilnadu.

Consumer perception refers to the process by which a consumer selects, organizes and interprets information or stimuli inputs to create a meaningful picture of the brand or the product. Consumers perception towards marketing can be examined through their views towards the for basic dimensions of marketing known as 4 P's namely Product, Price, Place/ Physical distribution and Promotion.

Perception being an abstract concept cannot be measured directly in terms of quantitative terms. But perception can be measured indirectly by devising an attitude scale. The researcher has devised an attitude scale for measuring the level of perception of the consumers towards marketing of TANTEA products. To analyse the level of perception of the consumers, some important components are identified and a comprehensive study has been made by measuring the level of satisfaction.

In this study, 54 statements have been formulated under four heads namely product, price, place/physical distribution and promotion to measure the perception level. Likert's five-point attitude scale was constructed by awarding scores to these 54 statements. With the help of the scale, the extent of perception has been measured.

**RATIONALE OF THE STUDY**

The TamilNadu Tea Plantation Corporation Limited is one of the biggest black tea producers in India. It aims to improve the distribution effectiveness and explore the preferences of the retail outlets. The outlets bridge the gap between the consumer and the dealers. The limited distribution of TANTEA in selected regions alone make the dealers to face with out of stock position and create dissatisfaction among the retail outlets which leads to dissatisfaction among customers too who switch over to other brands. Hence, the researcher is interested to study the consumer perception towards marketing of TANTEA products.

**OBJECTIVES OF THE STUDY**

1. To analyse the consumer perception towards marketing of TANTEA.
2. To offer valuable suggestions based on the findings.

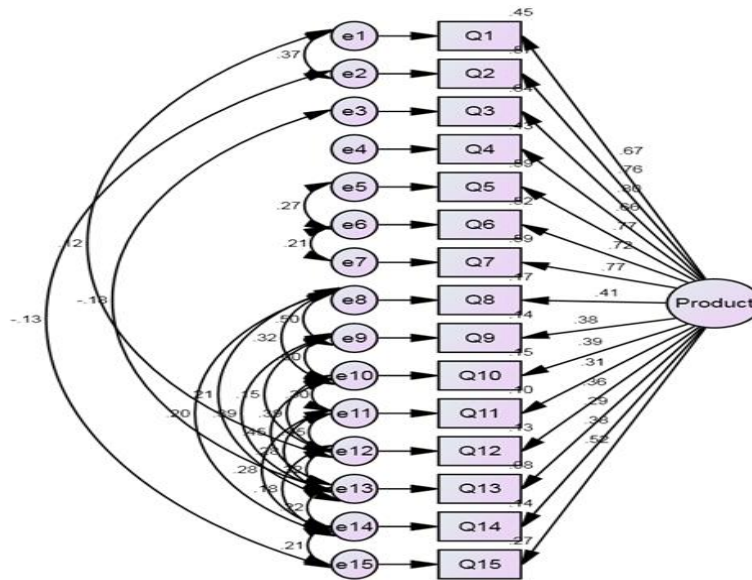
**RESEARCH METHODOLOGY**

The information required for the study are collected by means of primary source. The data which is collected in a fresh manner and which is not available is termed as primary data. The primary data have been collected from the consumers of TANTEA. For the purpose of the survey, Likert's five-point attitude scale was constructed by awarding scores to 54 statements under four heads namely product, price, place/physical distribution and promotion.

**RESULTS & DISCUSSION**

In this section, results relating to consumers opinion in respect of various elements of marketing mix includes product, price, place/physical distribution and promotion are discussed.

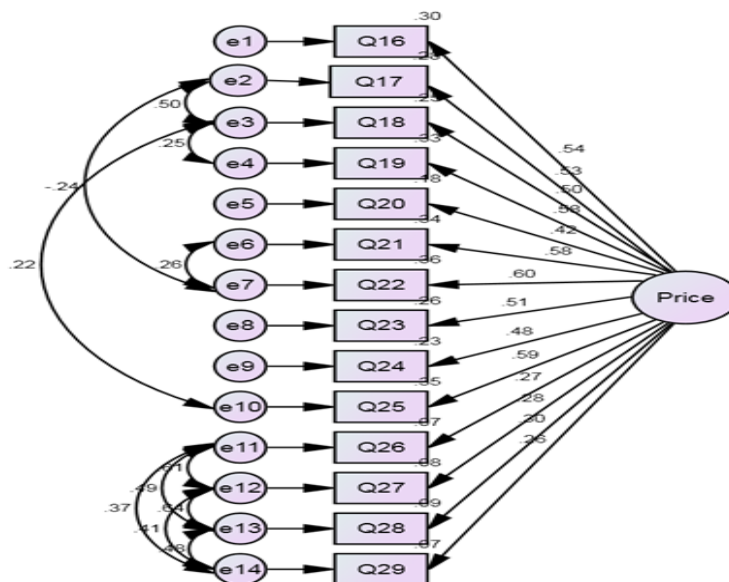
FIGURE 1: PRODUCT



This is a simple regression model where one observed variable, the consumers perception towards product, is predicted as a linear combination of the other observed variables. The model assumes '1' as standardized regression weights which specifies that other variables must have a weight of 1. Each single headed arrow represents a regression weight in the prediction of consumer perception towards the product of TANTEA. Each single-headed arrow represents a regression weight. The value shown against two sided arrows (-.13,.12, -.18,.37,.27,.21,.50,.32,.60,.21,.15,.30,.20,.39,.39,.45,.45,.28,.28,.32,.18,.22,.21) is the correlation between the observed variables and satisfaction about TANTEA products. The values shown with single sided arrow (.67,.76,.80,.66,.77,.72,.77,.41,.38,.39,.31,.36,.29,.38,.52) are standardized regression weights. The consumer perception is influenced Regularly using TANTEA (.80). The next two equally influencing variables are High brand image for TANTEA and Product is readily available (No product shortage) (.77) followed by Satisfied with the quantity supplied (.76), Product meets the taste and preferences of customer (.72), Quality of the product is good (.67), Wide varieties of products available (.66), There is product adulteration (.52), Packaging is good (.41), Reusable containers are useful (.39). The next two equally influencing variables are Packaging is more attractive and Labeling explain the product usage (.38) followed by Induce to make repeated purchase (.36), By consuming feel freshness (.31). The least influencing factor is TANTEA is preferred by all (.29).

CONFIRMATORY FACTOR ANALYSIS ON CONSUMER PERCEPTION ON PRICE

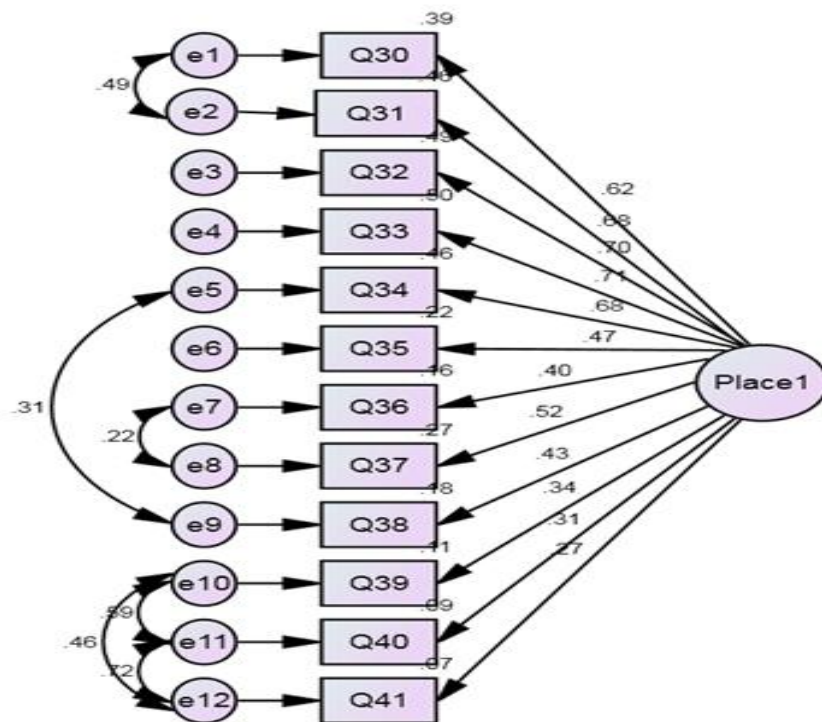
FIGURE 2: PRICE



This is a simple regression model where one observed variable, the consumers perception towards price, is predicted as a linear combination of the other observed variables. The model assumes '1' as standardized regression weights which specifies that other variables must have a weight of 1. Each single headed arrow represents a regression weight in the prediction of consumer perception towards the product of TANTEA. Each single-headed arrow represents a regression weight. The value shown against two sided arrows (.22, -.24,.50,.25,.26,.61,.49,.37,.64,.41,.48) is the correlation between the observed variables and satisfaction about TANTEA products. The values shown with single sided arrow (.54,.53,.50,.58,.42,.58,.60,.51,.48,.59,.27,.28,.30,.26) are standardized regression weights. The consumer perception is influenced Price reduction will enhance market expansion (.60) followed by fluctuation in price affect the effective purchase (.59). The next two equally influencing variables are Price variation for different varieties is acceptable and Price of the product ensure best value for money (.58) followed by TANTEA adopts genuine pricing methods (.54), The price is reasonable (.53), Higher the quality, higher the price (.51), Different varieties offered at different prices (.50), Higher the price, higher the benefit from the product (.48), Auction price influence the product price (.42), The price of white tea is high (.30), Government policy has impact on the price of the product (.28), Brand image enhance the price of the product (.27). The least influencing factor is The price of the green tea is acceptable (.26).



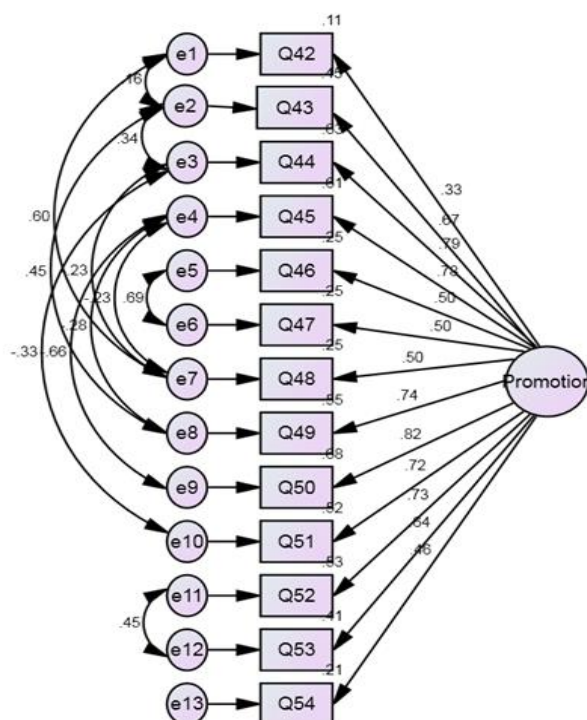
FIGURE 3: PLACE/PHYSICAL DISTRIBUTION



This is a simple regression model where one observed variable, the consumers perception towards place/physical distribution, is predicted as a linear combination of the other observed variables. The model assumes '1' as standardized regression weights which specifies that other variables must have a weight of 1. Each single headed arrow represents a regression weight in the prediction of consumer perception towards the place/physical distribution of TANTEA. Each single-headed arrow represents a regression weight. The value shown against two sided arrows (.49,.31,.22,.59,.46,.72) is the correlation between the observed variables and satisfaction about TANTEA products. The values shown with single sided arrow (.62,.68,.70,.71,.68,.47,.40,.52,.43,.34,.31,.27) are standardized regression weights. The consumer perception is influenced TANTEA can sold through Fair Price Shops (.71) followed by TANTEA shop can expand the market (.70). The next two equally influencing variables are Area coverage is adequate and Area of location of TANTEA shop is easy to access (.68) followed by TANTEA is available with all retailers (.62), More number of TANTEA shops can be established (.52), Follow the shortest channel of distribution (.47), Increased retail outlets ensure easy access to the TANTEA (.43), Distributing the products mainly through exclusive agency (.40), Services of middleman is prompt (.34), Packaging protect the product in transit (.31). The least influencing factor is There is no product defect / damage (.27).

CONFIRMATORY FACTOR ANALYSIS ON CONSUMER PERCEPTION ON PROMOTION

FIGURE 4: PROMOTION





This is a simple regression model where one observed variable, the consumers perception towards promotion, is predicted as a linear combination of the other observed variables. The model assumes '1' as standardized regression weights which specifies that other variables must have a weight of 1. Each single headed arrow represents a regression weight in the prediction of consumer perception towards the promotion of TANTEA. Each single-headed arrow represents a regression weight. The value shown against two sided arrows (.60,.45, -.33,.16,.34,.23, -.23,.69, -.28, -.66,.45) is the correlation between the observed variables and satisfaction about TANTEA promotion. The values shown with single sided arrow (.33,.67,.79,.78,.50,.50,.50,.74,.82,.72,.73,.64,.46) are standardized regression weights. The consumer perception is influenced More and clear product information is available in labeling (.82) followed by Media selected for promotion of TANTEA is effective (.79), Promotional strategies are adopted in selected regions only (.78), More and clear product information is available in advertisement (.74), TANTEA website influence to purchase the product (.73), Web advertisement of TANTEA is well known (.72), Different media are used to promote TANTEA (.67), TANTEA attracts new customers (.64). The next three equally influencing variables are Special seasonal promotional activities are carried out, In exhibition, stall for TANTEA is effective and Offers and discounts are given to promote sales (.50) followed by Recommend the product to others (.46). The least influencing factor is Knowledge of product gained through their promotional strategy (.33).

TABLE 1: MODEL FIT SUMMARY OF CONFIRMATORY FACTOR ANALYSIS

Indices	Product (Value)	Price (Value)	Place/Physical Distribution (Value)	Promotion (Value)	Suggested value
Chi-square value	302.164	211.481	186.952	233.888	-
P value	<0.001	<0.001	<0.001	<0.001	<0.01
GFI	0.938	0.953	0.950	0.944	>0.90
AGFI	0.918	0.925	0.919	0.906	>0.90
CFI	0.948	0.944	0.947	0.959	> 0.90
RMR	0.060	0.037	0.044	0.054	< 0.08
RMSEA	0.077	0.061	0.070	0.075	< 0.08

Source: Computed data

From the above Table 1 it is found that the calculated P value is less than 0.01 which indicates perfectly fit. Here GFI (Goodness of Fit Index) value and AGFI (Adjusted Goodness of Fit Index) value is greater than 0.9 which represent it is a good fit. The calculated CFI (Comparative Fit Index) value is greater than 0.9 which means that it is a perfectly fit and also it is found that RMR (Root Mean Square Residuals) and RMSEA (Root Mean Square Error of Approximation) value is less than 0.08 which indicated it is perfectly fit in all the marketing elements.

## FINDINGS

- ❖ The consumer perception towards product is analysed with 15 variables of which "Regularly using TANTEA" is the most dominating variable.
- ❖ The consumer perception towards price is analysed with 14 variables of which "Price reduction will enhance market expansion" is the most dominating variable.
- ❖ The consumer perception towards place/physical distribution is analysed with 12 variables of which "TANTEA can sold through Fair Price Shops" is the most dominating variable.
- ❖ The consumer perception towards promotion is analysed with 13 variables of which "More and clear product information is available in labeling" is the most dominating variable.

## RECOMMENDATIONS/SUGGESTIONS

- When new varieties of tea are introduced in the market, special offers, discounts and compliments should be given by the TANTEA to attract the consumers to purchase it.
- Market survey and market research by dealers for TANTEA products should be carried out on a continuous basis and strategies towards improving consumer satisfaction must be based on the research findings.
- TANTEA can adopt proper grading techniques to fix price for each grade because in Tamil Nadu the price of tea was varying from year to year.
- TANTEA should adopt careful pricing policy to retain the existing consumers and attract new consumers.
- The marketers of TANTEA should provide excellent distribution network to enable all types of tea to reach all types of shops located in all parts of rural and urban areas.
- TANTEA should popularize their brand through proper promotional measures.
- TANTEA should advertise their product through electronic media in order to attract the consumers easily. Especially TANTEA could advertise through television and mobile phones so that the consumers will immediately notice it.

## CONCLUSION

The key problem area of the company is its inability to get good price for tea. Despite 40 years of existence, its dependence on auction sales resulted in realisation of substantially low prices for tea. As the fall in tea prices was much higher compared to the production expenses, to overcome this deficiency, the Company should take immediate and effective steps to reduce its over dependence on auction sales and to improve direct sales and sale of packet tea in the liberalised tea marketing scenario. The price fluctuations of the product should be regulated. Though TANTEA products have more quality, lack of promotional measures leads to problem in sale of product. The future sale of TANTEA products might be increased by increased promotion. Thus TANTEA a public sector company, can become a role model to others.

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## ANALYSIS OF EDUCATIONAL FINANCIAL SCHEMES FOR SCHEDULED CASTES AND SCHEDULED TRIBES IN INDIA

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### ABSTRACT

*Various groups of historically disadvantaged people in India are given official designations by the name of Communities listed in Constitution as Backward Caste and Tribe. They are recognized in the Constitution of India and these various groups are distributed in one or other of the categories. They were known as Backward Classes during British rule. The Communities listed as Backward in Constitution are referred to as Backward Community interchangeably and official term used for Communities listed as Backward in Constitution is Adivasi. The education department has continued to give special emphasis on the importance of education Communities listed in Constitution as Backward Caste and Tribe. The removal of disparities and equalization of educational opportunities is specifically emphasized in Updated National Policy on Education (NPE) by attending to specific needs of those who have been denied equality so far. The Policy and its programme of Action (POA), contains specific directions and measures for their educational upliftment. These are the following special provisions for Communities listed as Backward in Constitution that have been incorporated in existing schemes of Ministry. Education is important and plays a crucial role in uplifting the standard of living. The Education has effect of changing people to live, and status in the society. Education provides an opportunity to do something constructive by allowing to utilize the best of knowledge in varied aspects. There is relationship of growth and personal success.*

### KEYWORDS

schedule caste, scheduled tribes, Economic upliftment, financial assistance.

### INTRODUCTION

In India, may get list of Scholarships In India here from this single page. Here we are also providing you all complete details about Scholarship for Indian Students. Scholarship is a boon for students, belonging to Communities listed as Backward in Constitution, who are Not able to further their education for some reason or other. Scholarship is a motivation as well as encouragement for candidates, who are brilliant, but do Not have means to study further. There is a various type of scholarships such as merit-based, need-based, student-specific, career-specific, and college-specific. The Ministry provides National as well as External Scholarships to needy students.

Education Development of Communities listed in Constitution as Backward Caste and Tribe The education department has continued to give special prominence to the importance of education Communities listed in Constitution as Backward Caste and Tribe. The inequalities in provision of education. These are the following special provisions for Communities listed as Backward in Constitution that have been incorporated in existing schemes of Ministry.

All Government of the state made the provision of waiver of tuition fees in schools belonging to government upto fourth standard these applies many states in case of all the other types of the schools such as schools belonging to municipal bodies and private schools

Most of the States provide assistance to students belonging to Economically backward, Communities listed as Backward in Constitution communities for meeting other costs of education, such as textbooks, uniforms, schools bags, transport, etc.

Secondary education is free for children belonging to Communities listed as Backward in Constitution in all States and Union Territories.

### IMPORTANCE OF SCHOLARSHIPS TO STUDENTS AND EDUCATION

Scholarships are the instruments of encouragement towards education and research for students. They are provided for candidates interested in college education, research and technical expertise. Importance of scholarships is so high that even educational institutes, governments and also the sponsors are keenly interested due to hidden benefits. Scholarships in general encourage students to think of further studies. While for an education institute, scholarships provide extra funds and also help students enrolment. For the sponsors, these scholarships bring fame, good will in the public and also tax benefits from the governments.

### PROBLEM ON HAND

Communities listed as Backward in Constitution have for ages remain backward and unique problem of their backwardness was identified with backwardness in education. In spite of the fact that Indian constitution had guaranteed the objective of development of the backward classes, including Listed as Backward in Constitution, the status of the backward community remains the same.

The Government and Non-Government Organisations had formulated various financial and Non-financial schemes for the development of the community, however on account of various problems as discussed below, the status of the scheduled Caste and Communities listed as Backward in Constitution community remained unchanged

1. The attitude of the implementing agencies of the various schemes is big challenges the beneficiary of the schemes is Not aware about the timeliness as to getting the information about various schemes properly. It was observed that the various modes of display of such schemes are Not properly device and hence the community is far away from applying the schemes.
2. There is big divide between the communities as to backward classes and Non backward classes. To the various schemes device form development of scheduled Caste and Communities listed as Backward in Constitution is being considered as majority of the other communities as being discrimination by the government amongst the community which day considered as punishment to upper class community. Hence there are wide scale atrocities by the majority on such minority community.

### OBJECTIVES

1. To study the awareness of various schemes for the upliftment of Scheduled Castes/Communities listed as Backward in Constitution as designed by various Government.
2. To Study the Economic conditions of Communities listed as Backward in Constitution/ Communities listed as Backward in Constitution.

**RESEARCH METHODOLOGY**

**REGION OF RESEARCH**

The Geographical location for the study was Mumbai, Thane, and Kalyan District in the state of Maharashtra.

**RESEARCH DESIGN**

The Research conducted was of Descriptive and Analytical in Nature

The research design and the steps adopted in research methodology kept in focus the objectives set for the study and the general hypothesis of the study. The Numbers of Null hypothesis numbering 10 were formed for the study was also subjected to statistics method of testing. I have used various Tests of significance such as Z test, Chi-Square test & t-test. I have used various statistical techniques for analysis and interpretation of my research data such as tables, graphs, mean, standard deviation , various averages.

The different respondents of different communities and executives of various Government and Non-Government agencies consisting of 4998 in numbers.

**POPULATION AND SAMPLING**

The population of study consists of the different respondents of different communities and executives of various Government and Non-Government agencies consisting of 4998 in numbers, selected by sampling method known as Convenient Sampling Method.

**COLLECTION OF DATA**

The collection of data consists primary data. The primary data was collected by floating a structured questionnaire.

**STATISTICAL METHODS**

I have collected the data by asking the respondents to give their responses with reference to the various question structured for the purposes of testing the various Hypothesis designed for getting the results. The respondents were selected from the backward class community both from scheduled caste and scheduled tribes community the data collection was by personal interview, circulating the questionnaire through electronic media etc.

The various statistical methods were systematically done using tools such as mean, standard deviation and for testing various hypothesis, Chi-Square and other statistical test was adopted using various statistical packages and computerized data processing was adopted Analysis and Interpretation of Data.

Data received from 4998 respondents is analysed and analysis was made on the basis of following:

- a) Gender
- b) Caste
- c) Age Group
- d) Marital Status
- e) Occupation
- f) Nature of the course
- g) Working and Non-working
- h) Employer type
- i) Annual Income
- j) Family Members

**REVIEW OF LITERATURE**

The Research Problem of my project was to evaluate the effectiveness and sufficiency of the various financial schemes floated by various Government and Non-Government agencies. The Indian constitution has accorded preferential status, amongst other backward communities, scheduled Caste and Communities listed as Backward in Constitution in particular. In spite of the constitutional preferences, various researchers have found that the effectiveness of such schemes have Not resulted in the desired Economic upliftment as was thought of while devising such schemes. In view of the same various research papers reviewed, the opinion of the authors centered around the wide disparity amongst the various classes of the society. The researchers found that such schemes for the development of Communities listed in Constitution as Backward Caste and Tribe have resulted in atrocities by Non-backward classes on scheduled Caste and Communities listed as Backward in Constitution.

**ANALYSIS OF RESULT**

**Objective No 1 :**To Study the awareness about the various available financial schemes for upliftment of the community following Hypothesis were formulated and Tested.

I have Tested the Hypothesis No.1 to Hypothesis No. 33 for Studying the Object No 2.

**Hypothesis 1:** Majority of the Scheduled Caste and Communities listed as Backward in Constitution are aware about the various available financial schemes for upliftment of the community

I have Tested the above Hypothesis with respect to all the Schemes as Discussed below,the results of the same are as follows.

**Hypothesis No :2**

1. H0: P = 0.80 (P<sub>0</sub>) Vs H1: P < 0.80

I	Government Schemes	Number	Z <sub>0.05</sub>	Z <sub>0.01</sub>
1	National Overseas Scholarship	1986	1.64	2.33

P	P0	Q0	S.E.	Z	DECISION	CONCLUSION
0.397359	0.8	0.2	0.005658	71.16332	REJECT H0 ACCEPT H1	Majority of the communities listed as backward in constitution respondents are Not benefited by the scheme

**Hypothesis No :3**

2. H0: P = 0.80 (P<sub>0</sub>) Vs H1: P < 0.80

I	Government Schemes	Number	Z <sub>0.05</sub>	Z <sub>0.01</sub>
2	Rajiv Gandhi National Fellowship	480	1.64	2.33

P	P0	Q0	S.E.	Z	DECISION	CONCLUSION
0.096038	0.8	0.2	0.005658	124.4191	REJECT H0 ACCEPT H1	Majority of the communities listed as backward in constitution respondents are Not benefited by the scheme

**Hypothesis No :4**

3. H0: P = 0.80 (P<sub>0</sub>) Vs H1: P < 0.80

I	Government Schemes	Number	Z <sub>0.05</sub>	Z <sub>0.01</sub>
3	Special Educational Development Programme for Communities listed as Backward in Constitution Girls Belonging to Low Literacy Levels	2083	1.64	2.33

P	PO	Q0	S.E.	Z	DECISION	CONCLUSION
0.416767	0.8	0.2	0.005658	67.73316	REJECT H0 ACCEPT H1	Majority of the communities listed as backward in constitution respondents are Not benefited by the scheme

**Hypothesis No :5**

4. H0: P = 0.80 (P<sub>0</sub>) Vs H1: P < 0.80

I	Government Schemes	Number	Z <sub>0.05</sub>	Z <sub>0.01</sub>
4	Scheme for Priceless Coaching for Communities as Backward in Constitution	2756	1.64	2.33

P	PO	Q0	S.E.	Z	DECISION	CONCLUSION
0.551421	0.8	0.2	0.005658	43.93426	REJECT H0 ACCEPT H1	Majority of the communities listed as backward in constitution respondents are Not benefited by the scheme

**CONCLUSION**

1. Considering the huge gap between the requirements of finance for education leading to Economic development of the community, the various measures undertaken shall lead to community being aware about various schemes so that they can go ahead with the schemes.
2. The further involvement of Non-Government agencies, shall reach the scheme to the wider Scheduled Caste and Communities listed as Backward in Constitution community for the Economic upliftment.
3. The overall development of India depends upon the overall Economic development of all the sections of the community in India, including scheduled Caste and Communities listed as Backward in Constitution community, the government's objective of overall growth shall be achieved.

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**PEER COACHING: A TOOL FOR CAREER DEVELOPMENT**

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**ABSTRACT**

*This research paper is aimed at analyzing the effectiveness of peer coaching in the organizations. Peer coaching can be defined as coaching and support given by colleagues working in the same hierarchy to expand explore and improve skill sets or behavioral aspects to solve the problems in the workplace. This paper reviews various research reports and their descriptive study. After studying various articles and papers related to this subject it can be inferred that peer coaching helps to improve collaborative ideas of the employees and there by delivering the highest quality products and services leading to increased customer satisfaction. Peer coaching also helps in building personal capabilities to match performance demands and reinforcing business practices and retaining talent in an organization more effectively. Peer coaching is directly linked with the job satisfaction and engagement of the employees hence improves the productivity of the organization. Peer coaching presently is seen as a narrow aspect and hence companies are failing to leverage its potential. This paper tries to explore the scope of peer coaching in organizations to encourage learning and development of employees.*

**KEYWORDS**

peer coaching, learning, development.

**INTRODUCTION**

Today businesses are operating in a "VUCA" environment. In environment for businesses to thrive it is expected that the employees are flexible to learn and unlearn things at a fast pace. It has therefore resulted in change in employment patterns and also formed high levels of stress environment around job in the organizations (Ashkanasy&Holmes, 1995). Employees with a varied set of skills who can adapt themselves to these fast changes are desired. Therefore, the key to career growth lies in continuous learning. It's the individuals who have to assume responsibility for their career development. Learning nowadays has moved from one time learning to a continuous process. (Guindon & Richmond, 2005).

History always tells us that education and work have never been well coordinated. To cultivate an atmosphere of learning and ensure growth and development of the organization is herculean task for the managers in the industry (Burns, 1995). It has been widely acknowledged that developmental relationships at work like mentoring helps employees to strengthen their ability to work. (Kram & Hall,1989). In a typical setup of such a relationship a more experienced employee helps a junior colleague to grow by allotting assignments and by providing guidance and feedback on the same. Psychosocial support and positive career outcomes come forward in the process.

Mentoring process in its traditional way has always been a learning process (Mavrinac, 2005). Today however, the reality is that there is a severe resource constraint, and a behavioral gap between the mentor and the mentee, hence few senior managers ready to take up a mentoring role. (Allen, Poteet, & Burroughs,1997). Today the most expected things from a mentor is an emotional support and informational guidance for the workers. Continuous learning is not possible if the organizational culture and the leadership don't encourage their employees to learn and grow continuously.

The concept of peer coaching evolved in the above mentioned situation. The concept initiated in teaching profession where teachers regularly observed each other and with feedbacks and suggestions partners improved their skills (Ackland, 1991; Joyce & Showers, 1980). Peer coaching is a high-impact low-cost powerful tool that can be easily implemented. It is a developmental interaction that helps partners to pick up the pace in their learning career. The fundamental principle of Peer coaching is to help each other, which will in-turn help to develop each other's abilities and improves the functioning in the organization.

Professional development of both the partners involved is the main agenda of peer coaching. In simple words it's a give and take policy. Peer coaching has capacity to accelerate career learning with mutuality and reciprocity as its inherent characteristics. Over the year's psychological studies have established that people learn more from social groups rather than individually.

**OBJECTIVES**

1. To study peer coaching as tool for the development of employees in the organization.
2. To recommend strategies for effective peer coaching in the organization.

**DISCUSSION**

Continuous professional development, growth and success require all employees to keep learning continuously. Learning support is essential for development of both micro and macro level skills such as adaptability for a specific job (Hall, 2002). Employees for their professional development need to have political and social skills (Siegel, 2000). Development of peer relationships helps learning career. Relationship interactions are essential for both individual development and organizational success (Eddy, 2003)

**RELATIONAL APPROACH OF LEARNING**

A relational approach to career is based on the fact that one of the important methods for learning is through interaction with others (Hall & Associates, 1996). Human beings have always stayed and developed around societies which have the centrality of relationships, acknowledge multiple viewpoints and learn from each other (Gallos, 1989). In learning with others, individuals attain a better sense of vision, purpose and self-understanding (Walsh, Bartunek, & Lacey, 1998).



Bringing colleagues together to learn and grow is the essence of peer coaching (Kram, 1996). Career growth starts with self - knowledge. It reinforces the identity and allows an individual to later collaborate with others. Learners have to be sensitive towards each others needs and interact effectively. Unlike traditional approaches that emphasize on autonomy and individual domain peer coaching encourages interdependence (Kram, 1996)

#### PEER COACHING IS DIFFERENT FROM TRADITIONAL COACHING

The contribution of mentors has been important in the development. Helping people with a wide range of personal and professional problems such as psychosocial support (feelings of self-esteem and acceptance), strengthening the individual capacity to be a leader in his profession and helping them to adapt to changes in the environment (Kram, 1985). Mentoring facilitates individual learning but is highly monitored. In VUCA times past experience and accumulated knowledge cannot guarantee success every time. The relevance of traditional role i.e. a senior directing a younger employee will be undermined in the future. The old models thus would be no longer be the guidelines for future situations. Hence, the learning from previous experiences could be a disadvantage.

Colleagues are more likely to associate themselves with the ambiguity and lack of certainty in day to day work. Peers can contribute to of psychosocial and vocational support and also help in sharing knowledge (Eby, 1997; Ensher, Thomas, & Murphy, 2001). One of the biggest drawbacks of traditional mentoring in organizations is that nomination of some employees precludes the opportunity for other motivated employees. This leads to dissatisfaction and eventually affects the performance of such employees. In a peer learning culture however numerically there can be a greater participation among the workforce. (Bryant, 2005). Thus such formal peer leaning models are becoming popular in organizations.

#### PEER COACHING AND PSYCHOLOGY

Partner training is a form of specialized development tool that facilitates mutual learning career. People have thrived in a give and take relationship. At the bottom of each of us lies a selfish attitude that questions the benefits of doing an activity. A mutual relationship which flourishes in a peer coaching satisfies this. Working with learning partners is a way to improve class-specific skills. In collaborative classrooms for example the natural environment of learning is optimized (Buzbee, Klein, 2005). In peer learning effective care by training partner's person is essential. Therefore, it requires a personal reflection on the actions of other. Through the process of reflection of cognitive and spiritual aspects the development of professional and personal dimensions takes place. This allows them to share emotions, social and political processes, knowledge of the body and spiritual awareness while solving problems. Thus co-training and learning process which is based on the self-awareness demands attention to self.

#### PEER COACHING AT DIFFERENT STAGES OF CAREER

Peer coaching capabilities keep evolving in an individual over different stages of his career.

In the beginning of career for example, it increases confidence and the ability to adapt to rapid changes in the organizational life. In later stages deeper levels of analysis and transformational learning are essential for professional development.

#### ESSENTIALS FOR PEER COACHING TO SUCCEED

Peer learning is a developmental activity where both the partners learn. Unlike the hierarchial traditional learning systems where it's the tutor who teaches the pupil here both the partners are benefitted. This is where peer coaching is different from mentoring as it doesn't focus on a single gainer. For such a peer developmental activity to take place positive regard, mutual understanding and trust are essential. (Ragin and Kram, 2007)

One of the characteristic features of the Peer coaching is equivalence of the colleagues (Siegel, 2000). It removes the important power dimension that otherwise is evident in a senior junior relationship. People who are peers at same level share critical communication (Siegel, 2000). Peers can work on learning opportunities with a common a goal of mutual learning. Also there is sensitive consideration of professional and personal issues. Peer coaching helps in gaining alternate view of the problem. Professional and Personal development of each other is an essential attribute of this coaching. In the process they seek to gain a thorough understanding of subjective experience.

Learning in peer coaching is self-paced and requires colleagues to investigate and understand their own strengths, attitudes, assumptions, beliefs and mental attitudes. Each participant chooses subjects of personal interest for exploration and expression. In a successful relationship colleagues listen consistently, understand feelings and keep the each other in positive regard. (Rogers 1973)

Organizations today are willing to experiment with peer coaching. Firms act as sponsors and offer platforms to bring peers closer on a regular basis. Organizations today help employees to set specific goals to support each other's learning and development objectives. Emotional competencies are related to the goals. Companies today are investing in the construction of ethical framework down and identify elements that bind team and ensure personnel development.

#### RECOMMENDATIONS

This section attempts to recommend few strategies and ways which would make peer coaching more effective:

**TNA:** Training need analysis is necessary to get to know about the gaps in competencies which need to be improved in employee to get better productivity. Identify the gaps which can be filled. Then decide for which type of coaching has to be given. In some cases, peer coaching works better than any other technique but it doesn't always work. To have a good developmental impact peer coaching has to be planned and implemented well. Complete support of the coach should be involved in the whole process and integrity of the coach is a major factor which needs to be considered. Coachee should be interested in developing them self because a peer coach's role is more of giving advice and guidelines to coachee which will help him to find the answer them self. Organizational culture is another important factor which needs to be considered while recommending for peer coaching. Not all the organizations encourage peer coaching since its more into development of the employee but not much into result oriented in monetary terms.

**Pairing of coach and coachee** defines the success of protégé. This is the most important consideration, both coach and coachee should agree completely for the process. Prior notice has to be given regarding the purpose of the coaching program and both of them don't agree whole heartedly the whole purpose get ruined. There should be a precise plan for the coaching and peer coach should make sure that coachee feels free and independent to interact and as questions. Coachee should be taking coach's feedbacks positively and accept the challenges whole heartedly. This is possible only with a good relation and trust that coachee has on the peer coach.

**Continuous feedback** between coach and coachee: Peer coaching should be for mutual benefits of coachee and coach. Feedback need to be taken from both to ensure improvements is happening and process doesn't go too friendly or too formal which may kill the purpose of peer coaching. It is not advisable to measure the exact improvements or keep an assessment procedure after the coaching. Rather trust the coach and give him freedom to guide to transform the coachee in the way organization requires. But still supervision has to be there as a form of feedback to make sure the purpose is getting done.

#### CONCLUSION

Participants from the peer coaching circles are finding the experience more regarding their personal development and learning and the career growth. Learning's through peer coaching were sometimes so important for several employees that they decided to continue to meet even after the official commitment had completed (Parker, Douglas T. Hall and Kathy E. Kram, 2008). Their research also established that senior executives who led these peer groups reported that they learned as much about themselves as they did in their junior colleagues. There is evidence that suggests that mental support and trust that people gets from colleagues in organizations and especially peer coaching leads to continuous development. Organizations like Microsoft encourage peer coaching for increasing organizational effectiveness and personal productivity (Peters, 1996).

After analyzing and interpreting the research papers it can be concluded that peer coaching could be more effective in apt situations if both the employees getting engaged are comfortable with each other and the organizational culture supports it. Peer coaching is considered as helping hand for employees from a same status and so both parties will be actively participating in the process which results in better outcome. A peer coach takes up a role of a critical friend who gives ample support and enough challenge that pushes the partner beyond his limits.

In any hierarchical organization an employee is most likely to have to have more peers than mentors thus leaving employees with a choice of choosing their peer coaches. Since there is no hierarchy mentioned in peer coaching relationship it's easier to have good communication and support which may not be that easily attained in a formal relationship. From organizations point of view peer coaching is definitely a cost effective technique to improve competencies of employees.



It can also be established that peer coaching can accelerate both technical learning and leadership learning. Peers working in product development teams, for example, have access to unique resources and a platform for getting honest and direct feedback which motivates the employees and improves productivity. In short peer coaching, with no doubt, has a great potential to accelerate the learning process and developing requires competencies in employees.

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**FACTORS AFFECTING CONSUMER PERCEPTION TOWARDS BRANDED CLOTHES IN RURAL AREAS**

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**ABSTRACT**

*Clothing and textile have been enormously important throughout human history to have their materials, production tools and techniques, cultural influences, and social significance. Clothing is considered to be second skin of the body; hence interest in clothing is higher during the whole life. Clothing items are now bought according to the psychological elements that they symbolize and not only for their physical characteristics and need-satisfying properties. This necessitates the manufacturers in the clothing industry to become familiar with the perceptions of the consumer. This study is an attempt to have insights about consumer perception towards branded clothes in rural areas and to explore series of factors affecting it. Primary as well as secondary study is undertaken to attain the predetermined objectives. Study revealed that 74% of the respondents prefer to buy branded clothes in rural areas and there are 3 core factors which influence consumer perception in rural areas about branded clothes. It came to limelight from study, that lion's share of consumers is becoming aware of branded clothes in rural areas.*

**KEYWORDS**

branded clothes, consumer perception, clothing habits.

**INTRODUCTION**

The wearing of clothing is exclusively a human characteristic and is a feature of most human societies. Clothing is considered to be second skin of the body; hence interest in clothing is higher during the whole life. Clothing items are now bought according to the psychological elements that they symbolize and not only for their physical characteristics and need-satisfying properties. This necessitates the manufacturers in the clothing industry to become familiar with the perceptions of the consumer.

**ANCIENT INDIA**

Traditional clothes are still worn in most of rural India; but urban India is changing rapidly, with international fashion trends. Fashion in India is a vibrant scene, a nascent industry and a colourful and glamorous world where designers and models start new trends every day. Previously a master weaver was recognized for his skill; but today a fashion designer is celebrated for his or her creativity. As Indian fashion designers are inspired by both Indian and western styles, young urban Indians can choose from the best of East and West. Fashion in India is also beginning to make its mark on the international scene as accessories such as bindis (red dots worn on the forehead), mehndi (designs made by applying henna to the palms of the hands and other parts of the body) and bangles, have gained international popularity, after being worn by fashion icons like pop singers Madonna and Gwen Stephani.

**INDIAN ETHNIC WEAR****DHOTI**

Dhoti kurta is the traditional Indian clothing of men. Unlike other dresses, it is an unstitched piece of cloth usually 5 yards long that is tied around the waist and legs. The knot is tied at the waist.

**KURTA**

Kurta is a term used to refer to a long loose shirt, the length of which falls below or may be just above the knees of the wearer.

**INDIAN SALWAR KAMEEZ**

Salwar Kameez is the traditional Indian clothing for women. Due to its high popularity in the region of Punjab, shalwar kameez is commonly referred to as Punjabi suit.

**INDIAN SARI**

Sari is one of the most wonderful dresses worn by Indian women. Infact, when one thinks of a typical Indian woman, the first thing that strikes the mind is a women clad in sari, who is wearing the solah shringar including bindi, chudi, kajal etc.

**SHERWANI FOR MEN**

Sherwani is a long coat resembling achkan in styling. It is buttoned upto the collar and lengthwise it is usually below the knee. Indian men spend lavishly on buying the sherwani suit for the special occasion of their wedding.

**TURBAN**

In India, one can spot many men wearing turban. Well, turban is tied not for the sake of fashion, but because it has a lot of significance in the lives of Indians. The hair turban is a headdress that basically consists of a long piece of unstitched cloth, which is wrapped around the head.

**INDIAN RURAL MARKET SCENARIO**

Rural markets are defined as those segments of overall market of any economy, which are distinct from the other types of markets like stock market, commodity markets or labour economics.

In recent years, rural market had undergone a considerable change. This is the result of new employment opportunities and new source of income made available through various rural development programmes. Indian rural market is vast in size, encompassing 834 million consumers and it is wide spread over 6.40 lakh villages. On account of the green revolution in India, the rural areas are consuming a large quantity of industrial and urban manufactured products.

Trends in rural expenditure are changing from livelihood expense to lifestyle expenses, with families buying products for their peripherals rather than functional value. According to a survey conducted by MART Rural, a rural marketing consulting agency, more consumers are buying products for the experience they provide not just their utility. Fast moving consumer goods like soaps, shampoos, toothpastes, washing powder, tea and biscuits have witnessed increased sale in the top-end segments because of the prestige factor associated with them. Now-a-days rural people are becoming more demanding, reason being growing awareness and affluence in villages closer to towns.

**REVIEW OF LITERATURE**

**Thakur and lamba (2013)** conducted a study to examine the customer satisfaction level and factors influencing readymade apparel purchase and also to determine the most popular brands among customers in branded clothes market of Jalandhar city. Sample size of 250 respondents was taken. It was found that quality and price are most important factors and Tommy Hilfiger and Peter England are the most preferred brands.

**Pandian and Varathani (2012)** determined the men's perception towards branded shirts. Primary data was collected with the help of structured questionnaire administered to 215 male respondents in trichy city. The study revealed that Raymond, Peter England and John Player remains the top three brands preferred by respondents and shoppers of men's branded shirts were highly influenced by the factors such as durability, reference groups, wider choice of colour and design, attractiveness, price range and celebrity endorsement.

**Mittal and Aggarwal (2012)** held that clothing is likely to form an integral part in the enactment of social encounters and it is also seen as a very important channel of non-verbal communication. The objective of the study was to determine whether the branding of garments influence the perception of consumer. Sample size was 120 respondents and questionnaire was handed out at different malls in jaipur. Survey depicts that there is a relationship between consumer's income and the satisfaction derived from a purchased product. People are price sensitive and final selection of goods depends on price or budget of buyer.

**OBJECTIVES OF THE STUDY**

1. To examine consumer perception about branded clothes in the rural market.
2. To determine factors which influence perception of rural people towards branded clothes.

**RESEARCH METHODOLOGY**

Research Methodology is a way to systematically solve the research problem. It includes various methods and techniques for conducting a research.

For this study a structured questionnaire was prepared which contained both open ended and close ended questions. The questionnaire contained multiple choice questions and questions on a Likert scale.

**SAMPLE SIZE:** 100 respondents

**TYPE:** Convenience sampling

**SAMPLE UNIT:** Rural masses from villages of Ajaibwali, Verka, Kathunangal, Malluwal, Jethuwal, Fatehgarh and Balluana.

**FACTOR ANALYSIS:** This test has been applied on the statements to check the customer perception regarding branded clothes in rural market. The main purpose of this test is to study the behavioural factors of respondents.

**RESULT AND DISCUSSION****1. PREFERENCE FOR BRANDED CLOTHES****TABLE 1: PREFERENCE FOR BRANDED CLOTHES**

Prefer to buy branded clothes	No. Of Respondents	Percentage
Yes	74	74
No	26	26

Source: Compiled by authors and analysis done through SPSS

The above figure shows that 74% of the Respondents prefer to buy branded clothes and 26% do not prefer.

**2. In the study respondents were asked to rate the various statements, representing the factors which influence the perception of people towards branded clothes, on 5 Point Likert Scale. Factor Analysis was done on the collected data.**

**FACTOR ANALYSIS:** Factor Analysis defines the relationship between factors and relationship building tools and relationship among sets of many interrelated variables are examined and represented in terms of a few underlying factors. Factor Analysis is primarily used for data reduction and summarization. Factor analysis is a set of techniques which, by analyzing correlations between variables, reduces their number into fewer factors which explains much of the original data, more economically.

**TABLE 2: SHOWING DIFFERENT VARIABLES ASSIGNED TO VARIOUS STATEMENTS**

Sr. no.	Statements	Variables no.
1.	Ambiance of store	ST 1
2.	Brand image affects my purchase decision	ST 2
3.	Branded clothes last longer	ST 3
4.	Branded clothes are value for money	ST 4
5.	Promotional efforts (like discounts, buy one get one free etc.) affect my purchase decision	ST 5
6.	Branded clothes are more expensive	ST 6
7.	Companies sell defective and inferior stuff in discount and promotional schemes	ST 7
8.	Branded clothes provide me distinctiveness	ST 8
9.	Designs and patterns are unique in branded clothes	ST 9
10.	Brands sometimes compromise on quality for gaining profits.	ST 10
11.	Advertisements influence my purchase decision	ST 11
12.	Cultural factors influences my purchase decision	ST 12

Source: Compiled by authors and analysis done through SPSS

**TABLE 3: FACTOR NAMING**

Factor Number	Factor name & Variance explained	Variables Included in the Factor	Factor Loading
F1	Efficacy (32.587%)	Designs and patterns are unique in branded clothes.	0.852
		Branded clothes provide me distinctiveness.	0.836
		Branded clothes are value for money.	0.773
		Branded clothes last longer.	0.760
		Brand image affect my purchase decision.	0.693
F2	Value Orientation (19.374%)	Ambiance of stores affects my purchase decision.	0.625
		Companies sell defective and inferior stuff in discount and promotional schemes.	0.858
		Branded clothes are more expensive.	0.855
F3	Promotion Mix (12.134%)	Brands sometimes compromise on quality for gaining profits.	0.654
		Cultural factors influence my purchase decision.	0.836
		Promotional efforts like discounts, buy one get one free etc. affect my purchase decision.	0.685
		Advertisements influence my purchase decision.	0.435

Source: Compiled by authors and analysis done through SPSS

**Interpretation**

In factor 1 variables identified are designs and patterns are unique in branded clothes (0.852), branded clothes provide me distinctiveness (0.836), branded clothes are value for money (0.773), branded clothes last longer (0.76), brand image affect my purchase decision (0.693), ambiance of stores affects my purchase decision (0.625). According to nature of these variables we can entitle this factor as "Efficacy". It is the most important factor which determines the consumer perception regarding branded clothes in rural market and it explains as high as 32.587% of the variation.

In factor 2 variables identified are companies sell defective and inferior stuff in discount and promotional schemes (0.858), branded clothes are more expensive (0.855), brands sometimes compromise on quality for gaining profits. According to nature of these variables we can entitle this factor as "Value Orientation". It is second factor which determines the consumer perception regarding branded clothes in rural market and it explains 19.374% of variation.

In factor 3 variables identified are cultural factors influence my purchase decision (0.836), promotional efforts like discounts, buy one get one free etc. affect my purchase decision (0.685), advertisements influence my purchase decision (0.435). According to the nature of these variables we can entitle this factor as "Promotion mix". It is the third factor which determines consumer perception regarding branded clothes and it explains 12.134% of variation.

Collectively all the three factors explain as high as 64.095% of the variation. Remaining 35.905% is due to the attributes of other factors that are not included in this study.

**FINDINGS**

The entire study conducted regarding the consumer perception regarding branded clothes in rural market reveals following findings:

- Study revealed that about 74% of respondents prefer to buy branded clothes and rest doesn't prefer to buy branded clothes.
- Factor analysis findings tell us that there are three important factors which influence customer perception towards branded clothes in rural market. The value of cumulative percentage is 64.095 and factor 1 that is efficacy accounts for 32.587 percent of total variance, factor 2 accounts for 19.374 percent and factor 3 accounts for 12.134 percent of total variance.

**RECOMMENDATIONS**

The most important recommendations which we would like to give while preparing this research paper are that:

- Marketer should take appropriate steps to tap this market which has huge growth potential.
- They should position their products with adequate advertising.
- They should push affordable quality products in the market.
- These companies should bring avioral differences across region.

**CONCLUSION**

To conclude, we can say that number of consumers preferring branded clothes in rural areas is increasing, as witnessed in the study it is 74%. Furthermore, three factors which influence consumer perception towards branded clothes in rural areas are efficacy, value orientation and promotion mix. From this study it is vigilant that market for branded clothes is comprised of consumers from rural area as well as urban area.

**LIMITATIONS OF THE STUDY**

Any study based on survey has a basic limitation that it can provide conflicting results. There may be difference in reality and what is found out. It is possible that the respondent may not present the true responses and there may be communication problems. So despite personally interviewing the respondents and taking every possible precaution in conducting the survey, the possibility of an error is not discarded. Some other limitations are as follows:

1. On account of limitation of time and accessibility, the coverage of the survey is limited to 100 respondents. It is small and may not be sufficient to predict the result with 100% accuracy and hence findings cannot be generalized.
2. All variables were incorporated to the best of the knowledge of researcher or investigator yet the chances of some variables not appearing in the study are not ruled out.
3. Possibility of some biased opinion of the respondents in answering the questionnaire could not be ruled out.

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**APPENDIX****QUESTIONNAIRE**

Kindly fill in required information as it would help to fulfil the objectives. All information given by you will be kept confidential and will only be used for academic purpose.

**RESPONDENTS PROFILE**

Name of Respondent

Gender : Male/Female  
Age Group : 20-25  
26-30  
31-35  
36-40  
40 and above

Q1 Do you prefer to buy branded clothes?

Yes/No

Q2 Have you ever purchased branded clothes?

Yes/No

Q3 Which of the following brands have you purchased:

Koutons  
Charles Outlaw  
Cotton County  
Madamme  
Numero Uno  
Spykar  
Allen Cooper

Lee solly

Any other, please specify \_\_\_\_\_

Q4 Are branded clothes retail outlets in your vicinity?

Yes/No

Q5 Would you recommend branded clothes to others?

Yes/No

Q6 Who made you aware about branded clothes?

Advertisement on television, newspaper etc.

Friends

Family

Any other, please specify \_\_\_\_\_

Q7 Are branded clothes in rural markets easily available?

Yes/No

Q8 Are you satisfied with the branded clothes retail outlets?

Yes/No

Q9 Rank the following factors which influence you to select branded clothes.

Strongly agree-SA, agree-A, neither agree nor disagree-N, disagree-D, strongly disagree-SD

1. Ambiance of stores affects my purchase decision.	SA	A	N	D	SD
2. Brand image affect my purchase decision.	SA	A	N	D	SD
3. Branded clothes last longer.	SA	A	N	D	SD
4. Branded clothes are value for money.	SA	A	N	D	SD
5. Promotional efforts like discounts, buy one get one free etc. affect my purchase decision.	SA	A	N	D	SD
6. Branded clothes are more expensive.	SA	A	N	D	SD
7. Companies sell defective and inferior stuff in discount and promotional schemes.	SA	A	N	D	SD
8. Branded clothes provide me distinctiveness.	SA	A	N	D	SD
9. Designs and patterns are unique in branded clothes.	SA	A	N	D	SD
10. Brands sometimes compromise on quality for gaining profits.	SA	A	N	D	SD
11. Advertisements influence my purchase decision.	SA	A	N	D	SD
12. Cultural factors influence my purchase decision.	SA	A	N	D	SD

## COMPARATIVE ANALYSIS OF PRE AND POST-MERGER FINANCIAL PERFORMANCE WITH REFERENCE TO IT SECTOR IN INDIA

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**BANGALORE**

### ABSTRACT

*Firms can adopt organic and/or inorganic approach as its growth vector to create value to the shareholders. Using organic growth as a means to growth is time bound and it is a long journey, whereas inorganic growth is a quick fix to reap growth. The pursuit of instantaneous growth has led the corporates to use Mergers and Acquisitions as a tool to propel growth. This research intends to study the movement in M&A (merger and acquisition) predominantly with reference to Information and Technology companies. While merger and acquisition is considered as a strategy for growth, the firms are anticipated to perform post-merger and acquisition so that those are proved successful. From the previous studies review, it has been found that there is no definite support about the impact of merger and acquisition on corporate performance in IT sector. Furthermore, in recent period merger and acquisition deals have gone up drastically and set of laws relevant for merger and acquisition have also undergone alteration. Hence there is a need to look into the trend of merger and acquisition and the post-merger and acquisition performance of companies. This study is to find out the difference in post-merger performance compared with pre-merger in terms of profitability, liquidity and solvency. The scope of the study is limited to IT sector companies in India. The statistical tools used are descriptive statistics, paired sample t-test. On analyzing it has been found that there is no significant change in the financial performances of companies in the post-merger period in case of both domestic merger and overseas merger and also it has been found that improvement in post-merger financial performance of domestic merger companies are better than the companies gone for overseas mergers.*

### KEYWORDS

merger and acquisition, financial performance, profitability, liquidity and solvency.

### 1. INTRODUCTION

The business today has become so dynamic and the companies need to handle with this dynamic environment to consistent growth. The corporate sector all over the world is restructuring its operations through different types of consolidation strategies like mergers and acquisitions in order to face challenges posed by the new pattern of globalization, which has led to the greater integration of national and international markets. In India, Merger and Acquisition has been increased in the last decade or so. Earlier than also the firms were widely using consolidation strategies, but one of the striking features of the present wave of mergers and acquisitions is the presence of a large number of cross-border deals.

Another reason for Merger & Acquisition activity in IT that we have seen is the objective of a company to service their multinational customers better in more countries. Post-acquisition integration is important to ensure the newly acquired unit functions well. While Merger & Acquisition is considered as one of the strategies for growth, the companies are expected to perform post-Merger & Acquisition so that those are proved successful.

Trends in mergers and acquisitions in India have changed over the years. M & A activities have also become increasingly global due to increasing global competition among many other reasons.

#### 1.1. MERGER AND ACQUISITION TREND IN INDIA

The total number of acquisitions from 1 April 1999 to 30 November 2010 is 9228, the highest being 1160 in 2007. The total number of mergers is 3454, the highest being 415 in 2006. The lowest amount is 15925.28 crores consideration and the highest is 209,247.97 crores, the total amount is 9, 58,147.28 crores. M & A is prevalent in all sectors, but compared to other sectors of the manufacturing industry has the largest number of mergers and acquisitions. Manufacturing accounted for more M & A in these years with a 40% share of total.

### 2. LITERATURE REVIEW

Merger in Indian Industry - Performance and Impacting factor" a study by K. Ramakrishnan uses secondary data from CMIE database taking total of 414 mergers and acquisition cases for study and concludes that mergers have enhanced the long-term performance of firms in India. The study also reveals that business wealth of the acquired company seem to have direct bearing on the post-merger performance of firms in the Indian context. Changes in corporate performance associated with bank acquisitions" a study by Hassan Tehrani and Marcia Millen in the year 1991, examines the post-acquisition performance of large bank mergers between 1982 and 1987. It has been found that merged banks outperformed the banking industry. Their performances have resulted from improvement in employee productivity and profitability from assets. They used networking capital/sales and operating cash flows/market value of assets for evaluating the performance. Also, they used liquidity ratios for determining the performance of firms. The result suggested that large bank showed superior performance in liquidity and return on assets. "Impact of HMO Merger and Acquisitions on Financial Performance", by Robert Weech-Maldonado examined the effect of Health Maintenance Organization (HMO) mergers and acquisition on financial performance, as indicated by cash flow returns and Profitability ratios. The study analyzed pre and post-acquisition financial performance for a period of 3 years. Change score for the financial performance were calculated and then evaluated using t- tests. The study shows positive effect on financial performances and efficiency. The paper uses Net profit margin, ROA, Medical expense ratio and years in operations for finding the profitability of the firms. "Long term post-merger performance of firms in India" by K Ramakrishnan, shows that there is an improvement in operating margin of the firm, though not efficient utilization of asset to generate higher sales. The study indicates that in the long run, mergers appear to have been financially beneficial for the firms in the Indian industry. It was also found significant change long term turn over performances like RONW and ROCE and sales turnover performances.

### 3. OBJECTIVES OF THE STUDY

1. To analyze the performance of Indian IT companies post-merger and pre-merger.
2. To know the difference between pre and post-merger financial performances in Indian IT companies with domestic merger.
3. To know the difference between pre and post-merger financial performances in Indian IT companies with overseas merger.
4. To find whether overseas merger is better or domestic merger is better among Indian IT with respect to financial performance.

### 4. HYPOTHESIS

Based on the research gap areas from the literature survey, the following research hypothesis is tested:

#### HYPOTHESIS 1

**H0:** There is no significant difference in the financial performances in IT companies with domestic merger in India.

**H1:** There is significant difference in financial performances in the post-merger period in IT companies with domestic merger in India.



**HYPOTHESIS 2**

**H0:** There is no difference in the financial performances in IT companies with overseas merger in India.

**H1:** There is significant difference in financial performances in the post-merger period in IT companies with overseas merger in India

**HYPOTHESIS 3**

**H0:** There is no difference in the post-merger financial performances in IT companies between overseas and domestic merger companies in India.

**H1:** There is difference in the post-merger financial performance in IT companies between overseas and domestic merger companies in India.

**5. RESEARCH METHODOLOGY****RESEARCH DESIGN**

The study has been carried on by using Accounting Based Approach with different financial parameters.

- **Profitability parameters are**

Return on Capital Employed (ROCE): EBIT/Capital Employed; Return on Net Worth (RONW): Profit after Tax /Net Worth. DuPont ROE

- **Liquidity parameters are**

Current Ratio: Current Assets/Current Liabilities;

Networking Capital/Sales: (Current Assets minus Current Liabilities) by Sales.

- **Leverage parameters are**

Total Debt Ratio: Total Debt to Total Assets;

Interest Coverage Ratio: Earnings before interest and taxes (EBIT)/Interest.

**HYPOTHESIS TESTING**

Average pre-merger and post-merger financial performance ratios is compared to know if there is any significant change in financial performance due to mergers and acquisition, using "paired two sample t-tests"

$$t = \frac{\bar{x} - \mu_0}{\frac{s}{\sqrt{n}}}$$

Where,

S is the standard deviation of the sample and n is the sample size.

The degrees of freedom used in this test is n – 1.

**DATA COLLECTION**

Secondary Data are used for the purpose of analyzing financial information like annual reports of respective company. Also the data bases are used for data collection such as

- Capitaline Database.
- Bombay Stock Exchange and National Stock Exchange Publications.
- Business Beacon, CMIE Prowess, EMIS Database.
- Securities Exchange Board of India (SEBI) Reports.

**SAMPLING TECHNIQUE**

The Acquirer and Target Company are public limited companies and are listed on the stock exchange. A total of 18 companies were obtained who have undertaken domestic and cross border mergers or acquisitions during the period from January 2007 to August 2010. Out of these 10 companies have made a total 12 overseas mergers and acquisitions and 10 companies were involved in domestic merger or acquisition. From this for analyses the companies gone for merger during the period 2008 has been considered for analysis, over which 6 companies gone for overseas merger and 4 has gone for domestic merger. So that it will be easy for data collection for 3 years pre-merger and 3 years post-merger.

**6. DATA ANALYSIS**

For conducting this study, the data are obtained from CMIE Prowess database and BSE Merger and Acquisition database.

**INDIAN IT COMPANIES GONE FOR OVERSEAS MERGERS**

List of companies considered for study which has gone for overseas merger in the year 2008:

**TABLE 1: LIST OF COMPANIES GONE FOR OVERSEAS MERGER**

Acquirer Company	Target Company
GSS America Infotech Ltd	System Dynamix Corporation
HCL Technologies Ltd	Capital Stream Inc-USA
Mascon Global Ltd	Ebusinessware Inc USA
Mindteck (India)Ltd	Prime Tech Solutions USA
Rohta India Ltd	Whittman Hart USA
Silverline Technologies Ltd	OMDR Inc Canada

➤ **GSS America Infotech Ltd**

In 2008, GSS Infotech acquired 100% stake in System Dynamix Corporation, an IT consulting and software Development Company based in Connecticut, USA with effect from January 01, 2008. Out of this merger GSS Infotech expected it to contribute to revenues for full year basis in the year 2008-09. They have planned a few of initiatives, particularly in IT Infrastructure division to rapidly take advantage of emerging opportunities in these areas.

The study is performed for each Merger individually and then by combining the financial performance of the overall Mergers in IT companies. The following tables show the results of the various tests, followed by comments on the differences in financial performance between pre-and post-merger periods.

TABLE 2: PAIRED SAMPLE t TEST RESULTS OF GSS INFOTECH AND SYSTEM DYNAMIX CORP. MERGER DEALS

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	254.000	1.581	0.255	4.303
Pre-Merger Net Margin – Post Merger Net Margin	-0.115	-0.288	0.801	4.303
Pre-merger RONW – Post Merger RONW	267.580	1.539	0.264	4.303
Pre-merger current ratio-post merger current ratio	-13.680	-7.491	0.017	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	-3.016	-1.375	0.303	4.303
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	-3.960	-5.476	0.032	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	0.023	1.000	0.423	4.303
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	19.567	0.101	0.929	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	1.343	1.640	0.243	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The liquidity ratios like current ratio, quick ratio, and net working capital/sales ratio improved after merger, Current ratio and networking capital/sales ratio is statistically significant. Quick ratio is not statistically significant.

In case of the leverage ratios, the debt ratio declined in the post-merger period. But it is not statistically significant. Interest coverage ratio has also decreased, but it is not statistically significant too.

The bad sign is that the profitability ratios have decreased too much during the post-merger period. But net margin has increased post-merger period, however it is not statistically significant.

#### ➤ HCL Technologies Ltd

HCL Technologies has acquired CapitalStream US company, in a cash transaction of about Rs 160 crores (\$ 40 million). Capital Stream, Inc., a U.S. leader in providing complete end-to-end lending and straight through processing solutions for commercial banks and finance companies in North America, including prospecting and sales credit analysis, due diligence, documentation and portfolio monitoring. This strategic acquisition of Capital Stream strengthens the ability of HCL to provide end to end solutions with the ability to deliver products and multi-services for companies and individuals with financial institutions. Finance Center flagship product CapitalStream is a multi-tier web application and is a leading solution on the market today for the automation of business and commercial lending institutions. Finance Center can be customized and delivered to different segments of the financial industry of major banks for mid-level credit unions. The product is currently used by more than 20% of the largest banks in North America and has transformed several large banks and midrange.

The HCL acquisition of CapitalStream provides a number of synergies, benefits and opportunities, including:

The addition of a focused product portfolio to HCL's multi-service capability will enable the company to provide commercial banks and other financial institutions comprehensive end-to-end solutions globally, with significantly reduced implementation time.

The offering from Capital Stream complements HCL's lending technology capabilities in financial services.

TABLE 3: PAIRED SAMPLE t TEST RESULTS OF HCL TECHNOLOGIES AND CAPITAL STREAM INC. MERGER DEALS

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	-1.703	-0.149	0.895	4.303
Pre-Merger Net Margin – Post Merger Net Margin	-0.115	0.807	0.505	4.303
Pre-merger RONW – Post Merger RONW	-2.273	-0.248	0.827	4.303
Pre-merger current ratio-post merger current ratio	-0.677	-11.586	0.007	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	0.007	0.219	0.847	4.303
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	-0.130	-1.811	0.212	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	-0.157	-2.682	0.115	4.303
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	43.307	2.407	0.138	4.303
Pre-merger DuPont ROE – Post merger Du Pont ROE	-0.003	-0.071	0.950	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The liquidity ratios like current ratio, quick ratio, and net working capital/sales ratio improved after merger but Current ratio is statistically significant. But, Quick ratio and Networking capital/sales ratio are not statistically significant.

In case of the leverage ratios, the debt ratio has increased in the post-merger period. But it is not statistically significant. But, Interest coverage ratio has decreased, but it is not statistically significant too.

The Good sign is that the profitability ratios have increased during the post-merger period and net margin have increased post-merger period, however it is not statistically significant.

Return on Equity have also increased but it to not statistically significant.

#### ➤ Mascon Global Ltd., acquired ebusinessware, Inc.

Mascon Global Ltd provides business technology and information technology (IT) consulting services to businesses and government agencies. Mascon develops custom software provides network and systems integration and conducts research and development.

Ebusinessware is a global technology company that provides technology solutions and services in areas such as the management of credit risk, market risk, credit derivatives, business process management and management of reference data.

Mascon Global (MGL) has acquired New York-based Ebusinessware Inc., which provides software solutions and consulting services to financial services companies, for about \$ 35 million.

"The main objective is to build the company into an innovation by companies, focusing on solutions providers. Some are internal and others through acquisitions," said Mascon Global CEO Sandy K Chandra.

TABLE 4: PAIRED SAMPLE t TEST RESULTS OF MASCON GLOBAL LIMITED AND EBUSINESS WARE INC. US MERGER DEALS

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	1.320	0.255	0.823	4.303
Pre-Merger Net Margin – Post Merger Net Margin	0.062	0.287	0.801	4.303
Pre-merger RONW – Post Merger RONW	1.293	0.265	0.816	4.303
Pre-merger current ratio-post merger current ratio	0.763	0.272	0.811	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	2.715	1.865	0.203	4.303
Pre-merger Networking Capital/Sales - Post merger NetworkingCapital/Sales	-0.237	-0.931	0.450	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	0.000	0.000	1.000	4.303
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	-0.253	-0.079	0.944	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	0.046	0.474	0.682	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre – merger period

The liquidity ratios like current ratio, quick ratio, and net working capital/sales ratio decreased after merger but it is statistically insignificant. In case of the leverage ratios, the debt-equity ratio has been unchanged in the post-merger period. But it is not statistically significant. Interest coverage ratio has increased but it is not statistically insignificant too.

The profitability ratios have decreased during the post-merger period and net margin have decreased post-merger period, however it is not statistically significant. Returns on Equity have also decreased, but it too not statistically significant.

➤ **Mindteck (India) Ltd Acquires Prime Tech Solutions USA**

Mindteck (India) Limited, a global Technology and IT services company, acquires Primetech with revenues of US\$ 8.7 million. Primetech provides integrated business and IT consulting services to a large client base in the US.

TABLE 5: PAIRED SAMPLE t TEST RESULTS OF MINDTECK (INDIA) LTD AND PRIME TECH SOLUTIONS US MERGER DEAL

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	6.250	2.374	0.141	4.303
Pre-Merger Net Margin – Post Merger Net Margin	-0.039	-0.612	0.603	4.303
Pre-merger RONW – Post Merger RONW	5.697	2.427	0.136	4.303
Pre-merger current ratio-post merger current ratio	1.120	2.844	0.105	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	1.619	1.572	0.257	4.303
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	0.409	1.140	0.373	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	0.123	2.199	0.159	4.303
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	-14.413	-1.037	0.409	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	0.020	1.051	0.403	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The liquidity ratios like current ratio, quick ratio, and net working capital/sales ratio decreased after merger but it is statistically insignificant. In case of the leverage ratios, the debt-equity ratio has been decreased in the post-merger period. But it is not statistically significant. Interest coverage ratio has increased, but it is not statistically significant too.

The profitability ratios have decreased during the post-merger period, but net margin have increased post-merger period, however it is not statistically significant. Returns on Equity have also decreased, but it too not statistically significant.

➤ **Rolta India Ltd acquire of WhittmanHart Consulting, US**

Rolta India Limited (Rolta) is an Indian multinational organization in IT-based geospatial solutions, and caters to industries as diverse as infrastructure, telecom, electric, airports, defense, homeland security, urban development, town planning and environmental protection.

Rolta has acquired WhittmanHart Council, the consulting division of WhittmanHart Inc., a Chicago-based company providing solutions in digital communications, process improvement and enabling technologies for over 20 years. Provide consulting services in business intelligence (BI) arena, WhittmanHart Consulting (WHC) is particularly focused on the Hyperion software technology acquired by Oracle Corporation in 2007.

The motives of the acquisition to keep with their declared clients get greater returns from the investments in enterprise solutions and services from Rolta. This acquisition helps Rolta to add business intelligence solutions to their portfolio and deliver higher values to their clients.

TABLE 6: PAIRED SAMPLE t TEST RESULTS OF ROLTA INDIA LTD AND WHITEMAN HART CONSULTANT MERGER DEAL

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
	0.610	0.324	0.777	4.303
Pre-Merger Net Margin – Post Merger Net Margin	-0.015	-0.401	0.727	4.303
Pre-merger RONW – Post Merger RONW	-4.217	-4.584	0.044	4.303
Pre-merger current ratio-post merger current ratio	-0.277	-1.078	0.394	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	1.073	1.914	0.196	4.303
Pre-merger Networking Capital/Sales - Post merger	0.035	0.084	0.941	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	-0.250	-1.916	0.195	4.303
Pre-merger Interest Coverage Ratio-Post merger	-24.573	-1.541	0.263	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	-0.029	-2.011	0.182	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The liquidity ratios like current ratio has increased post-merger but the remaining other liquidity ratios have decreased post-merger period, but it is statistically insignificant.

In case of the leverage ratios, the debt-equity ratio has been increased in the post-merger period. But it is not statistically significant. Interest coverage ratio has also increased, but it is not statistically significant too.

The profitability ratios have decreased during the post-merger period, but net margin have increased post-merger period, however it is not statistically significant. The good sight is that the RONW have increased post-merger period and it is statistically significant. Returns on Equity have also increased, but it not statistically significant.

➤ **Silverline Technologies Ltd acquires OMDR Inc., Canada**

Silverline Technologies, an IT and BPO services company, has acquired Canadian-firm, Omega Direct Response, a global provider of customer interaction and management services. OMDR, formerly known as Omega Direct Responses, specializes in inbound, outbound and multilingual customer service. OMDR Inc. is a global provider of outsourced call center services.

**TABLE 7: PAIRED SAMPLE t TEST RESULTS OF SILVERLINE TECHNOLOGIES LTD AND OMDR INC. MERGER DEAL**

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	-1.560	-0.311	0.785	4.303
Pre-Merger Net Margin – Post Merger Net Margin	7.137	1.408	0.295	4.303
Pre-merger RONW – Post Merger RONW	-0.957	-0.213	0.851	4.303
Pre-merger current ratio-post merger current ratio	0.123	1.066	0.398	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	0.459	1.741	0.224	4.303
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	5.273	1.750	0.222	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	0.680	5.987	0.027	4.303
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	301.840	0.874	0.474	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	0.118	0.276	0.809	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The liquidity ratios like current ratio, quick ratio and Net Margin/ Sales ratio has decreased post-merger but, it is statistically insignificant. In case of the leverage ratios, the debt-equity ratio has decreased in the post-merger period, and it is statistically significant. Interest coverage ratio has decreased, but it is not statistically significant.

The profitability ratios have increased with respect to ROWN and ROCE during the post-merger period, but net margin have decreased post-merger period, however it is not statistically significant. Returns on Equity have also decreased, but it not statistically significant.

**INDIAN IT COMPANIES GONE FOR DOMESTIC MERGERS**

List of companies considered for study which has gone for overseas merger in the year 2008:

**TABLE 8: LIST OF COMPANIES GONE FOR DOMESTIC MERGER**

Acquirer Company	Target Company
3i Infotech Ltd	AOK In-house BPO Service Ltd.
Allied Digital Service Ltd.	En Pointe Technologies India Pvt. Ltd.
Mindtree Ltd.	Aztechsoft Ltd.
Tech Mahindra Ltd.	I-Policy Networks Ltd.

➤ **3i Infotech Ltd Acquires AOK in-house BPO Service Ltd.**

3i Infotech Ltd. is a global information technology that provides technology solutions to over 1500 customers in more than 50 countries on 5 continents, spanning a range of vertical markets. The company provides software products, IT services and Business Process Outsourcing (BPO) for a variety of vertical markets, including insurance, banking, capital markets, mutual funds and asset management, wealth management, government, manufacturing and retail.

Aok In-house BPO Services Limited provides business process outsourcing in India; it has service and back support. The application that provides image processing, forms processing, services, data processing and analysis in bulk, OCR and ICR-based data conversion. The company also provides processing credit card, insurance and policy processing to provide support on-site and off - the management of site resources, archiving electronic research, factoring, human resources support and counseling, telecommunications, loan processing and mortgage, software development, processing and verification services and private discussions, data supply, confidential testing as well as temporary solutions. It serves a variety of organizations, including insurance and banks companies.

3i Infotech has acquired AOK In-house BPO service for their delivery capability in the area of auto loans and credit card processing for claims and proposal processing in Insurance sector and banking sector. In 2007, 3i Infotech acquired 50.5% stake in AOK In-house BPO and acquired the remaining 48.5% in 2008.

**TABLE 9: PAIRED SAMPLE t TEST RESULTS OF 3I INFOTECH LTD. AND AOK IN-HOUSE BPO MERGER DEAL**

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	-0.727	-1.758	0.221	4.303
Pre-Merger Net Margin – Post Merger Net Margin	-0.134	-0.851	0.485	4.303
Pre-merger RONW – Post Merger RONW	-11.750	-0.712	0.550	4.303
Pre-merger current ratio-post merger current ratio	0.110	0.282	0.804	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	0.073	0.092	0.935	4.303
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	-0.711	-2.328	0.145	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	-1.193	-5.571	0.031	4.303
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	1.157	1.011	0.418	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	0.010	0.157	0.890	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The liquidity ratios like current ratio, quick ratio have decreased and Net Margin/ Sales ratio has increased post-merger but, it is statistically insignificant. In case of the leverage ratios, the debt-equity ratio has increased in the post-merger period, and it is statistically significant. Interest coverage ratio has decreased, but it is not statistically significant.

The profitability ratios have increased with respect to ROWN, Net Margin and ROCE during the post-merger period, however it is not statistically significant. Returns on Equity have also decreased, but it not statistically significant.

➤ **Allied Digital Service Ltd acquires En Pointe Technologies India Pvt. Ltd.**

Allied Digital Services Ltd. is a global company Services and Solutions, which supplies a range of services and infrastructure solutions including the managed services and physical security solutions and information to major Indian companies and worldwide.

En Pointe Technologies India Pvt. Ltd offers a pool of trained and certified SAP consultants with rich experience of geography multi, multi-country consultancy and SAP support services.

This acquisition will support the management of the Allied Digital Infrastructure and Application Remote Support Services portfolio. Allied Digital has leveraged its state of Network Operation Center (NOC) installation and widens proven remote support for many critical applications for instance SAP ERP. The acquisition further helped the Allies digital to complete its vision of a complete end to end support services in remote data center, together with enterprise applications.

TABLE 10: PAIRED SAMPLE t TEST RESULTS OF ALLIED DIGITAL SERVICE LTD. AND EN POINTE TECHNOLOGIES LTD. MERGER DEAL

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	38.070	2.659	0.117	4.303
Pre-Merger Net Margin – Post Merger Net Margin	-0.065	-1.051	0.403	4.303
Pre-merger RONW – Post Merger RONW	42.913	4.342	0.049	4.303
Pre-merger current ratio-post merger current ratio	4.303	-0.877	-1.167	0.364
Pre-merger Quick Ratio – Post merger Quick Ratio	4.303	-3.867	-2.541	0.126
Pre-merger Networking Capital/Sales – Networking Capital/Sales Post merger	-0.118	-0.511	0.660	4.303
Pre-merger Debt/Equity –Post Merger Interest Coverage ratio Debt/Equity	-8.107	-0.548	0.639	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	4.303	0.219	2.229	0.156

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The liquidity ratios like current ratio, quick ratio, Net Margin/ Sales ratio has increased post-merger but, it is statistically insignificant. In case of the leverage ratios, the debt-equity ratio has decreased in the post-merger period, and it is statistically insignificant. Interest coverage ratio has increased, but it is not statistically significant too.

The profitability ratios have decreased with respect to ROWN decreased post-merger period and ROCE also decreased during the post-merger period, however it is statistically significant. The Net margin has increased, but statistically insignificant. Returns on Equity have also decreased, but it not statistically significant.

➤ **Mindtree Ltd. Acquires Aztecsoft Ltd.**

Mindtree is a worldwide IT solutions company with revenues of over USD 400 million. Its 11,000 expert engineer’s significant technology solutions to help societies and businesses flourish. It has two units operation: Information Technologies Services and Product Engineering Services.

Aztecsoft is a leader in Testing and OPD (Outsourced Product Development) market as a 2,100 more people strong software engineering Services Company. It provides independent testing, professional services, full-lifecycle product engineering and sustenance engineering to application and infrastructure software vendors, as well as to New Media and Internet-based companies.

Mindtree acquired Aztecsoft in 2008 for an equity valuation of \$90 million. Acquiring Aztecsoft has enhanced the expertise of Mindtree in IT and R&D services. Aztecsoft software solutions and products knowledge has given Mindtree and its IT service customers, a unique edge in architecting, deploying, managing and integrating the right solutions.

TABLE 11: PAIRED SAMPLE t TEST RESULTS OF MINDTREE LTD. AND AZTECSOFT LTD. MERGER DEAL

Financial Ratios	Mean Diff*	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	2.913	0.862	0.480	4.303
Pre-Merger Net Margin – Post Merger Net Margin	0.015	0.371	0.746	4.303
Pre-merger RONW – Post Merger RONW	0.083	2.657	0.117	4.303
Pre-merger current ratio-post merger current ratio	0.370	1.254	0.336	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	0.462	2.351	0.143	4.303
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	0.409	1.140	0.373	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	0.277	3.336	0.079	4.303
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	-139.207	-1.267	0.333	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	0.085	10.790	0.008	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

From the above table on paired sample t test result we find no significant change in the financial performance of Mindtree on post period of acquiring Aztecsoft Ltd. except for the increase to a greater extend in interest coverage ratio in post-merger period. And all other financial ratios have decreased post-merger period. There has been significant change noted on DuPont ROE, it has decreased in the post-merger period.

➤ **Tech Mahindra acquires i-Policy Networks Ltd.**

Tech Mahindra is a leading global systems business transformation and integrator consulting organization, which focused mainly on the telecommunications sector. Tech Mahindra extended its IT portfolio in 2009 by acquiring one of the leading global business and information technology services company, Mahindra Satyam.

iPolicy Networks is one of the leading integrated network security product company. The company delivers a high-performance, carrier-grade integrated security application with an exceedingly scalable security management system.

Tech Mahindra acquires iPolicy for its security appliances provide by them. These helped Tech Mahindra to get ipolicy’s solutions in Intrusion prevention firewall and real time protection and MSSP (Managed security service provider) solution delivered by iPolicy.

TABLE 12: PAIRED SAMPLE t TEST RESULTS OF TECH MAHINDRA AND I-POLICY NETWORKS LTD. MERGER DEAL

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail
Pre-Merger ROCE-Post Merger ROCE	14.780	0.481	0.678	4.303
Pre-Merger Net Margin – Post Merger Net Margin	-0.067	-1.253	0.337	4.303
Pre-merger RONW – Post Merger RONW	6.900	0.270	0.812	4.303
Pre-merger current ratio-post merger current ratio	-0.067	-0.191	0.866	4.303
Pre-merger Quick Ratio – Post merger Quick Ratio	-0.527	-1.709	0.230	4.303
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	-0.058	-1.270	0.332	4.303
Pre-merger Debt/Equity –Post Merger Debt/Equity	-0.330	-2.185	0.160	4.303
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	-118.873	-0.736	0.538	4.303
Pre-merger DuPont ROE – Post merger DuPont ROE	-0.100	-0.764	0.525	4.303

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

From the above table on paired sample t test result we find no significant change in the financial performance of Tech Mahindra on post period of acquiring i-Policy Networks Ltd. But there is increase in the liquidity ratio like Current ratio, Quick ratio and networking capital/sales ratio. Also found that there is increase in leverage ratios like debt/equity ratio and interest coverage ratio in the post-merger period. There is increase in DuPont ROE during the post-merger period. But it is not statistically significant too. There is decrease in RONW and ROCE during post-merger period of Tech Mahindra. But increase in Net profit margin during post-merger period.

**PAIRED SAMPLE T TEST RESULTS FOR ALL OVERSEAS MERGER DEALS IN INDIA IN 2008**

The paired sample T-test has been made for combined effect of all 6 overseas mergers taken for analysis purpose. The result is shown in the below table:

**TABLE 13: PAIRED SAMPLE t TEST RESULTS FOR ALL OVERSEAS MERGER DEALS IN INDIA IN 2008**

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail	Significant or not
Pre-Merger ROCE-Post Merger ROCE	43.153	1.886	0.200	4.303	Insignificant
Pre-Merger Net Margin – Post Merger Net Margin	1.187	1.423	0.291	4.303	Insignificant
Pre-merger RONW – Post Merger RONW	44.521	1.721	0.227	4.303	Insignificant
Pre-merger current ratio-post merger current ratio	-2.104	-3.478	0.074	4.303	Insignificant
Pre-merger Quick Ratio – Post merger Quick Ratio	0.476	1.404	0.295	4.303	Insignificant
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	0.231	0.506	0.663	4.303	Insignificant
Pre-merger Debt/Equity –Post Merger Debt/Equity	0.070	0.842	0.489	4.303	Insignificant
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	54.246	0.635	0.590	4.303	Insignificant
Pre-merger DuPont ROE – Post merger DuPont ROE	-0.282	-0.328	0.774	4.303	Insignificant

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The above result shows that there is no significant change in the financial performance in post overseas merger period by Indian IT companies. But there is increase in the current ratio and DuPont ROE.

**PAIRED SAMPLE T TEST RESULTS FOR OVERALL DOMESTIC MERGER DEALS IN INDIA IN 2008**

The paired sample T-test has been made for combined effect of all 4 overseas mergers taken for analysis purpose. The result is shown in the below table:

**TABLE 14: PAIRED SAMPLE t TEST RESULTS FOR ALL DOMESTIC MERGER DEALS IN INDIA IN 2008**

Financial Ratios	Mean Diff *	T-Stat	P(T<=t) two-tail	t Critical two-tail	Significant or not
Pre-Merger ROCE-Post Merger ROCE	13.759	1.249	0.338	4.303	Insignificant
Pre-Merger Net Margin – Post Merger Net Margin	-0.063	-1.135	0.374	4.303	Insignificant
Pre-merger RONW – Post Merger RONW	18.075	2.257	0.153	4.303	Insignificant
Pre-merger current ratio-post merger current ratio	-0.116	-0.399	0.728	4.303	Insignificant
Pre-merger Quick Ratio – Post merger Quick Ratio	-0.965	-2.257	0.153	4.303	Insignificant
Pre-merger Networking Capital/Sales - Post merger Networking Capital/Sales	-0.201	-1.973	0.187	4.303	Insignificant
Pre-merger Debt/Equity –Post Merger Debt/Equity	-0.169	-2.245	0.154	4.303	Insignificant
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	-66.258	-2.424	0.136	4.303	Insignificant
Pre-merger DuPont ROE – Post merger DuPont ROE	-0.046	-0.518	0.656	4.303	Insignificant

\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The above result shows that there is no significant change in the financial performance in post-merger period by Indian IT companies gone for domestic merger. But on ignoring statistical significance, there is increase in the Liquidity ratios like current ratio, Quick ratio and networking capital/sales. And there is increase in leverage ratios like debt/equity and interest coverage ratio. Profitability ratios also have increase during post-merger period like ROCE, RONW and DuPont ROE.



TABLE 15: SUMMARY OF T TEST RESULT PRE AND POST MERGER PERFORMANCE

Summary of test result pre and post merger performance	Overall domestic merger																			
	Domestic merger companies																			
	Si infotech	Allied digital	Mindtree	Tech Mahindra	Overall Overseas merger															
Financial Ratios	Overseas merger companies						Overall Overseas merger													
	Silverline tech	GSS Infotech	HCL	Mindteck	Mascon	Relta	Overall Overseas merger													
Pre Merger ROCE-Post Merger ROCE	+	-	+	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-
Pre Merger Net Margin - Post Merger Net Margin	-	+	+	+	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Pre merger RONW - Post Merger RONW	+	-	+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Pre merger current ratio-post merger current ratio	-	+	+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Pre merger Quick Ratio - Post merger Quick Ratio	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pre merger Networking Capital/Sales- Post merger Networking Capital/Sales	-	+	+	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Pre merger Debt/Equity - Post Merger Debt/Equity	-	-	+	-	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Pre merger Interest Coverage Ratio-Post merger Interest Coverage ratio	-	-	-	+	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Pre merger DuPont ROE - Post merger DuPont ROE	-	-	+	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-

Source: Evaluated from test undertaken

The sign + refers to increase in ratio  
 The sign - refers to decrease in ratio  
 The colored block refers to statistically significant

TABLE 16: AVERAGE MEAN DIFFERENCE OF OVERSEAS MERGER AND DOMESTIC MERGER

Financial Ratios	Overseas Mean Diff**	Domestic Mean Diff**
Pre-Merger ROCE-Post Merger ROCE	43.153	13.759
Pre-Merger Net Margin – Post Merger Net Margin	1.187	-0.063
Pre-merger RONW – Post Merger RONW	44.521	18.075
Pre-merger current ratio-post merger current ratio	-2.104	-0.116
Pre-merger Quick Ratio – Post merger Quick Ratio	0.476	-0.965
Pre-merger Networking Capital/Sales - Post merger NetworkingCapital/Sales	0.231	-0.201
Pre-merger Debt/Equity –Post Merger Debt/Equity	0.070	-0.169
Pre-merger Interest Coverage Ratio-Post merger Interest Coverage ratio	54.246	-66.258
Pre-merger DuPont ROE – Post merger DuPont ROE	-0.282	-0.046

\*\* The negative sign in the value indicate there is an overall increase in the particular performance parameter in post-merger period compared to pre-merger period.

The above table shows that on an average there is increase in the current ratio on post-merger period of companies gone for overseas merger. But there is average decrease in quick ratio, this shows that sometimes mask hidden financial problems. For instance:

- An inventory backlog
- Slow collections on accounts receivable

Any of these conditions may reduce the productive capacity of the business or indicate financial trouble. It's important to look at why your quick ratio is low, as well as looking at the number itself.

All other ratios have decreased during the post-merger period on overseas merger. On the other side the ratios of companies gone for domestic merger have improved to a considerable amount except for ROCE and RONW. The liquidity position of companies on average has increased, and the interest coverage ratio also increased to a greater amount, this indicates that there is increase in EBIT by the companies during post-merger period or there may be decrease in interest expenses in post-merger period. On an overall the table shows that the financial position of companies gone for domestic merger have improved then the companies gone for overseas merger.

## 7. DISCUSSION

The study is an attempt to provide an analysis of overseas and domestic Mergers and Acquisitions in Indian Information Technology Industry from the perspective of acquiring company's financial performance.

The analysis shows that the mergers and acquisitions did not make any significant change in the financial performance of the acquirer company to its pre-merger performance. There is no significant change noticed in IT companies going for overseas merger even though there is an increase in current ratio. Hence with respect to Hypothesis-2 we accept null hypothesis (H<sub>0</sub>).

In the same way on the conducted result there is no significant change found on the companies going for domestic merger too, hence with respect to hypothesis-1 we accept null hypothesis (H<sub>0</sub>).

Even though there is no significant difference in their financial performance during post-merger period in domestic mergers, there is an improved in case of liquidity position like current ratio by 0.16, quick ratio by 0.96 and networking capital/sales ratios by 0.2, and even in leverage ratios and DuPont ROE by 0.046 have increased post-merger period. Whereas the on overseas merger the current ratio increases by 2.10, but other liquidity ratio like quick ratio and networking capital/sales ratio have decreased by 0.4 and 0.23 respectively. Also interest coverage ratio on post overseas merger decreased drastically by 54.24. Hence, on hypothesis-3 we conclude that IT companies going for domestic merger have considerable improvement in their financial position then going for overseas merger. Hence domestic merger is better than overseas merger for the companies in terms of financial performances.

Not so significant improvement in the financial performance of the companies has put a question mark over the motive behind mergers. Furthermore, financial performance may not be the only parameter for M & A success.

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## THE ART OF GIVING FEEDBACK IN COACHING: SIGNIFICANCE AND PERSPECTIVE

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### ABSTRACT

*Feedback plays a major role in building the self-awareness of the coachee in terms of knowledge, skill and attitude. The disparity between coaching and effective coaching lies in a constructive feedback. Apart from the coach providing support and assistance it is essential to provide a constructive feedback to the coachee. The purpose of this paper is to understand the significance of feedback by the coach on the performance of the coachee. This paper reviews the importance of giving a constructive feedback and its effect on the coach and coachee relationship. It also highlights the significance of constructive and effective feedback to the coachee along with his acceptance towards the opinion of the coach by reviewing various papers. It was found that in order to provide positive or negative feedback, one should soften the emotional blow and to deliver the criticism in private. The results also disclose that a constructive feedback also acts as a tool to identify potential leaders in the organization. This paper would help coaches as well as coachees to give effective and continuous feedback. This would develop a better coaching culture in the organisation. The limitation of the paper includes the reverse feedback in the coaching process. The paper does not consider any gender differences in providing feedback. It would help individuals and organisations in making decisions about designing, implementing and measuring effectiveness of feedback in the coaching programs, thus cultivating a habit of utilizing feedback in the coaching process.*

### KEYWORDS

coaching, effective feedback, coach.

### INTRODUCTION

Coaching is essential for developing the career growth of the employee in an organization by refining the skills and performance. It deals with concerns before they become severe. Coaching is primarily associated to one to one process of improve, grow and to achieve a higher performance level by providing constructive feedback, support and awareness to the coachee (Pousa & Mathieu, 2010). A coaching session is usually a dialogue between the coachee and the coach. It helps the coachee to find out solutions for their growth. In few organizations when things are not in place, coaching is used as a corrective means. In many organizations, coaching is perceived to be a positive tool for helping employees to explore and accomplish their professional growth. Coaching is for the benefit of the individual along with the focus on organisational development, although there might be a personal aspect. Results are measured aligned with the performance needs of the organisation for the individual being coached.

Coaching is a continuous practice used in the organization to establish and sustain professional relations and employee's performance level. It identifies an employee's growth, help in planning and developing effective skill. With the help of their coaching skills, the coach assesses the requirements for the development of the coachee. Coach and coachee work out mutually on planning out on training needs or new projects. These plans are mostly conveyed through effective feedback process. Hence, it is important to build trust at first along with a constructive feedback for a successful coaching process. These tactics are mostly conveyed through effective feedback process. Feedback is the crucial to provide employees with valuable inputs and supervision. The art of giving feedback is essential because it not only affects the performance but also the talent of the coachee. Many a times coaching is not effective due to several reasons. Hence, it is necessary for a two-way communication feedback between the coachee and the coach. *Employee feedback* provides coach with valuable inputs regarding how they assist their coachee's work performance. *Coach feedback* should guide and recommend employee's performance enhancement. Coach must point out the incident specifically so that new ideas or required improvements could be made in a cautious manner. Renowned coaches cultivate a practice which includes constant and extensive discussions regarding employee's performance. It would be more effective with informal practise and focused discussions concerning performance and development of the employee.

When coaches contribute to coachee's career growth in regard to eminence and magnitude of their job, coachee understands the need to improve upon his performance to achieve career growth and skills. Coachee who are willingly for a feedback from their coaches, figure out the reason for their professional failure and are able to eliminate them with time. Constant and constructive feedback gives the coach and coachee several chances to standardize and reward their mutual efforts. Constructive and constant feedback is necessary for enhancing the performance and flourishing coach-coachee relationship.

### OBJECTIVES

1. To understand the significance of feedback on the performance of the coachee by the coach.
2. To review the importance and effects of constructive feedback on the relationship of coach and coachee.

### DISCUSSION

Coaching the employees to help them in reaching their goals and achieving their optimal performance is the best way to bring out the best in them. Giving feedback to employees is one of the crucial processes in coaching. One of the reasons companies have introduced coaching is because of not obtaining the standard of feedback they need (Carol Wilson, 2004). Ongoing feedback and coaching is used to strengthen acceptable behaviour, to teach the employee new skills, to encourage employee to pursue higher levels of performance, to mentor employees, similarly on correct performance deficiencies. The performance review of the coachee or any deliberate suggestion might not even be a feedback which can have effect on the relationship between the coachee and the coach. The coach must provide feedback without pinching the emotions of the coachee.

People are naturally creative, take pleasure in contributing and like to have a measure of control of their workload. These instincts are restrained by managers who bully, criticize, humiliate or micro-manage their staff. However, being left alone without any positive feedback or suggestions for enhancement does not encourage people to take responsibility either (Carol Wilson, 2011). So here the *importance* of giving feedback comes into picture but then sometimes manager struggle about how to give "learning" or "developing" or "negative" feedback which can be faced by asking a simple question "What would I prefer to listen in this situation?" Effective feedback and direction, and reaching to personal well-being are seemingly to enable coaches, HRD practitioners and line managers to take a more informed and intelligent approach in coaching and other situations where inter- and intra-personal awareness are essential (Penny Mavor, Eugene Sadler-Smith, David E. Gray, 2010). So here we can understand how effective feedback helps the employee to map its ability and well-being. Ongoing coaching, additional to performance appraisals, is viewed by several practitioners (e.g., Hutcheson, 1996; Luthans & Peterson, 2003; Waldroop & Butler, 1996) as a primary way to develop and encourage employees. This as a result of coaching overcomes the problem of timeliness. It involves giving feedback on an ongoing basis. Based on this feedback, specific goals are set, the relationship between what the person is doing and the outcomes the person can expect is clarified, good performance is appreciated, and the individual is encouraged to take action that would lead to improvement in job performance (Hall, Otazo, & Hollenbeck, 1999; Heslin, Latham, & VandeWalle, 2005; Heslin, Vande- Walle, & Latham, 2006).

One of the difficult areas that constantly provide managers as well as employees is the need to provide and receive *effective feedback*. The issue is to give an effective feedback which is one of the essential components that need to be present to help employees improve performance. It builds an association between the employee's work and the way actions are perceived by their peer. The key to provide an effective feedback is about the quality of information provided than the time dedicated for it. Despite the performance review session, it would be an ineffective without giving the team an insightful feedback in coaching (on a regular basis) this approach helps them develop and be more productive (Halogen Software, 2014).

To implement thriving *performance management* systems, one must develop the supervisor - subordinate relationship because it is the daily coaching phenomenon which is vital for improving performance on several aspects. To enhance employee recognition, organizations ought to coach their managers to interact in appropriate manner which supports the means of providing feedback technique (Stephen F. Young and Lisa A. Steelman, 2014). The encouragement of a constructive feedback culture could be reinforced through coaching behaviour by the means of formal inclusion in the performance appraisal. Coaching works as bridges the gap between the existing and required performance as well as coaching creates the best medium for searching new insights and developing action plans as long as constant and constructive feedback is provided (Paul King and John Eaton, 1999). Thus we can further say that coaching and feedback go hand in hand to enhance the performance and bring out the right potential of the coachee.

The intention of feedback is it is to plan for the long run rather than residing on the past. Though feedback is initiated with the past reflection and present behaviour and job performance, it does not conclude there. Effective feedback uses past reflection to assist the coachee to plan effective career growth in the organization (Karen Miller and Shirley Poertner, 1997). The *power of feedback* isn't solely to provide a futuristic map but also goal oriented, supportive, continual, in depth (specific and accurate) and multidirectional.

Feedback and coaching intervention have higher *impact on leadership behaviours*. Providing significant feedback by assessing and serving high performing employees to interpret feedback through coaching, these are viable tools to boost leadership in organization (Peter Goff, J. Edward Guthrie, Ellen Goldring and Leonard Bickman, 2014). Thus it may be said that coaching and feedback together facilitate leaders' ability to interact with their employees regarding their own leadership development. The grouping of multi-rater feedback and individual coaching do increase leadership effectiveness up to sixty per cent (Elizabeth C. Thach, 2002). Thus we are able to say that implementing developmental processes for leadership that highlights feedback to drive self-awareness with the hand holding by a experienced coach; future leaders can be developed and high potentials performers would hone their skills; and derailing executives can be saved.

Feedback also can be seen as a tool to *identify potential coach* in the organisation. It is done through formal processes such as employees' annual appraisal which consist of 360-degree feedback and what their team describes their tendency to coach others, then it can be taken in to consideration (Julie Starr, 2004).

For becoming an effective coach, one needs to be professional at providing praise and criticism. While it is straightforward to praise, it is much more difficult and not pleasant to criticize the coachee. The employees are shown the scope of improvement by this practice in the management. Thus, it is very important for managers to be informed about when and how to provide negative feedback. The thing to realize is that *individuals generally respond more strongly to negative events than positive ones*. One should avoid inadvertently criticizing any of their employees and need to weigh the tradeoffs involved in making negative feedback (Robert C. Pozen, 2013). Managers at work might hesitate to provide direct and tough feedback which is usually expected by the coach. Whereas coachees expect a tactful, sensitive and caring delivery of feedback but some insist on providing the feedback as it is. (Peter Bluckert, 2005). However they should also keep in mind to take steps to soften the emotional blow and ensure deliver your criticism in privately. The ability to give feedback in an expert manner is also learnt as is that the capability to receive feedback in an exceedingly non-defensive manner (Peter Bluckert, 2005). Through a range of personal development processes and argues that coaching ought to be conducted both in one-to-one situations and in groups so as to derive the benefit of feedback.

The support provided by a senior, immediate manager or self-appointed mentor uses their coaching skills to develop coachee is preferred at the workplace (Stewart, 2008). To be at par with the quality of work in this setting is done by effectively communicating with the coachee and providing *constructive feedback* on periodically. Constructive feedback focuses on behaviours and not the coachee along with the focus on the future rather than the past and helps the coachee to self-discover (Dave Ulrich, 2008). Coachees are more likely to develop their career effectively by exploring opportunities to enhance their potential. Hence they expect constructive feedback on their performance and do not relinquish their growth when confronted by challenges (Lorna J. Stewart, Stephen Palmer, 2009). This would benefit organizations to be aware of the decreasing motivation among employees and the importance of timely support by the coaches or managers. This could be achieved by encouraging, providing constructive feedback and minimising challenges of the employees and this would in turn elevate their motivation to attain individual as well as organizational goals

## RECOMMENDATION

Approaches should be made to measure the effectiveness of feedback in coaching because it a crucial element of the coachee and coach relationship. Sometimes even though the coach has knowledge and skill about his area but they might lack in refining the weakness of the coachee. A continuous constructive feedback is necessary for the development of the coachee because persistent feedback enhances performance. Providing effective feedback to regarding the performance of the coachee is chief accountability for all coaches and is it affects the overall performance of the coachee. Constructive feedback is mostly objective. It is mostly focused on performance rather than attitude of the coachee. It is a mutual effort of the coach and the coachee which helps developing new skills for career growth. Informal coaching would help to develop performance and match up the expectation of employees as well as organization. Hence, more emphasis should be given to the feedback while coaching. Other barriers to providing feedback would be the cultural and lingual differences for coaching that occurs beyond geographical boundaries of a nation.

## CONCLUSION

Coaching is meant for the coachee to grow professionally and achieve their career goals. Gone are those days when the feedback was given annually. The trend of providing feedback has drifted from stipulated to persistent feedback. Coaching would be incomplete without feedback as there is a positive association with each other. This paper highlights the significance of constructive and effective feedback to the coachee along with his acceptance towards the opinion of the coach. The purpose of this paper is to understand the significance of feedback by the coach on the performance. It also reviewed the importance of constructive feedback and its effect on the relationship of coach and coachee. This paper reveals that in order to provide positive or negative feedback, one should soften the emotional blow and make sure to deliver the criticism in private. It discloses that a constructive feedback also act as a tool to identify potential leaders in the organization. The performance review or any deliberate suggestion by the coach might not be a feedback. The relationship between the coachee and the coach is dependent on the way a feedback is given. Skills such as empathetic listening also contribute in providing a good feedback. The coach needs to give feedback without hurting the emotions of the coachee. With the help of their coaching skills, the coach assesses the requirements for the development of the coachee. This makes coachee aware of the various experiences which would help them to acquire appropriate mind set for career growth. Coach and coachee work out mutually



on planning out on training needs or new projects. These plans are mostly conveyed through effective feedback process. Hence, it is important to build trust at first along with a constructive feedback for a successful coaching process.

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# INVENTORY MANAGEMENT IN PAPER INDUSTRY: A COMPARATIVE STUDY IN SPML AND INTERNATIONAL PAPER APPML

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## ABSTRACT

The word inventory in accounting language refers to the stocks of the product (finished goods) of a firm offering for sale. In a manufacturing concern, it may include raw materials, work-in-process, finished goods and stores. Raw materials consist of those units or input which are used to manufacture goods that require further processing to give a shape of finished goods. Finished goods are products ready for sale. Inventory should neither be too low to effect the production adversely nor too high to block the funds unnecessarily. About 90 per cent part of working capital is invested in inventories. Therefore, it is necessary for management to give proper attention to inventory management. A proper planning of purchasing, handling, storing and accounting should form a part of inventory management. In India, there are 759 pulp and paper mills in India as on March, 2014 with an installed capacity of 12.7 MTPA (Million Tons Per Annum), producing around 10.90 MTPA paper, paper board and newsprint. The production is anticipated to grow up to 14.0 MTPA by the year 2016. The average annual turnover of the industry is approximately ₹30,000 crores, which accounts for approximately 0.37% of the national GDP. It contributes ₹3000 crores to exchequer and provides direct employment opportunities to about 0.37 Million people and indirect employment of over 1.2 Million people. The Indian paper share in World's production is just 2.6% only. In this connection, inventory is the major role play in the production process. Hence there is need to study the inventory management in paper industries.

## KEYWORDS

inventory, profit, paper.

## INTRODUCTION

Inventory constitutes an important item in the working capital of any business concern. The dictionary meaning of inventory is 'Stock of Goods or A List of Goods'. The word inventory in accounting language refers to the stocks of the product (finished goods) of a firm offering for sale. In a manufacturing concern, it may include raw materials, work-in-process, finished goods and stores. Raw materials consist of those units or input which are used to manufacture goods that require further processing to give a shape of finished goods. Finished goods are products ready for sale. The classification of inventories and the levels involved vary from organisation to organisation depending upon the nature of business. For example, steel is a finished product for a steel industry, but it is raw material for an automobile manufacturer. Thus, inventory may be defined as "Stock of goods that is held for future use". Since inventories constitute about 50 to 60 per cent of current assets, the management of inventories is crucial for successful working capital management. Working Capital requirements are influenced by inventory holding. Hence, there is need for effective and efficient management of inventories.

## NEED OF THE STUDY

A good inventory management is important for successful operations of any organisations but unfortunately the importance of inventory is not always appreciated by top management. This may be due to a failure to recognise the link between inventories and achievement of organisational goals'. Inventory management refers to an optimum investment in inventories. It should neither be too low to effect the production adversely nor too high to block the funds unnecessarily. About 90 per cent part of working capital is invested in inventories. Therefore, it is necessary for management to give proper attention to inventory management. A proper planning of purchasing, handling, storing and accounting should form a part of inventory management.

In India, there are 759 pulp and paper mills in India as on March, 2014 with an installed capacity of 12.7 MTPA (Million Tons Per Annum), producing around 10.90 MTPA paper, paper board and newsprint. The production is anticipated to grow up to 14.0 MTPA by the year 2016. The average annual turnover of the industry is approximately ₹ 30,000 crores, which accounts for approximately 0.37% of the national GDP. It contributes ₹ 3000 crores to exchequer and provides direct employment opportunities to about 0.37 Million people and indirect employment of over 1.2 Million people. The Indian paper share in World's production is just 2.6% only. In this connection, inventory is the major role play in the production process. Hence there is need to study the inventory management in paper industries.

## OBJECTIVES OF THE STUDY

The main objective of the study is to analyse the inventory management in paper industry. It includes;

1. To study the components of inventory in select companies
2. To analyse the inventory conversion period in select companies and
3. To evaluate the impact of inventory on profits of select companies.

## RESEARCH METHODOLOGY

The study is based on secondary data. The secondary data was collected include the following: earlier studies/reports on selected paper units, annual reports of the selected undertakings, textbooks, journals, periodicals, daily news papers, web sites etc., The data collected on inventory management in paper industry processed, tabulated and analysed in a systematic manner with the help of various statistical techniques such as percentages, averages, ratios and such other relative measures.

**Selection of sample:** In order to carry out my research, I have selected two established paper manufacturing companies located in two neighbouring states viz., Andhra Pradesh and Telangana State;

- 1) **Sirpur Paper Mills Limited (SPML):** It is situated at Sirpur town in Adilabad district of Telangana State.
- 2) **International Paper (APPM- formerly known as The Andhra Pradesh Paper Mills) Limited (International Paper APPML):** It is located at Durganagar, Sriram-nagar, Rajahmundry, Andhra Pradesh.

## COMPONENTS OF INVENTORY OF SPML AND INTERNATIONAL PAPER APPML

The data in table 1 reveals that the major components of inventory are Chemicals, Stores and Spare parts and Raw Material. The proportion of Chemicals, Stores and Spare parts represent 44 per cent to that of total inventory in the year 2003-04 and declined to 41 per cent by the year 2012-13. The average proportion of Chemicals, Stores and Spare parts stood at 39 per cent for the period of the study. The proportion of raw materials to inventory of SPML indicates 39 per cent of the total inventory in the year 2003-04 and declined to 28 per cent in the year 2012-13.

The average raw material proportion is 33 per cent for the study period. The stock of input in terms of raw materials and chemicals and stores in SPML were piled up may be due to scarcity or to meet un-anticipated demand for products in unseasonal periods. The next component of inventory is process stock and its share in total inventory account for 18 per cent in the study period. This indicates that the production cycle is short in the select company. The stock of finished goods on an average represented only 7 per cent in total inventory and thus indicates that SPML products are kept as stock for short period and their disposals are very fast. Stores in transit were recorded at 3% in SPML.

TABLE 1: BREAKDOWN OF INVENTORY AND ITS PROPORTION TO TOTAL INVENTORY OF SPML (₹ in Lakhs)

Financial Years	Finished Goods		Process Stocks		Raw Materials		Chemicals, Stores and Spare parts		Stores-in-Transit		Total Inventory	
	₹	%	₹	%	₹	%	₹	%	₹	%	₹	%
2003-04	110.54	5	192.01	8	888.00	39	1015.72	44	81.02	3	2287.29	100
2004-05	102.39	4	385.54	14	1123.43	42	1024.85	38	46.67	2	2682.88	100
2005-06	86.57	3	352.90	11	926.16	36	1130.05	44	52.10	2	2547.78	100
2006-07	62.19	2	332.16	11	1368.22	47	1053.23	36	66.24	2	2882.49	100
2007-08	111.22	5	397.61	17	705.22	30	991.53	42	121.55	5	2327.13	100
2008-09	437.84	14	741.26	24	621.85	20	1033.21	34	230.37	7	3064.53	100
2009-10	279.41	8	766.21	22	795.21	22	1540.26	44	140.16	4	3521.30	100
2010-11	143.19	5	724.00	24	785.54	26	1248.85	41	126.73	4	3030.31	100
2011-12	508.18	11	771.07	17	1803.85	25	1470.07	41	67.78	1	4620.95	100
2012-13	299.53	7	860.17	21	1150.02	28	1679.11	41	106.73	3	4095.56	100
Average	214.106	7	552.293	18	1016.35	33	1218.688	39	103.735	3	3106.222	100

Source: Annual Reports of SPML from 2003-04 to 2012-13.

The data in table 2 reveals that the various components of inventory and their ratios to that of total inventory. The major components of inventory are Chemicals, Stores and Spare parts and Raw Material. The proportion of Chemicals, Stores and Spare parts represent 30 per cent in the year 2003-04 and increased to 39 per cent in the year 2012-13. The average proportion of Chemicals, Stores and Spare parts is 34 per cent for the period of the study. The highest proportion of Chemicals, Stores and Spare parts were recorded at 42 per cent in the year 2010-11.

The proportion of raw materials to inventory of International Paper APPML indicates that 42 per cent of the total inventory in the year 2003-04 and it declined to 38 per cent in the year 2012-13. The average proportion of raw material was 31 per cent during the entire study period. The same kind of pattern we observed in respect of raw materials and chemicals as both components are mostly depend on seasonal and scarce inputs. The next component of inventory is finished goods on an average they stood at 25 per cent of total inventory over the study period. The work in progress recorded at 8 per cent of the inventory and its level speaks about the short period of production cycle in converting raw materials into the end products. Stores-in-Transit recorded 2 per cent in total inventory representing that the industry is located near to the raw material centre.

The Chemicals, Stores and Spare parts and Raw Material are the major components of the inventory in International Paper APPML. The piled up inventory which calls for immediate attention to have proper control as these two components together constitute 65% of total inventory. Hence, it is advised that proper inventory control techniques like maximum, minimum, danger levels of orders to be used in order not to cause any interruptions in production schedule.

TABLE 2: BREAKDOWN OF INVENTORY AND ITS PROPORTION TO TOTAL INVENTORY OF INTERNATIONAL PAPER APPML (₹ in Lakhs)

Financial Years	Chemicals, Stores and Spare parts		Raw Materials		Materials –in– Transit		Work in Process		Finished Goods		Total Inventory	
	₹	%	₹	%	₹	%	₹	%	₹	%	₹	%
2003-04	2605.28	30	3665.38	42	35.22	0.4	144.56	1.6	2253.50	26	8703.94	100
2004-05	2765.72	32	3865.00	45	25.76	0.3	128.55	1.7	1839.26	21	8624.29	100
2005-06	3,056.63	38	4,504.61	56	20.16	0.2	313.08	3.8	198.80	2.4	8,093.28	100
2006-07	3,545.24	40	3,342.78	37	31.52	0.3	863.33	9.7	1,163.43	13	8,946.30	100
2007-08	4,253.14	40	2,677.97	26	193.02	1.8	1,157.39	11.04	2,199.84	21	10,481.84	100
2008-09	4,419.78	33	2,223.50	16	430.74	3.18	2,030.35	15	4,420.48	33	13,524.85	100
2009-10	4,020.72	35	2,659.20	23	319.28	2.7	895.36	7.73	3,692.64	32	11,587.20	100
2010-11	5,152.89	42	3,512.48	29	190.81	1.6	1,142.31	9.4	2,108.36	17	12,106.85	100
2011-12	4,806.39	23	4,525.71	21	386.90	1.8	1,413.95	6.67	10,058.82	47	21,191.77	100
2012-13	6,735.84	39	6,692.44	38	527.84	3	1,016.54	6	2,506.65	14	17,479.31	100
Average	4136	34	3767	31	216	2	910	8	3044	25	12074	100

Source: Annual Reports of International Paper APPML from 2003-04 to 2012-13.

### INVENTORY TURNOVER RATIO OF SPML AND INTERNATIONAL PAPER APPML

Inventory turnover Ratio establishes the relationship between the sales with inventories. This ratio measures the velocity of conversion of stock into sales. Usually, a high inventory turnover indicates efficient management of inventory because the stocks are sold more frequently and lesser amount of money is required to finance the inventory. A low turnover ratio indicates inefficient management of inventory as over investment in inventories makes the business dull and ultimately lead to low profits or high losses and poor liquidity. An extraordinary high inventory turnover may be the result of low level of inventory, which results in shortage of goods produced in relation to demand and thus slips the market into the hands of competitors. The turnover may also be high due to a conservative method of valuing inventories at a lower value or the policy of being to buy frequently in small lots. Inventory turnover ratios are calculated to indicate whether inventories have been used efficiently or not. The inventory turnover ratio also known as stock velocity ratio is normally calculated as sales/average inventory cost.

Inventory Turnover Ratio =

**Cost of goods sold/Net Sales**

**Average inventories**

Inventory conversion period may be calculated to find the average time taken for clearing the stocks.

Inventory Conversion Period =

**Days in a Year**

**Inventory Turnover Ratio**

In this backdrop, there is a need to analyse the select units Inventory Turnover Ratios to facilitate comparison. The relevant data collected in this regard are presented in the Table – 3 covering the study period of ten years i.e. from 2003-04 to 2012-13.

TABLE 3: INVENTORY TURNOVER RATIOS OF SPML &amp; INTERNATIONAL PAPER APPML (₹ in Lakhs)

Financial Years	SPML			International Paper APPML		
	Net Sales	Inventory	ITR	Net Sales	Inventory	ITR
2003-04	21657	2287	9.5	44339	8704	5.09
2004-05	22026	2683	8.2	39352	8624	4.56
2005-06	23333	2548	9.2	50853	8093	6.28
2006-07	24186	2882	8.4	52279	8946	5.84
2007-08	24308	2327	10.4	62824	10481	5.99
2008-09	34621	3065	11.3	65733	13525	4.86
2009-10	33549	3521	9.5	66934	11587	5.78
2010-11	36459	3030	12.1	79862	12107	6.60
2011-12	40023	4621	8.7	60160	21192	2.84
2012-13	36520	4096	8.9	125362	14479	8.66

Source: Annual Reports of SMPL & International Paper APPML from 2003-04 to 2012-13.

The data presented in the above table reveals that the inventory turnover ratio of SPML was 9.5 times in the year 2003-04 and it decreased to 8.9 times in 2012-13. The ten years average is 9.6. In case of International Paper APPML the inventory turnover ratio is 5.09 times in 2003-04 and it has grown to 8.66 times in the year 2012-13. As there is no standard inventory ratio and norms in this respect differ from firm to firm the ratios displayed in both the companies never exceeded 12% relatively. SPML fared well as the ratios were high compared to International Paper APPML and thus the inventory management is quite appreciative in SPML. With regard to International Paper APPML though the ratios were less in the beginning years of the study but later raising trend was found as in the current year i.e. 2012-13 the ratio stood at 8.66. Thus it can be concluded that in both the companies' velocity of conversion of stock into sales is quite appealing and also admirable.

### INVENTORY CONVERSION PERIOD (ICP) OF SPML AND INTERNATIONAL PAPER APPML

Management of inventory gathers much importance in a company that aims at making surplus through sales. Inventory conversion period stands as an index to judge how effectively the business being carried out. If the age of inventory is lower, it means that the company's activity position is satisfactory and thus they will be able to sell their product within a short period to realise the sound liquidity position in an organisation. On the other hand, if the age of inventory is too high, it indicates the slow movement of stock due to lower demand for product or excessive production by company leading to blockage of investment in stocks and shows a negative impact on short term paying capacity of the firm. The relevant data depicting inventory conversion period is tabulated in the Table -4 covering the study period of ten years i.e. from 2003-04 to 2012-13.

TABLE 4: INVENTORY CONVERSION PERIOD OF SPML &amp; INTERNATIONAL PAPER APPML

Financial Years	SPML		International Paper APPML	
	ITR	ICP (Days)	ITR	ICP (Days)
2003-04	9.5	38	5.09	72
2004-05	8.2	44	4.56	80
2005-06	9.2	40	6.28	58
2006-07	8.4	44	5.84	63
2007-08	10.4	35	5.99	61
2008-09	11.3	32	4.86	75
2009-10	9.5	38	5.78	63
2010-11	12.1	30	6.60	55
2011-12	8.7	42	2.84	129
2012-13	8.9	41	8.66	42

Source: Annual Reports of SMPL & International Paper APPML from 2003-04 to 2012-13.

The data in table- 4 indicates that the inventory conversion period of SPML & International Paper APPML companies. In case of SPML, the inventory conversion period is 30 to 44 days in the study period. Whereas, in case of International Paper APPML, the inventory holding period is 42 to 129 days for the corresponding period. The average inventory holding for the entire study period in this company is just above 60 days and conversion period being 2 months just because of these ratios we cannot jump into a conclusion because, the quality of product, markets served varieties of products and operating cycles in respect of these products should also be taken into account. Purely based on this ratio the SPML excelled the International Paper APPML as far as inventory conversion into sales are concerned and thus its operating cycle was very short in terms time/days involved.

### ANALYSIS OF WORKING CAPITAL TURNOVER RATIOS OF SPML & INTERNATIONAL PAPER APPML

Working Capital turnover ratio indicates the velocity of the utilisation of net working capital. This ratio indicates the number of times the working capital is turned over in the course of year. In other words, this ratio measures the efficiency with which the working capital is being used by a firm. This ratio is an outcome of cost of sales divided by average working capital. There is no standard norm for this ratio therefore this ratio is to be compared with that of other firms pursuing same kind of business. The data presented in table 5 indicates working capital ratios of both the firms viz., SPML and International Paper APPML, for the period of 10 years ending with 2012-13. A thorough analysis of these ratios indicates that International Paper APPML is far better in utilisation of working capital compared to that of SPML. Due to negative net working capital in three years viz., 2007-08, 2010-11 and 2011-12 in SPML the pathetic position was undergone by this company and was made to use long term funds to meet short term commitments. Except in one year i.e. 2012-13 in remaining 9 years the International Paper APPML has done better in utilisation of its net working capital. The highest ratios were identified in 2005-06 and 2011-12 in International Paper APPML i.e. 45.57 and 39.81 respectively indicating efficient utilisation of working capital but the company should also take little bit of care to see that too greater is this ratio it leads to worst situation in terms of idle resources fetching no returns.

TABLE 5: CO-EFFICIENT OF CORRELATION OF INVENTORY WITH PROFIT OF SPML AND INTERNATIONAL PAPER APPML (₹ in Lakhs)

Years	SPML		International Paper APPML	
	Inventory	Profit	Inventory	Profit
2003-04	2287	1792	8704	2336
2004-05	2683	1410	8624	2540
2005-06	2548	1459	8093	3503
2006-07	2882	1332	8946	2413
2007-08	2327	3262	10481	1654
2008-09	3065	-163	13525	1895
2009-10	3521	-1185	11587	5419
2010-11	3030	-1791	12107	4494
2011-12	4621	-1731	21192	-9781
2012-13	4096	-9710	14479	-2370
Co-efficient of Correlation (R)	<b>-0.7307</b>		<b>-0.8424</b>	

Source: Annual Reports of SMPL & International Paper APPML from 2003-04 to 2012-13.

### IMPACT OF INVENTORY ON PROFITABILITY OF SPML & INTERNATIONAL PAPER APPML

To analyse the impact of inventory on profitability, the relationship between inventory and profits is calculated through co-efficient of correlation and its significance is tested through t-test. The relevant data collected and presented in the Table – 6 during the study period of ten years i.e. from 2003-04 to 2012-13. Overall analysis of the tabulated data mentioned above indicates that the co-efficient of correlation of inventory with profit in SPML is negative i.e., -0.7307. This is a moderately negative correlation, which means that there is a tendency for high inventory variable scores to go with low profit variable scores (and vice versa). In the case of International Paper APPML, the value is -0.8424. This is a strong negative correlation, which means that high inventory variable scores go with low profit variable scores (and vice versa).

To analyse the significance of coefficient of correlation between inventory and profit the t-test is applied for both companies.

#### In case of SPML:

**Null Hypothesis (H<sub>0</sub>):** There is no significant relation between inventory and profit.

TABLE 6: SIGNIFICANCE TEST BY t-TEST BETWEEN INVENTORY &amp; PROFIT OF SPML

Particulars	Calculated t-test Value	Table Value	Result
Significance between Inventory and Profit	<b>0.0116</b>	<b>2.262</b>	Null Hypothesis <b>Accepted</b>

Source: Compiled from Table – 5

As per the details in table 7 the calculated value of  $t=0.0116$ , which is less compared to that of critical value  $t=2.262$  at 5% level of significance. Hence, the null hypothesis is accepted. This means that there is no significant correlation between inventory and profit of SPML.

#### In case of International Paper APPML:

**Null Hypothesis (H<sub>0</sub>):** There is no significant relation between inventory and profit.

TABLE 7: SIGNIFICANCE TEST BY t-TEST BETWEEN INVENTORY &amp; PROFIT OF INTERNATIONAL PAPER APPML

Particulars	Calculated t-test Value	Table Value	Result
Significance between Inventory and Profit	<b>2.40</b>	<b>2.262</b>	Null Hypothesis <b>Rejected</b>

Source: Compiled from Table – 5

As per data presented in table 8 the calculated value of  $t=2.40$ , which is more compared to the critical value  $t=2.262$  at 5% level of significance. Hence, the null hypothesis is rejected. This means that there is significant correlation between inventory and profit of International Paper APPML.

### FINDINGS OF THE STUDY

- The stock of input in terms of raw materials and chemicals and stores in SPML were piled up may be due to scarcity or to meet un-anticipated demand for products in unseasonal periods.
- The Chemicals, Stores and Spare parts and Raw Material are the major components of inventory in International Paper APPML. The piled up inventory which calls for immediate attention to have proper control as these two components together constitute 65% of total inventory. Hence it is advised that proper inventory control techniques like maximum, minimum, danger levels of orders are to be used in order not to cause any interruptions in production schedule.
- The two sample units of Paper Industry indicate that the major constituent of the gross working capital was inventory. The average inventory in paper industry was 39 per cent. Thus, it intends to have proper control over inventory to reap higher profitability and productivity.
- SPML fared well as the inventory ratios were high compared to International Paper APPML and thus the inventory management is quite appreciative in SPML. With regard to International Paper APPML though the ratios were less in the beginning years of the study but later raising trend was found as in the current year i.e. 2012-13 the ratio stood at 8.66. Thus it can be concluded that in both the companies' velocity of conversion of stock into sales is quite appealing and also admirable.
- In case of SPML, the inventory conversion period is 30 to 44 days in the study period. Whereas, in case of International Paper APPML, the inventory holding period is 42 to 129 days for the corresponding period. Purely based on this ratio the SPML excelled the International Paper APPML as far as inventory conversion into sales are concerned and thus its operating cycle was very short in terms of time/days involved.
- The International Paper APPML is far better in utilisation of working capital compared to that of SPML. Due to negative net working capital in three years viz., 2007-08, 2010-11 and 2011-12 in SPML the pathetic position was undergone by this company and was made to use long term funds to meet short term commitments.
- The co-efficient of correlation of inventory with profit in SPML is negative i.e., -0.7307. This is a moderately negative correlation, which means that there is a tendency for high inventory variable scores to go with low profit variable scores and vice versa. In the case of International Paper APPML, the value is -0.8424. This is a strong negative correlation, which means that high inventory variable scores go with low profit variable scores and vice versa.
- The calculated value of  $t=2.40$ , which is more compared to the critical value  $t=2.262$  at 5% level of significance. Hence, the null hypothesis is rejected. This means that there is significant correlation between inventory and profit of International Paper APPML.

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# CORPORATE SOCIAL RESPONSIBILITIES OF COMMERCIAL BANKS IN INDIA WITH SPECIAL EMPHASIS TO SBI

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## ABSTRACT

Corporate Social Responsibility is the mechanism through which the corporate organisations have executed their philanthropic vision for social welfare. Commercial banks in India also have their own corporate social responsibility towards society. Now banks in India lead to divert their available resources to do more social responsible activities, to attract more and more customers. Most of the commercial banks social responsible activities include supporting education, supporting healthcare, supporting sanitation, livelihood creation and assistance during natural calamities like floods/droughts etc. SBI is the largest bank in India with refers to its deposits, advances, profit, branches and employees etc. At the time of formation of SBI in 01.07.1955 it has only 477 branches with Rs 1 crore net profits, now it has 16333 branches all over India with Rs 13102 crore net profits during the FY 2014-2015 (SBI-various annual report). This figures show that SBI is more socially responsible than any other banks in India with refers to its rural branch expansion, financial inclusion programmes and financial literacy etc. The main objective of the paper is to examine the corporate social responsibilities of commercial banks in India with special emphasis to SBI.

## KEYWORDS

commercial banks, corporate social responsibility, rural branch expansion, social and community welfare, financial literacy.

## INTRODUCTION

Corporate Social Responsibility it is also called corporate conscience, corporate citizenship or responsible business; it is a corporate self-regulation policy of a company or an organization. The concept of Corporate Social Responsibility is not a new term; it is also used in all most all the major industries in the world. So every firm are socially responsible to societies in the form of economic, legal, ethical and discretionary (or philanthropic responsibilities). The main aim of Corporate Social Responsibility is to develop sustainable livelihoods to the society. So the Corporate Social Responsibility voluntary activities performed by the company to enhance economic, social and environment in a sustained manner.

The World Business Council for Sustainable Development in its publication 'Marketing Good Business Sense' by Lord Holme and Richard Watts used the following definition on Corporate Social Responsibility.

"Corporate Social Responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of the work force and their families as well as of the local community and society at large."

All most all industries in the world are now doing these socially responsible activities to improve their reach and accessibilities. So in this Corporate Social Responsibility environment the commercial banks in India are not an exceptional one.

## PYRAMID OF CORPORATE SOCIAL RESPONSIBILITY

The Pyramid of Corporate Social Responsibility is a new definition to Corporate Social Responsibility developed by Archie. B. Carroll, he is a Professor Emeritus in the Terry College of Business, University of Georgia. In this pyramid a company has four types of responsibilities to its society. The responsibilities are in the form of

1. Economic Responsibilities
2. Legal Responsibilities
3. Ethical Responsibilities
4. Philanthropic Responsibilities

### 1) ECONOMIC RESPONSIBILITIES

The first and important responsibility of a company to its society refers to running the business unit in a most economical manner.

### 2) LEGAL RESPONSIBILITIES

The second responsibility is to obey the laws implemented by the society as well as the concerned governing organizations.

### 3) ETHICAL RESPONSIBILITIES

The third responsibility is ethical responsibility. It is also relate to the legal responsibility of the organization. That is to do what is right even when business is not compelled to do so by law.

### 4) PHILANTHROPIC RESPONSIBILITY

The fourth responsibility is the philanthropic responsibility. It is also called discretionary responsibility. It is best described by the resources contributed by corporations towards social, educational, recreational and cultural purposes.

FIG: 1



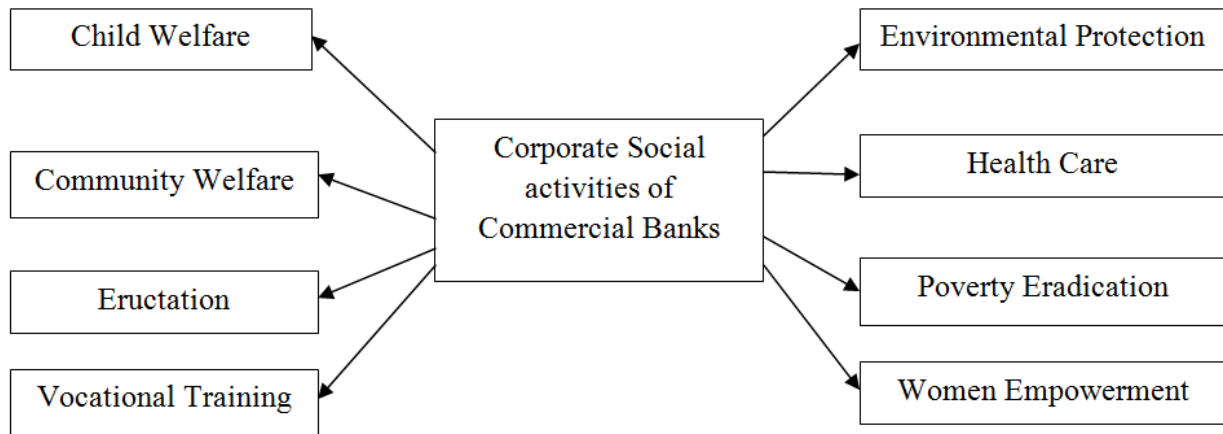
Source: Archie. B. Carroll (1996)



**COMMERCIAL BANKS AND CORPORATE SOCIAL RESPONSIBILITY**

Commercial banks are one of the major financial institutions in our financial system. In India commercial banking operations are divided into Scheduled Commercial Banks (included in the II<sup>nd</sup> Schedule of the Reserve Bank of India Act 1934) and non-Scheduled Commercial Banks. The Scheduled Commercial Banks consist of Private Sector, Public Sector and Foreign banks. At present India has 171 commercial banks are operating (As per Brach Banking Statistics RBI). India like a vast country the financial services are mostly accessed through commercial banks. Now all most all commercial banks in India are doing their own Corporate Social Responsibility activities to attract new customers. The major key area of Corporate Social Responsible activities undertaken by commercial banks are Child Welfare, Community Welfare, Education, Environmental Protection, Health Care, Poverty Eradication, Rural Development, Vocational Training, Women Empowerment, Protection to Girl Child and Employment Generation etc.

**FIG. 2: CORPORATE SOCIAL RESPONSIBLE ACTIVITIES OF COMMERCIAL BANKS**



**STATE BANK OF INDIA AND CORPORATE SOCIAL RESPONSIBILITIES**

Responsiveness to needs of the society and responsibility to meet those social needs is integrated in the ethics of State Bank of India. Corporate Social Responsibility is not an isolated practice or initiative of the bank but Corporate Social Responsibility included or come up with entire business activities. Banks Corporate Social Responsibility touches millions of people all over the country. The Corporate Social Responsibility activities are practiced by SBI since 1973, under the community service banking covering various social, environmental and welfare activities. During the financial year 2014-15 the bank spends about one percentage of the previous year’s net profit for Corporate Social Responsibility activities. The Corporate Social Responsibility budget of the State Bank of India during the FY 2015 was Rs: 109 crores. Against this budget the actual CSR spend about amounts to Rs: 115.80 crores during the financial year 2015.

Focus areas of SBI’s Corporate Social Responsible activities are

- Supporting Education
- Supporting Health care
- Supporting Sanitation
- Livelihood Creation
- Assistance during natural calamities like floods/ droughts etc.

In addition to this rural branch expansion activity, financial literacy programme and green banking initiatives are also considered in the nature of Corporate Social Responsibility activities.

**CATEGORY WISE CLASSIFICATION OF CSR OF SBI**

**TABLE: 1 SOURCE SBI ANNUAL REPORT 2014-15**

Category	Amounts(in crores)
Supporting Health Care	28.56
Supporting Education	4.20
Supporting Sanitation	13.64
Vocational Training/ Livelihood	24.24
Natural Calamities	4.00
Others	4.16
<b>Total</b>	<b>115.80</b>

**1. SUPPORTING EDUCATION**

Technology is an inevitable part of modern educational system. So the banks provided large number of computers to schools with underprivileged children. For this programme bank spend about Rs: 7.21 crores during the financial year 2015. The bank also supports the educational activities by way of providing furniture, scientific instruments and accessories and donation of large number of school buses/ vans for the benefit of physically or visually challenged children and children belonging to economically weaker sections of the society.

**2. SUPPORTING HEALTHCARE**

To provide quality healthcare services to those belonging to underprivileged and economically weaker sections of the society and also to respond to the needs of quick shifting of critical patients to hospitals, bank has donated 79 ambulances during the FY 2015. Major spending of the bank under supporting health care activities is assigned to Cancer detection and Prevention.

**3. SUPPORTING SANITATION**

In order to support Swachh Bharat Mission the bank supported reputed NGOs for the construction of toilets in needy schools especially girls’ schools under Swachh Vidyalaya Campaign. During the financial year 2014-15 the bank has donated about Rs: 13.64 crores for the construction of 435 toilets in 398 schools in nine districts in India.

**4. LIVELIHOOD CREATION**

In order to improve the skill of the rural youth the bank has provided an infrastructure support of Rs: 21 crores to 24 Rural Self Employment Training Institutes (RSETs). At present 117 RSETs are being operated by the bank, which is the highest number of RSETs established by any commercial banks in India.

**5. SBI YOUTH FOR INDIA**

SBI Youth for India is a unique Indian rural fellowship programme initiated, funded and managed by State bank of India in tie up with reputed nongovernment organizations in India.

**6. GREEN INITIATIVES**

State bank of India do number of activities to enhance the sustainability of the environment and cutting down on consumption of paper, Bank release its annual report only in the form of Electronic Annual Report to reduce paper consumption of the bank. Some of the important green initiatives undertaken by the bank are

- Wind based power projects
- Installed solar ATMs, introduced Green Channel Banking (paperless banking)
- Construction of green building, waste water treatment plants.
- Constructing recycling plants in SBI residential quarters.
- Over 54000 SBI Group ATM and Cash Deposit Machines (CDMS) ensure reduced consumption of paper at Branch.
- Committed to finance renewal energy projects.
- Tree plantation programme.
- Rain water harvesting projects etc.

**7. RURAL BRANCH EXPANSION**

As on March 2015 the branch network of SBI reached 16333, of which 66% of branches are concentrated in rural and semi-urban areas. At the time of formation of SBI it has only 477 branches and all most all branches of SBI are concentrated in urban areas and the bank only will have focused on class banking activities. After the nationalization of SBI bank will shifted their operations to class banking to mass banking activities. The main objective behind the nationalization of SBI on 01.07.1955 is to expand the banking operations all over India. So the rural branch expansion process of SBI reveal banks social commitment towards society.

**8. FINANCIAL LITERACY**

The main aim of imparting financial literacy and facilitating effective use of financial services by common man, SBI has set up 212 Financial Literacy Centers (FLCs). During the Year 2014-15, a total of 20966 financial literacy campaign programmes are conducted villages across India through Financial Literacy Centers (FLC's)

**NUMBER OF OUTDOOR TRAINING CONDUCTED BY SBI****TABLE 2: SOURCE SBI ANNUAL REPORT 2014-15**

Year	No. Training Conducted
2011-12	556
2012-13	2723
2013-14	7913
2014-15	28879

The above Corporate Social Responsible activities of SBI reveals the banks ethical relationship with society.

**CONCLUSION**

Now Corporate Social Responsibility is a part of any kind of business activities. In this rapidly changing environment society is a part and inevitable components of every organization, without social support from the part of the society an organization cannot survive in the industry. So banks like a financial institution cannot survive without a full support from the part of society. In order to gain the support from the public the commercial banks in India also develop there on strategies to Corporate Social Responsibility in the form of supporting education, supporting healthcare, supporting sanitation, livelihood creation and assistance during natural calamities like floods/droughts etc. So SBI has their own strategies to Corporate Social Responsibility for supporting the society. Normally SBI spend about 1% of its net profit for social responsible activities every year.

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**AUDIT PROCESS UNDER MGNREGA**

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**ABSTRACT**

*Audit is an effective and reliable instrument in the financial management to know what is going on, how it is going on and what is happening in Panchayati Raj Institutions in terms of its funds and function. Through audit, one is able to understand and observe the ultimate results and conclusions about the success or failure in terms of performance of panchayats. It enables to review and modify the policies and programmes and to remove the short coming and defects noticed in the functioning of the administrative unit and particularly of the system. An efficient and excellent auditing system acts as watchdog and also a well-wisher and adviser to the panchayats. The auditor is expected to follow the principles of corrective, reformative and preventive measures. Through the instrument of auditing one can ascertain that how much money has been spent, how it is spent, for what purpose it is spent, what is achieved and what should have been spent to achieve.*

**KEYWORDS**

Panchayati Raj, MGNREGA & audit.

**INTRODUCTION**

With the passage of time the flow of funds to panchayats has increased considerably and several developmental works and welfare activities are entrusted to panchayats. Therefore, it is essential to conduct an effective audit of panchayats. In view of this 73<sup>rd</sup> constitutional amendment has provided a mandated provision for auditing of accounts of panchayats. The mandated provision allows states to legislate on it and the state government has to prescribe the authority for auditing of accounts for panchayats. In the light of the above constitutional amendments act, the provision for conducting the annual accounts of panchayati raj institutions has been made under section 118 of Himachal Pradesh Panchayat Raj Act, 1994 and financial rules 2002 notified their under. Here an attempt has been made to know the process of audit under MGNREGA.

**OBLIGATIONS OF AUDITORS**

- It is not a primary function of audit to detect fraud. Owing to the inherent limitations of an audit, there is an unavoidable risk that some material misstatements of the financial statements will not be detected, even though the audit is properly planned and performed in accordance with auditing standards generally accepted. An audit does not guarantee that all material misstatements will be detected because of such factors as the use of judgment, the use of testing, the inherent limitations of internal control and the fact that much of the evidence available to the auditors is pervasive rather conducive in nature. For these reasons, the auditor is able to obtain only a reasonable assurance that material misstatements in the financial statements will be detected.
- In the event of auditors discovering anything which seems likely to involve the discovery of embezzlement and /or serious irregularities, the same may be communicated to Director Panchayati Raj.
- The observation regarding misappropriation embezzlements should not be raised in general manner without giving the full financial implications of the lapse. Because without this information the objection detracts from the effectiveness and fails to give a proper idea of the gravity the lapse on the part of the panchayat whose accounts are subject to audit. The auditor should not simply point out the detection of short realization/ misappropriation/ embezzlements but also suggest action to recover the amount from the defaulter concerned and taking suitable action against the defaulter according to law.
- The auditors should also verify and tick in the cashbook the credit of the embezzled amount, if any, recovered and credited by the office bearer concerned at fault.
- The audit should also scrutinize the record of service matters relating to contractual/ regular employees of the panchayat and also mention staff position in the audit report.<sup>1</sup>

**OBLIGATIONS OF PANCHAYAT SECRETARY**

It shall be the duty of the Panchayat Secretary concerned to place the record for the audit viz. Cashbook, ledger, financial statements, (i.e. income and expenditure, panchayat nidhi and trial balance) registers and other relevant accounts record for the audit along with the compliance report of the previous audit. In case he fails to put up the necessary accounts/information/record required by the auditors in the commencement of the audit of the panchayats the same will be communicated to the concerned authority immediately by the auditor for necessary action.

**DIFFERENT KINDS OF AUDIT****POST-AUDIT**

The accounts of all receipts and expenditure of Panchayats for the financial year shall be ordinarily audited by the auditors. The scope of post audit of panchayati raj institution may be grouped in to three general categories;

1. Financial accountability and legality the verification of accounting records and review of internal control concerning income and expenditures.
2. Performance efficiency-the examination of the efficiency and economy of PRIs and
3. Development work and other programmes and evaluation.

**SPECIAL AUDIT**

Special audit means an audit of accounts pertaining to a specified item or series of items, which requires thorough examination of the accounting of Panchayati Raj Institutions for the specific period with the prior approval of Director Panchayati Raj.

**RE-AUDIT**

If Director is not satisfied with the audit of the panchayat conducted by the auditor in that event re-audit of the panchayat will be conducted by another auditor (s).

**GENERAL PRINCIPLES OF AUDITORS**

- Take reasonable steps to obtain information relevant to the audit. Auditor should take into account information from the panchayats, any changes in legislation, and the results of previous audit work.
- Keep up to date with developments in professional matters.
- Look out for and take into account any unusual circumstances.
- Consider audit objectives and plan work to adhere to them.
- Discuss the main features of the audit with the panchayat.

- Ensure that conclusions are adequately supported by reliable evidence.

The evidence should be sufficient for an auditor to ascertain about the facts to reach conclusion.

- Maintain objectivity where appropriate.
- The approach should be straightforward, honest and sincere in his approach to his professional work. He must be fair and must not allow prejudice or bias to override his objectivity. He should maintain an impartial attitude.

### APPROACH TO AN AUDIT

For an intelligent efficient audit or inspection of accounts, it is necessary auditor should concentrate on the followings aspects.

- To make a critical review of the system of book keeping, accounting and internal control.
- To make such tests and enquiries as the auditors consider necessary to form an opinion as to the reliability of the records as a basis for the preparation of accounts.
- To make a critical review of the financial statements, in order to make a report thereupon, stating whether, in the opinion of the auditors, the accounts are presented and the items are described in such a way that they show true and fair view of the Panchayat.
- Auditor should have an intimate acquaintance with various Act, Codes, Statues and Manuals relating thereto, and he should also be conversant with the subsidiary rules and order issued from time to time. It should be ensured that rules are strictly enforced.
- Sometimes some irregular payment or some slight discrepancy is detected in the course of audit. The general tendency is to embody this in a formal objection statement, which in course of time is replied to, the requirements of audit department are complied within a particular case in question, and then the matter ends. But the case should not be wended up at this stage. Small circumstances like cited above may lead to the detection of large irregularities, or a defect in the system liable to lead to fraud, and their value and importance must be borne in mind.
- The Auditor should avoid such frivolous objections which complicate the procedure rather than to simplify it.
- The function of is not merely to criticize, but to assist, they will meet with little difficulty in this direction. They should assist the Panchayat with advice and show, by means of practical examples, how the account registers should be posted and thus endeavor to eliminate the possibility of mistake in procedure due to ignorance.
- Auditor should use courteous and simple language in drafting audit objections.
- Auditors should not merely audit the payment vouchers as a mechanical check seeing that a proper acquaintance is attached with the voucher in support of the payment and that the amount has been paid to the actual payee or that the rates etc., charged are arithmetically correct and are in accordance with the standard schedule of rates. In order to apply the higher functions of audit, it is necessary to see that the charges in the bill are not extravagant. In such cases, however, no hard and fast rules can be down as it demands the exercise of great intelligence and due care of the Auditor.
- No Auditor is competent to undertake any investigation, which is not strictly with the scope of audit. If anything important is noticed during the course of audit, it should specifically be brought to the notice of District Panchayat Officer/Director.
- Auditors should confine themselves to the facts, which have a bearing on the accounts. They should not touch finances and matters not falling strictly within the scope of audit.

### PRODUCTION OF RECORD FOR AUDIT

Auditors must ensure that all the registers, accounts and other record such as demand and collection register of tax, marriage register, ration card, rent register etc. required for audit are produce in audit. Written requisition for supply of information/record should be issued in the beginning of audit of the panchayat, the accounts of which are to be audited. Omission on the part of Panchayat to put up necessary accounts, if not asked for, sufficiently in advance of the conclusion of audit is not an adequate ground for failure to conduct the audit. If an auditor states that he asked for particular record, but that was not produced, he must be able to prove it from the requisitions.

If in any case, complete accounts records of an individual item or head of accounts are not made available and incompleteness of the records and information supplied are not sufficient to conduct the audit smoothly, the matter should be promptly brought to the notice of the DPO and in the event of failure on the part of Panchayat for production of record, the matter should be brought to the notice the DPO setting forth the full facts, for deciding if the audits should be suspended. The Auditors should not omit to exercise the prescribed checks if a part of the record is not available. He should exercise all the prescribed checks and specifically raise objection if any of the subsidiaries is not made available.<sup>2</sup>

### REVIEW OF PREVIOUS AUDIT REPORTS

The first duty of an Auditor should be to see that deficiencies pointed out in the previous audit report and objection statement have been remedied as promised in the annotated replies, either by the production of the required documents, by recovery of overpayments, or by adoption of the procedure suggested. The further correspondence, if any, on the replies should also be pursued, with a view to ensuring how the several matters referred to were eventually settled. In all cases where the promised action has not been taken, attention should at once be drawn to the matter, and in cases of recoveries or missing documents, the Panchayat should be given every opportunity of repairing its previous omissions, before the completion of audit, if, however, the promised recoveries have not been effected, or the required documents etc. are not produced till the conclusion of audit, the fact should be clearly mentioned the audit report with additional remarks as are called for. Auditors should particularly see that in case of serious irregularities as pointed in the previous audit, the actions should have been taken by the Panchayat. If no action or partial has been taken and the results are unsatisfactory, he should report the matter separately to the Director Panchayati Raj through District Panchayat Officer. The job of disposal of old outstanding audit objections should not be left till the current audit is over. It is not sufficient to see that an annotated copy has been prepared and submitted. It has also to be verified that it was submitted within the prescribed period failing which the auditors should clearly state in part II of their draft audit reports, the date on which the audit report was received in the office of Panchayat and the date on which the copy of annotated replies was forwarded to the Director/District Panchayat Officer. Where the annotated copy is not submitted even till the commencement or conclusion of the next audit, it is not sufficient merely to point out this omission in part II of the audit report. The lapse on the part of Panchayat should specifically be brought to the notice of the Director/District Panchayat Officer.

Auditor should see that if an objection in its original form has been met, fresh observation on the system relating thereto, record or document, if any, should appear in part-III of the current audit report. An old objection should under circumstances be kept alive if it has met in its original form. At the commencement of the audit, auditor should issue a requisition to the concerned whose accounts are to be audited requesting him to arrange for the production of record which was not produced in the last audit and the details of which are noted in the last audit report. The record should be checked with respect to the requirements of audit and defects, if any, should be incorporated in the current audit report.

All objections which outstanding for over five years should be examined with particular care if the auditor feels that the he is not component to withdraw them after verifying the concerned record, they should refer all such objections along with replies of the Panchayat to the Director/District Panchayat Officer for consideration. Such objection which stands to be settled be recommended for dropping them to the concerned prescribed authority.

### AUDIT UNDER THE MGNREGA

The audit of schemes under MGNREGA/BRGF other schemes will be done either by the chartered accountant appointed by the State Government. The accountant general will also conduct the audit of accounts of MGNREGA in addition to the audit conducted the chartered accountant. The audit agency of the department is to conduct the audit of all receipt and expenditure as per the provision of full 79 of H.P. Panchayati Raj Financial Rule 2002.

**JOB CARD APPLICATION REGISTER**

In this register the name of the applicant, date of receipt of application and the detail of job card issued are provided. It also contained reason in case the job card is not issued.

**JOB CARD REGISTERED**

In this register the detail or the members of the households who have been issued job cards are given.

**MUSTER ROLL RECEIPT REGISTER**

This register is to be maintained by the Gram Panchayat which received the muster roll from the programme officer.

**WORK REGISTER**

This register contains details of the work such as number and date of sanction order, completion date, expenditure, incurred and date of social audit. This register will be maintained by the gram panchayat and other implementing agencies.

**ASSETS REGISTER**

This register contains details of assets, its cost, location current status, benefits dryable and the details of works which have been taken on the assets.

**COMPLAINT REGISTER**

This register contains the date of receipt of the complaint, the details of complaint, the action taken on the complaint and the date of final disposal.

**MONTHLY ALLOTMENT AND UTILIZATION CERTIFICATE WATCH REGISTER**

This register contains site expenditure balance available with the implementing agency and the details regarding submission and pendency of utilization certificate.

**CASH BOOK**

Entries of receipt and expenditures will be checked with bank passbooks, receipt books, vouchers and muster rolls. Entries of receipt and expenditure will be checked with bank pass books receipt books, vouchers and muster rolls etc.

**CHECK LIST FOR AUDIT OF WORK UNDER MGNREGA**

- Whether administrative/technical section has been obtained.
- Whether payment of wages have been made through banks/post offices.
- Whether unemployment allowance has been provided
- The social audit undertaken by Gram Sabha /Ward Sabha.
- It is also be seen by the auditor that under the scheme work cannot be executed by contractor and through labour displacing machine.<sup>3</sup>

**E-GOVERNANCE IN RURAL AREAS**

Ministry of Rural Development, Government of India has developed a number of applications to automate the processes of information generation and strengthening E-governance. Efforts are also made to develop national level ICT solutions for some important activities like the land records computerization, MIS for Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), online monitoring of schemes of the Ministry, Rural Bazaar, Rural Soft, Below Poverty Line (BPL) census 2002 etc.

In India, Poverty alleviation programmes have been important rudiments of public policy to provide unskilled workers with short-term employment on public works. They provide income transfers to rural households during periods when they undergo on account of lack of opportunities of employment. In areas with high unemployment rates and under-employment, from these programmes transfer benefits prevent poverty from worsening, especially during lean seasons. Durable assets that these programmes generate have the potential to generate second-round employment benefits as requisite infrastructure is developed. India has a long history and knowledge in implementing wage employment programmes implemented by the state governments with the assistance of Central Government. These schemes are self-targeting, and the objective is to provide enhanced livelihood security, particularly to those dependent on casual manual labour. Therefore, audit process under these programmes should be well managed and fare.

**CONCLUSION**

It can be concluded that audit is an effective and reliable instrument in the financial management to know what is going on, how it is going on and what is happening in Panchayati Raj Institutions in terms of its funds and function. Through audit, one is able to understand and observe the ultimate results and conclusions about the success or failure in terms of performance of panchayats. It enables to review and modify the policies and programmes and to remove the short coming and defects noticed in the functioning of the administrative unit and particularly of the system. An efficient and excellent auditing system acts as watchdog and also a well wisher and adviser to the panchayats. The auditor is expected to follow the principles of corrective, reformatory and preventive measures. Through the instrument of auditing one can ascertain that how much money has been spent, how it is spent, for what purpose it is spent, what is achieved and what should have been spent to achieve.

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**COMPETITIVE CHALLENGE OF CASHEW INDUSTRY IN ANDHRA PRADESH  
(WITH REFERENCE TO PRAKASAM, EAST & WEST GODAVARI DISTRICTS)**

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**ABSTRACT**

*This article made an attempt to review the Competitive Challenge in Cashew industry and the problems encountered by the industry in Prakasam, East & West Godavari Districts of Andhra Pradesh. Based on the observations of the problems, appropriate suggestions are also offered to tone up the performance of the Cashew industry in Andhra Pradesh in general and Prakasam & East & West Godavari Districts in particular. Cashew is often regarded as 'poor man's crop and rich man's food' and is an important cash crop and highly valued nut in the global market. The area under cashew cultivation is the highest in India. However, it is not so in the case of productivity, processing and quality. In reality, the Indian cashew industry has a high untapped potential to support the livelihood of cashew farmers, provide numerous employment opportunities and improve returns through global trade. This Districts Cashew Industry Process is Second Largest position in India. The present work projects the need for Competitive challenge & Problems to be Solve make in the development of the industry, so as to find a substantial improvement in the growth of the Indian cashew industry.*

**KEYWORDS**

Indian cashew industry, cash crop, global market, global trade, cultivation, productivity.

**1. HISTORY OF CASHEW INDUSTRY**

Cash in cashew seems to reveal that cashews are commercially very valuable processed nuts in the world. The English name cashew is derived from the Portuguese name for the fruit of a cashew plantation, Kaju. In India also, cashew is commonly known as kaju, and was brought by the Portuguese from Brazil during the 16th century. It was first planted in Goa, from where it spread to other parts of the country, and thereafter across to Southeast Asia, and even Africa.

Four centuries ago, when the Portuguese landed on the Indian soil, they brought with them the priceless tree nut, cashew. Cashew came, conquered, and took deep roots across the entire coastal region of India. It found the Indian soil more congenial for its growth than even its homeland—Brazil. Not surprisingly, it soon gained popularity as a cash crop in many parts of the country. But the large-scale commercial cultivation of cashew commenced in India only during the early 1960s. Today, India is one of the largest producers and processors of cashew in the world, and is still seeking new pastures for cultivation in the country. Cashew is presently grown in Kerala, Karnataka, Goa, and Maharashtra along the west coast, and in Tamil Nadu, Andhra Pradesh, Orissa, and West Bengal along the east coast. The products of cashew fruit are cashew apple and nuts/kernels. In Brazil, cashew apple is used in the preparation of jams, as also for the manufacture of soft and alcoholic drinks. In India, cashew apple is extensively used only in Goa to prepare cashew liquor called *feni*.

India is also the second largest exporter of shelled cashew (kernels) in the world, and follows Vietnam. India enjoys comparative cost advantage in not only production of cashew fruit, due mainly to long coastal line of the country that favors cashew cultivation, with apt soil and climatic conditions, but, more importantly, also processing of raw cashews, owing to abundant availability of cheap and skilled labour. To be sure, India may well be regarded as the global leader in cashew processing mainly because of the dexterity of its labour. For, when processed manually, as in India, broken nuts hardly account for 20% of the country's output of processed kernels.

**2. LOCATION OF CASHEW INDUSTRY**

The cashew processing industry in India gathered momentum through the last over half a century. In the early years, the industry was located mostly in Kerala, which had then over 50% of the cashew plantations in the country. Though the land ceiling legislation restricted the expansion of cashew sowing in Kerala, the demand for cashew nuts grew. Therefore, over the years, cashew cultivation extended to the other coastal states of the country, more particularly in the Prakasam, East & West Godavari districts of Andrapradesh. Several other states too took to cashew cultivation and processing. High Value Added Tax (VAT) of 12.5% in Kerala also fuelled the growth of cashew industry in other states, where such tax was around 2-4% only. No wonder, the number of cashew processing units in the country



increased rapidly from 170 in 1959 to as many as 3,650 in 2005–06, the last year for which the official government data are available. The total capacity of processing units in India was then 15 lakh tons in raw nuts, and the capacity utilization was 75%. Maharashtra alone then had 2,200 units, followed by Kerala 432 units, and Tamil Nadu 417 units. Nearly 84% of the processing units in Andrapradesh were in the small-scale cottage sector. Probably, at present, the country may have around 4,000 cashew processing units, with an installed capacity of about 18 lakh Tonnes. Assuming 75% capacity utilization, as in 2005–06, it appears that around 14 lakh tons of cashews in shell are presently processed in the country. Half of the processing capacity is utilized through domestic supplies, while for the rest the industry depends on imports.

### 3. INDIAN CASHEW INDUSTRY

India was the first country to enter the global cashew trade. The country processed about 1.14 million tons of cashew in 3650 cashew processing mills scattered around the country. The number of cashew processing mills shows an increase from 170 units in 1959 to over 3500 in 2008. The industry provides employment to around 0.5 million people and about 95 % of them are women (Anon, 2009). Forty-six per cent of cashew processing is in the organized sector while 54 % is in the unorganized sector. Annual demand on the Indian cashew processing industry is in the order of 1.5 million tons, only a half of which is met by the existing production. To meet the rising demand, India imports raw in-shell cashew from Congo, Tanzania, Indonesia and Thailand (Zheng, 2012). India exports processed nuts to USA, UK, Japan, Netherlands, Australia, Canada and Germany (Directorate-General of Commercial Intelligence and Statistics, 2011). Cashew is of global value and Table 1 shows a summary of the various uses of cashew products and by-products.

### 4. INDIA AND THE WORLD CASHEW MARKET

India is among the top producers of cashew nuts, next to Vietnam, Nigeria and Ivory Coast. These four countries contribute to 70 % of the global cashew production. The area under the crop is 4.71 million ha worldwide with a production of 2.75 million tones annually. In 2010, India produced 0.61 million tones of in-shell nuts from an area of 0.92 million ha (NHB, 2010). This corresponds to 17.10 % of the global cashew production from 19.6 % of the global area under cashew cultivation (FAOSTAT, 2010). Major contributions within the country are from Maharashtra (32.3 %), Andhra Pradesh (16.15 %), Orissa (13.7 %), Kerala (10.76 %) and Tamil Nadu (9.8 %), indicating maximum growth of the crop in the peninsular region (Personal communication, 2010). In the context of imports, India is the major importer, particularly from various countries of the African sub-continent.

### 5. CHALLENGES OF CASHEW INDUSTRY

Cashew nut processing demands high labour and fuel requirements. Though many technologies have been developed, most small and medium processing units follow traditional processing methods. This could be because of problems with technology-transfers, insufficient capital investments, shortage of resources and mere negligence. There have also been concerns about the need to address the safety and healthy working standard requirements of labors engaged in cashew processing. The following sections explain the problems faced in the Indian cashew processing industry.

#### 5.1 SUPPLY-DEMAND IMBALANCE

Though India is the leading producer of raw cashew nuts, the country continues to rely on various forms of the commodity from the Middle-East to meet the growing demands. India (58 %), Vietnam (25 %) and Brazil (15 %) dominate the global processed cashew markets (Kyle, 2009). From Table 1, it is evident that there is a 10 fold increase in market value when raw cashew nut is processed to segregate the kernel. Also, subsequently processed product like spiced cashew would fetch about Rs. 1300 per kg, indicating a 17 to 18 % increase in value as compared to raw cashew nut. Apart from the edible portion obtained, Table 1 explains that the processing by product CNSL has a wide scope for several industrial applications (Paramashivappa *et al.*, 2001). Nut butter production is a relatively simpler, yet less performed processed in India.

#### 5.2 INFERIOR PRODUCT QUALITY

The work atmosphere of many small-scale cashew processing units is deplorable and unhygienic, leading to inferior quality of cashew nuts, with high levels of contamination. For example, the soiling operation commonly adopted in most rural units prior to shelling (Fig 2), so as to remove the oil adhering to the surface is known to be a potent source for direct contamination of the edible product. High temperatures used to loosen the outer shell can have adverse effects on heat sensitive bioactive compounds in the kernel. Further, storage of high moisture cashew kernels under adverse conditions would result in a aflatoxin contamination, a rising concern in food safety. Among recent interventions that could possibly be implemented in India, the "Flores" hand-cracking method developed in Indonesia allows the cashew nut kernels to be separated from the shell by means of a manual cracking device. The cashews produced after a 3 hours mild temperature drying at about 45°C has the testa undamaged, with minimal emergence of CNSL, which could come in contact with the kernel and lower its value.

#### 5.3 ENERGY LOSSES

Most cashew processing units continue to involve non-standardized unit operations that result in huge losses of fuel and energy. Steaming or roasting of raw cashew nuts and mechanical drying of kernels are classical examples. These high temperature treatments are indispensable to break the shell and remove the testa. Temperatures ranging from 75 to 200 °C are commonly used in such processes (Trox *et al.*, 2010). During steaming, water molecules penetrate into the shell structure and result in loosening of cell matrix components. Hence, pressure, temperature and time of exposure are critical process parameters. Cutting and shelling operations involve heavy consumptions of energy. This is because of the peculiar kidney-shaped kernel, the presence of a tough outer shell, the reactive CNSL and the brittleness of the kernel (Jain and Kumar, 1997, as cited by Ogunsina and Bamgboye, 2013). There is a scope for an overall energy savings of up to 30–48 % (Mohod *et al.*, 2010a). Mohod *et al.* (2010a) also proposed, there is scope for utilization of renewable energy sources such as solar energy and biomass gasification in this sector. Use of modern equipments demand huge investment costs. This is because of the use of conventional, inefficient devices. Fuel used in roasting is in most cases, high-moisture agricultural bio-mass. This may involve the direct combustion of cashew nut shells in furnace or semi-open pits and is characterized by low fuel calorific value and subsequent thermal energy losses (Bhoi *et al.*, 2006).

#### 5.4 ENVIRONMENTAL ISSUES

In India, many state governments have banned drum roasting of cashew nuts because of its contribution to air pollution. Its economical affordability is at the price of the ill-effects to the environment. Eco-friendly steam cooking is an alternative. A study claims that the combined use of steam cooking and hand-cum-pedal operated sheller is more cost-effective than other processing systems (Line, 2003). However, the method is not adopted in most units. Also, the thick acid fume generated during the roasting process pollutes the environment (Azam-Ali and Judge, 2001). With considerations to environmental protection, cashew processing units need to strictly adhere to environmental protection standards which have been approved by the Peer and Core Committee of Central Pollution Control Board (Mohod *et al.*, 2010b).

#### 5.5 HEALTH AND SAFETY ISSUES:

In most cashew processing units, workers face several health problems. Shelling is considered to be the most hazardous section in the process line. Workers squat in rows on congested and unhygienic floors littered with burned nutshells and dust (Fig 4). Female workers are commonly adopted for this purpose. In India, over 82 % are manual-processing units compared with 40 % in Vietnam and 25 % in Brazil. While breaking the shells CNSL oozes out. This caustic oil can cause severe irritation to fingertips and often results in skin burns. To avoid this, workers apply a Layer of oil (commonly coconut oil) and smear ash over skin parts (Fig 5). Very few units Provide hand-gloves for workers. There have also been instances when sharp broken pieces strike the worker's eye during shelling, often resulting in permanent vision problems. Almost 90 % of workers suffer health hazards while employed in such operations.

Several other medical issues such as allergic contact dermatitis, respiratory diseases, cancer, reproductive disorders, lower back pain, stiff neck, pain in the heels, strain on eye muscles, finger pain, numbness and even bleeding from finger nails were reported by those workers (Kannan, 1978). The condition remains same even after 25 years of publication of the work just cited. Medical findings explain that prolonged squatting leads to degenerative tissue changes and functional defects of the musculoskeletal system. In the peeling and grading section also, women workers suffer similar issues in addition to muscular discomfort and cramps. Such working conditions also make them prone to asthma and other respiratory disorders.

**5.6 WORKING CAPITAL**

Finance is the life blood to any industry. Financial institutions are advancing fixed capital to Cashew Industry in these districts. But capital, rapid technological changes are necessitating the replacement of obsolete machinery by up to date high cost sophisticated machinery. The financial Institutions are not enthusiastic to provide these loans for modernization and are charging high rates of interest. There is need for liberalized provision of replacement loans at cheaper rates of interest. Commercial banks are responsible for advancing working capital requirements for Processing Units in the districts. Processing units have to hypothecate their inventories to get working capital loans. 65 per cent of the value of hypothecated inventories is taken as the limit for providing working capital advancement, which is not sufficient. Many units have become sick due to lack of required Working Capital and support of Financial Institutions. Unless the Government comes in a big way to help the industry, the industry may not survive collapse. So the Government should come to help in a big way. The contiguous areas of East, West & Prakasam account for a major share of India's export of processed Cashew Exports. So, the Government of India should take necessary steps to provide infra-structural facilities. Therefore, to bale out processing units from working capital constraints, it is necessary to raise the working capital borrowing limits.

**5.7 SHORTAGE OF RAW MATERIALS**

The capacity utilization and prolongation of the period of operation depend upon the size of the crop market. At present, the business of Cashew Industry is linked to the production of the raw cashew materials. Now a days Mostly we are especially cashew industry is depends from foreign exporters. Therefore, market expansion, both internal and external is imperative for improving the profitability of the units. Processing units being small cannot undertake by themselves, the expensive advertisement activities. Therefore, a marketing organization financed by processing units should be created for the purpose. Government can take necessary actions and try to develop crop production in our own state only, at the same time they must concentrate on qualitative production. Due to the seasonal effect imbalances of crop we are not in a position to produce qualitative Production and at the same time large quantum of production.

**5.8 MARKETS**

Serious efforts should be made to expand external market as processing industry is rapidly increasing throughout the country. Therefore, meticulous care should be taken for ensuring scientific production, packing, boiling and cooling. In order to minimize costs, it is reported that some processing units are not observing scientific methods of packing and cooling. The processing units shall be forced to observe stipulated methods of production, packaging and boiling and cooling as per international standard.

**5.9 TECHNOLOGY**

Success of any industrial activity depends upon technical efficiency and ethical standards followed in the production process. It is high time for the producers to realize that it is the quality of the product, which attracts consumers that ultimately determine the profitability and prosperity of the industry. Good government policies and honest and efficient administration are essential prerequisites for proper and efficient functioning of any economic system. The existence of honest administration is essential for rapid industrial development in a country. Unnecessary official interference may stall the prospects of industry. The government should positively come forward to lend a helping hand to the industrial entrepreneurs.

**6. CONCLUSION**

As the demand of cashew nut grows, the area under cashew crops is also increasing. But this trend is constrained. Research and development presently -focuses on implementing good cultivation practices and developing high yielding varieties, pest resistant crops and other technologies to improve the productivity and quality of cashew. In order to balance the gap in supply-demand, India imports various forms of cashew. Cashew industry in the Region of Districts of Andhra Pradesh is a seasonal industry; the Cashew production will be available for few Months only in a year. Cashew Processors' effort to run the Industry throughout the year with the limited stock. India needs to take necessary actions to improve productivity, cultivation practices and food safety standards in the cashew processing sector. Limited data is available on the processing efficiency of different unit operations by manual and mechanical means in cashew processing. There is also a need for an informative survey of other problems in Indian cashew units, so as to re-focus research and development. Such measures will ensure greater value of Indian cashew at the global markets.

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## REGULATION OF E-COMMERCE IN INDIA

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## ABSTRACT

The concerned research paper deals with the legal world conflicts and the consequent repercussions which are born out the dawn of e-commerce in today's age. The idea of conducting businesses online seems to be very economical and very convenient, but very few know the status of its legality or the legal aspects which are tied with a process like this, in which there is no 'personal touch' involved between the parties. In this era where internet and online shopping, transaction have become a necessity to us, it is very vital for a layman to know what a simple click on 'I Agree' can do. The researcher, via the medium of this paper hopes to inculcate the basics of legality in India and legal repercussion of e-commerce, to the readers.

## KEYWORDS

Indian contract act, Indian penal code, Indian evidence act, e-commerce, e-signatures, commerce.

## 1. INTRODUCTION

Humans are channeled in a way, which keeps them involved in some activity or the other. These activities are undertaken by them with certain motives, and amongst such motives, wealth creation is one of them, this can also be categorised into economic activities. These economic activities are catered by commerce. Commerce, conveys the goods and services to the end stage i.e. consumption from the stage of manufacturing or foundation.<sup>4</sup>

*"Commercial occupations deal with the buying and selling of goods, the exchange of commodities and the distribution of the finished products."*

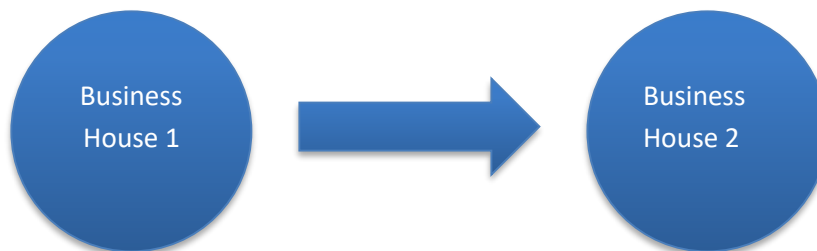
- Evelyn Thomas

In the 21<sup>st</sup> century the ambit of commerce has expanded on to include electronic commerce as well, popularly known as e-commerce. E-commerce in this day and age has become more of a necessity than a boon. Today, almost every aspect of our lives involve e-commerce, be it for purchasing expensive jewelry to purchasing our daily grocery, many portals like the Caretlane and grofers facilitate us with these privileges. E-commerce was bestowed on the Indian market post 2000<sup>5</sup>. With the increase in the use of information technology, surprisingly India has come up to becoming one of the prime clients of e-commerce from both the ends, the business providers as well as the costumers.

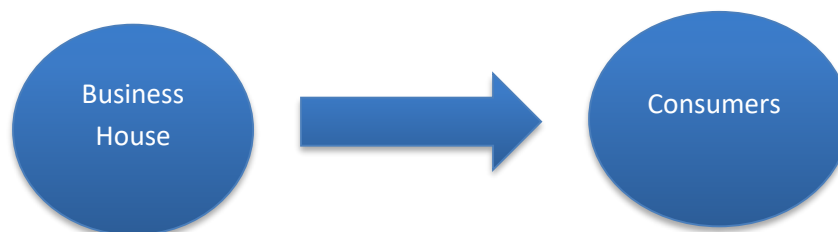
E-commerce is a method of conducting business on the virtual platform i.e. the internet, then by way of using the conventional methods of doing business which involves the tangible catalysts. E-commerce, now is not just restricted to the use of computers it has expanded itself to 'm-commerce' as well, which includes the use of mobile phones.<sup>6</sup> The ambit of e-commerce has now widened itself to include not just the buying and selling but also, steps of customer welfare i.e. delivery, payment facilitation, refund, and other such services.

The basic models of conventional business can be seen in e-commerce as well, like;

- **B2B Commerce:** The supply chain of a B2B commerce does not include consumers they involve just business houses on both the ends. There is scope of many models like, distribution of services, procurement services, brokering, exchange of information, company websites which target other companies and their employees. Alibaba, Carolina Biological, MSC Industries are some of the examples of B2B e-commerce.



- **B2C Commerce:** This model of business involves transaction between a business house and the end user, the consumer. This model eliminates the involvement of intermediaries. Online business houses like Amzon.com can serve as good example for B2C e-commerce.



<sup>4</sup> Commerce Definition | Investopedia. (2003). Retrieved August 17, 2016, from <http://www.investopedia.com/terms/c/commerce.asp>

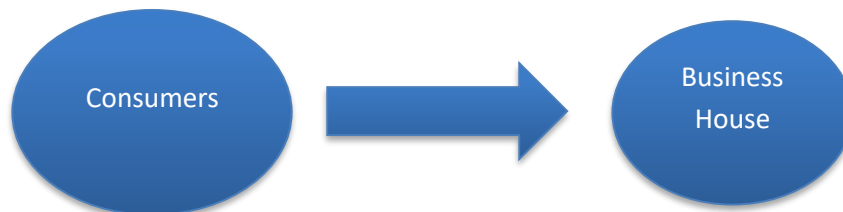
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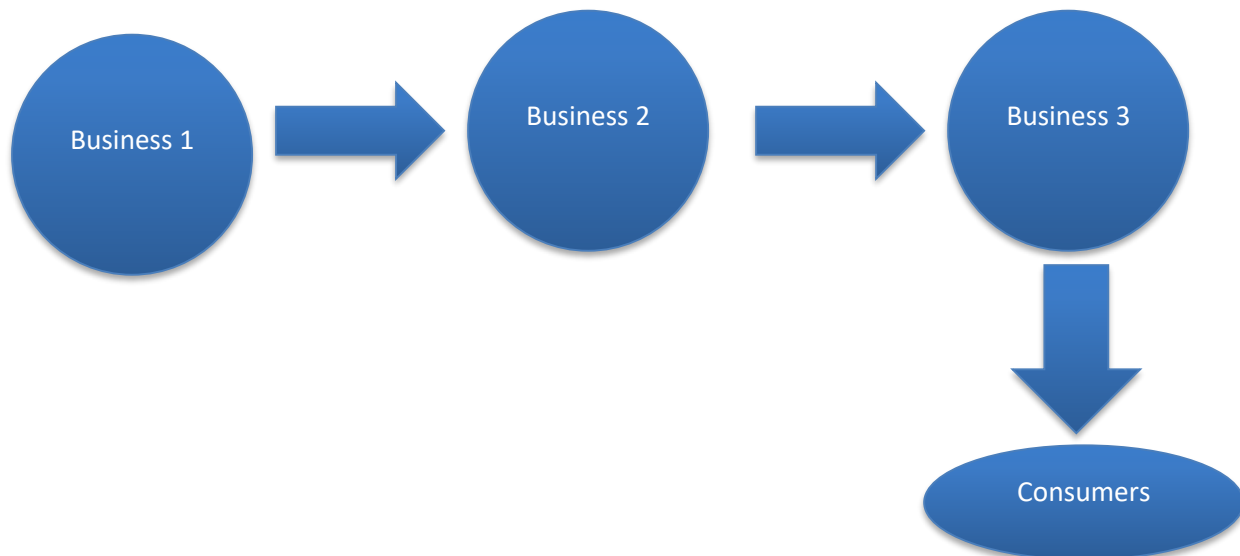
- C2C Commerce:** This is a business model which lets two end users to transact with each other. This means that the two parties involved at both ends are consumers. They interact with each other directly. E-commerce involves electronic facilitation of transaction between two individuals, often buoyed by a third party. Marketplaces like Tokopedia and Zaplye are two emerging examples of C2C e-commerce.



- C2B Commerce:** This model involves transaction from the consumers to the business, this is a reverse model of B2C commerce. In this type of commerce the consumers provide the business houses with product development ideas or reviews which the business houses internally use for advertisement purposes. Google AdSense is one of the most intriguing examples of C2B e-commerce.



- B2B2C Commerce:** This is a model which is an extension of the traditional B2C commerce model, just that it involves the existence of intermediaries to assist the first business transact with the end consumer. This model is a better option for the concept of virtual business. Flipkart is one such example which provides variety of items from different industries like, books, fashion, electronics etc. on a single platform, Jabong is also one such example for B2B2C e-commerce.



For a layman and for just a surfaced knowledge of e-commerce, the concept comes out free from complications, economical and a very efficient method of conducting business but this concept of e-commerce invites for consideration of a lot of legal factors, from contractual liability, criminal liability, tax liability and also evidential factors of e-contracts. These legal factors were brought in notice to the market with the famous *Napster Case*<sup>7</sup>, wherein, the court held the Napster Co. to be vicariously liable for distributing copies of copyrighted music files as this activity fell outside the ambit of fair use. From this case, there have been a number of cases wherein the online business houses were brought in front of the house of law for several infringements.

### 1.1 INDIAN SCENARIO

India has accepted this platform with open hands, especially with all the legislative changes and amendments. The MCA-21 programme which was launched by the Ministry of Corporate Affairs (MCA) played a major role in revolutionising digital signature usage by making E-filing mandatory for majority of the documents required to be filed under the parent act, The Companies Act. This change also extended to the Limited Liability Partnership Act 2008. The Indian Tax department also came forward to accept the new era by providing for compulsory filing of return in an electronic mode. Now, also the registration under the Foreign Contribution Regulation Act (FCRA) has to be filed electronically.

Also, with an 100% Foreign Direct Investment allotment in the market to the e-commerce format is a big step. Even though the guidelines issued by the Department of Industrial Policy and Promotion (DIPP) on FDI for e-commerce, foreign direct investment has not been permitted in inventory based models of e-commerce, where the business houses exercise ownership over the inventory. The acknowledgment for the necessity of regulating e-commerce by Raghuram Rajan, the now RBI Governor has also eliminated some light on the right path for e-commerce regulations.

Looking at the wide ambit of electronic documents, signatures, contracts etc. in today's market, the paper will deal with some important legal issues relating to e-commerce in India and a comparison with various legislations of other countries (U.S.A, U.K, Australia, Singapore, Canada). The legal issues will be dealt with under the following laws;

- Indian Contract Act, 1872
- Indian Evidence Act, 1872
- Information Technology Act, 2000 and
- Indian Penal Code, 1860

<sup>7</sup> A&M Records, Inc. v. Napster, Inc, 239 F. 3d 1004 (9TH CIR. 2001).

## 2. LEGAL ASPECT

### 2.1 E- CONTRACTS AND INDIAN CONTRACT ACT, 1872

The Indian Contract Act, 1872 governs all the issues relating to contracts and execution of contracts in the territory of India. The respective legislation provides for a framework for contract execution, rights and liabilities of the parties, it codifies the effect of breach of the terms of a contract and most importantly lays down 'what' constitutes a contract and what are the requirements for a valid contract.

The essentials of a valid contract are:

- Capacity to contract
- Offer and Acceptance
- Lawful Consideration
- Free Consent
- Lawful Object

*An agreement enforceable by law is a contract.*<sup>8</sup> Since the Indian Contract Act, provides for a very unambiguous definition of a contract which is written or oral by way of Sec 2, it does not specifically deal with e- contracts. Therefore, the definition of e- contract is a mere inference from Sec 10 of the Indian Contract Act. This inference was made due to the major increase in the number of businesses going on to the virtual world. The section reads as follows,

*"All agreements are contracts if they are made by the free consent of parties competent to contract, for a lawful consideration and with a lawful object, and are not hereby expressly declared to be void. Nothing herein contained shall affect any law in force in India, and not hereby expressly repealed, by which any contract is required to be made in writing or in the presence of witnesses, or any law relating to the registration of documents."*<sup>9</sup>

Therefore, with the light of the above section and e- contract can be validated as a contract in a conventional sense, if there is an offer made and acceptance<sup>10</sup> of the same offer in the same sense is conveyed. This can be done by way of usage of emails, online forms and online agreements. There is a lawful consideration<sup>11</sup> for the same. There is competency to contract, the consent given from the accepting party is a free consent and is not coerced or colored with undue influence. If all the essentials as mentioned under the Contract Act are satisfied by an agreement made online then it can be equated to a valid contract as defined under Sec 2(h) of the *Indian Contract Act, 1872*.

There are three types of e- contracts, namely;

- 1) Clickwrap Agreements
- 2) Shrinkwrap Agreements, and
- 3) Browsewrap Agreements

Clickwrap agreements among the three are the most widely used methods of e- contracts. In this type of agreements, the user is required to affirmatively click a box, 'I Agree' on the website acknowledging his agreement to the terms and conditions mentioned in the contract. Here the parties enter into a contract at just the click of a button.<sup>12</sup> These kind of agreements have been upheld by the courts many a times, in the famous case of *Feldman v. Google, Inc.*,<sup>13</sup> the courts held that the plaintiff [Feldman] had reasonable notice of the terms and manifested assent to the agreement. They used the reasoning from *Baer v. Chase, 2006* and said:

*"...Contracts are 'express' when the parties state their terms and 'implied' when the parties do not state their terms. The distinction is based not on the contracts' legal effect but on the way the parties manifest their mutual assent. [...] To determine whether a clickwrap agreement is enforceable, courts presented with the issue apply traditional principles of contract law and focus on whether the plaintiffs had reasonable notice of and manifested assent to the clickwrap agreement."*

A shrinkwrap agreement allows the party involved in a contract to read the terms and conditions only after they open a box within which the product is packed. This is not directly associated to e- commerce. The validity of a shrinkwrap agreement was held in 1996 in the landmark case of *Pro CD v. Zeidenberg*<sup>14</sup>, the U.S courts held the validity of a shrinkwrap license that is included with computer software.

Browsewrap agreements are the once which become binding on the party by the mere use or visit of the website. These are often connected to the webpage by a hyperlink to another webpage wherein, the terms and conditions of the respective contract are mentioned. These type of contract usually do not contain any affirmative manifestation of consent by the contracting party as the terms and conditions to the contract are not expressly mentioned to the party, they have to actively click on the hyperlink to get the knowledge of these terms and conditions. These types of agreements are often not recognised by the courts, as it appears that these agreement do not fulfil the essentials of a valid contract, this was laid down in *Nguyen v Barnes & Noble, Inc.*<sup>15</sup>. The court opined that, *"...when a website or a party makes the terms and conditions available by way of a conspicuous hyperlink on every page of the website but otherwise does not provide any notice to the users nor prompts them to take any affirmative action to demonstrate assent, even close proximity of the hyperlink to relevant buttons user must click on- without more- was insufficient to give rise to constructive notice."*

After discussing the types of e- contracts and their validity in the legal world, let's now delve into the aspect of why and how an e-contract can be held valid with help of legal provisions and their interpretations.

As stated earlier an e- contract can be equated with a conventional contract by way of Sec 10 of the Indian Contract Act, provided it adheres to all the requirements of a valid contract.

A contract has to be mutually assented to for it become a valid contract, even though The Indian Contract does not require all contracts to be physically written and signed by the promisee<sup>16</sup> but under some statutes signature by the contracting parties are mandatory, like the Indian Copyright Act, 1957, requires signatures by the assignee for the assignment of copyrights.<sup>17</sup> For such purposes on the e- commerce platform the Information Technology Act, 2000 equates electronic signatures to handwritten signatures<sup>18</sup>.

For the purpose of validating such contracts it is important to go in depth to understand e- signatures.

For the reason of commerce going online and the revolution in the technology field, the legislature felt the necessity of introducing a legislation which regularised the IT sectors and its affiliation. This legislation deals with and works as a catalyst to the validity of e- contracts. Section 3 of the act deals with authentication of electronic records and section 4 goes on to provide such records legal validity in the country by way of the use of digital signatures<sup>19</sup>.

In the Indian Market, digital signatures were introduced as a hybrid concept of electronic signature which is taken from the UNCITRAL Model Law on Electronic Signatures, 2001. Electronic signature is a parent concept and is inclusive digital signatures. E- signatures can be of various types, namely;

- Typewritten
- Scanned

<sup>8</sup> Indian Contract Act, 1872, § 2(h).

<sup>9</sup> Indian Contract Act, 1872, § 10.

<sup>10</sup> *Carlill v Carbolic Smoke Ball Co*, [1892] EWCA Civ 1.

<sup>11</sup> *Lampleigh v Braithwaite* [1615] EWHC KB J17.

<sup>12</sup> *See Be In, Inc. v. Google Inc.*, No. 12-CV-03373-LHK, 2013 WL 5568706, at \*6 (N.D. Cal. Oct. 9, 2013).

<sup>13</sup> 513 F.Supp.2d 229 (E.D.Pa.2007).

<sup>14</sup> 86 F.3d 1447 (7th Cir. 1996).

<sup>15</sup> D.C. No. 8:12-cv-0812-JST.

<sup>16</sup> The Indian Contract Act 1872, § 9.

<sup>17</sup> The Indian Copyright Act, 1957, § 19.

<sup>18</sup> The Information Technology Act, 2000, § 5,; *Forcelli v. Gelco*, 109 A.D.3d 244,972 N.Y.S.2d 570 (2013).

<sup>19</sup> The Information Technology Act, 2000, § 5.



- Electronic Representation of hand written signatures
- A unique representation of characters
- Retina, digital representation of characters
- Cryptographic means

Digital Signatures are defined as an authentication in any form by electronic methods for an electronic record.<sup>20</sup>

Countries like the U.S.A, U.K, Canada, Australia and Singapore have developed a specific legislation dealing with and regulating e- signatures alone. This is because they have realised the scope of misuse and the legal aspect involved in e- commerce and its authentication. The U.S has Uniform Electronic Transaction Act (UETA), this legislation was passed with a view of unifying the laws within the states. Personal Information Protection and Electronic Documents Act (PIPEDA), is a Canadian legislation specifying how business should be conducted online and how the data should be handled to ensure security as well as privacy. This legislation has entrusted consumers with secure e- commerce in the country. The Electronic Communications Act 2000 is a legislation of the U.K, which is of the similar structure and of the same content to the E.U Directive. This legislation validates e signatures in the respective territory and promotes e-commerce and data storage. In Australia, the Electronic Transactions Act was passed in the year 1999, regulating framework for electronic transactions and also stated that no transaction can be invalidated just for the reason that it is completed electronically.

India also came up with an act which was inspired by the e- commerce relating legislation in Singapore, it was called the Electronic Commerce Act, 1998 but was never passed in India. Instead of a uniform and a consolidated legislation relating to e- commerce and e- signatures different legislations govern them in our country.

**2.2 THE INDIAN PENAL CODE, 1860**

The Indian Penal Code has been in India for the last 152 years and its application in the country has been extremely successful but with the inception of the era of technology and the dawn of e-commerce, the Indian legislators felt the need improving the regulation for business houses which work online. With the Information Technology Amendment Act, 2008 the IPC was also amended to add section 29A<sup>21</sup>, which lays down the introduction and gives recognition to electronic signatures for being dealt under criminal law in India, in accordance with sub-section (1) of section 2 of the Information Technology Act, 2000.

Existence of digital/ e- signatures in India majorly increase the number of cases of forgery in India, forgery is a crime where a person replicates someone else's authenticity. <sup>22</sup>To counter or curb the number of forgery cases the Law of Commission came with an amendment in relation section 463 and 464, to add electronic records and electronic signatures within the ambit of 'making of false documents'.

Keeping the aspect of frauds involved with digital signatures a case wherein, the respondent, the fraudster with a use of fake pan card and MTNL bill obtained a digital signature certificate on the name of the Petitioner company and went ahead and appointed himself and 3 others as the directors of the company and also attempted on to increasing the share capital of the company from Rs. 5 crore to Rs. 45 cr.<sup>23</sup> The Bombay High Court raised concerns regarding the credibility of digital signatures and need for stringent verification mechanism for digital signature. The court went on to add that;

*This is a matter that needs the attention of both the Company Judge as also the Chief Justice for further action possibly in a Suo Motu PIL, in which the MCA can be asked to set out safety norms for the use of digital signatures at the MCA portal and the department of telecommunications can be called on to issue guidelines regulating issuance of digital signatures. Unless that is done on a priority basis, every corporate entity is potentially vulnerable,"*

For the purpose of safeguarding and getting forgery of electronic records under the ambit of the act other sections were also amended.

Also, keeping in mind when such situation arises where and which court will have the authority to take cognizance of such cases? Section 3 of the Indian Penal Code gives out jurisdiction for crimes being committed in India and as well as outside India, but has not been amended to include the jurisdiction for crimes committed while conducting e- commerce. But the Delhi High Court, laid down that, place of the crime i.e. the place of the petitioner or where the wrong has been done is where the jurisdiction lies.<sup>24</sup>

Other Amendments which took place in respect to e- commerce are listed below.

Sections	Respective Amendments
167	A public servant who frames an incorrect document or electronic record with the intention to cause injury to any person will be punished with imprisonment for three years, or with fine, or both.
175	A person who omits to produce documents or electronic records to public servants by a person legally bound to produce will be punished with a simple imprisonment, or with fine, or both.
192	A person who fabricates false evidences, in terms of entry in a book or record or electronic record or makes any document or electronic record containing false evidence will be punished with imprisonment and with fine.
204	Any person who destroys any document or electronic record to protect its production as evidence in the court of law will be punished with imprisonment, or with fine, or both.
466	A person who commits forgery of record/ electronic record of court or of a public register will be punished with imprisonment and with fine.
468	A person who commits forgery of documents or electronic records for the purpose of cheating will be punished with imprisonment and with fine.
469	A person who commits forgery of document or an electronic record with an intention of causing harm to a reputation of someone will be punished with imprisonment and with fine.
470	A wholly or partly false document or electronic record is termed as forgery.
471	Whoever uses a forged document or electronic record as genuine will be punished in the same manner as if he had forged such documents.
474	Someone having possession of a false document or electronic record and having an intention of using it as genuine will be punished with imprisonment and with fine.
476	A person who counterfeits upon any mark or material used for the purpose of authenticating any document or electronic record will be punished with imprisonment and with fine.
477A	Whoever being a clerk, officer or servant or employed or anyone acting in such capacity falsify (alter, delete, defrauds etc.) any record or electronic record will be punished with imprisonment, or with fine, or both.

- "electron records", used in the above table were added with the amendment 2.3

**2.3 THE EVIDENCE ACT, 1872**

The Indian Evidence Act 1872 is a legislation dealing with kinds of evidences that can be produced or admitted in a court of law by the litigating parties in India. The legislation which was enacted in 1872 did not envisage electronic signatures and records as evidences since its inception. Therefore, keeping in view the widespread use of electronic records and electronic signatures including digital signatures the legislators felt the need of amending the aforesaid Act to bring it in conformity with the changing trends in the society.

<sup>20</sup> The Information Technology Act, 2000, § 2(p).

<sup>21</sup> The words "electronic record" shall have the meaning assigned to them in clause (t) of sub-section (1) of section 2 of the Information Technology Act, 2000.

<sup>22</sup> The Indian Penal Code, 1872, § 464,.

<sup>23</sup> DDPL Global Infrastructure Pvt & 4 Others v. Alok Mishra & 3 Others, SL/255/2015.

<sup>24</sup> SMC. Pneumatics (India) Pvt. Ltd. v. Jogesh Kwatra, Suit No. 1279/2001.



Section 3<sup>25</sup> of the Act lays down the definition of the terms used in the Act and gives out interpretations of the relevant evidences, with the course of the amendment, the section was amended to add "electronic signatures" as admissible evidences in the court of law. Also, Section 47A<sup>26</sup> was inserted in the Act, providing that whenever the Court of Law has to form an opinion about an electronic signature of any person, then the opinion of the Certifying Authority which issued the electronic signature, like e- mudhra is a relevant fact in the eyes of law.

Section 67A<sup>27</sup> was inserted with the view of protecting the secured electronic signatures. The section provides that if in case the electronic signature of any subscriber is alleged to have been affixed to an electronic record the fact that such electronic signature is the electronic signature of the subscriber must be proved in the court, except in the situations it is secured electron signature. Section 73A<sup>28</sup> has been newly inserted to provide that the court may instruct the concerned person or Certifying Authorities who issued the electronic certificate to ascertain whether electronic signature/ digital signature in the question before the court, is that of the person by whom it is purported to have been affixed. It may also direct any other person to apply the public key listed in the electronic Signature Certificate and verify the electronic signature purported to have been affixed by that same person.

Furthermore, Section 85B(1)<sup>29</sup> was inserted to provide that during any proceeding relating to electronic records, the courts have to make an assumption that the secure electronic record has not been altered since the point of time to which the secure status relates, unless it is proved otherwise in the court of law. Section 85(B)<sup>30</sup> states that, the Court has to presume that the intention behind affixing the electronic signature on the electronic record is to acknowledge their own assent to the record, unless proved contrary. Also, there can be no presumption relating to authenticity of the electronic record or any electronic signature if the same is not secured.

Section 85C<sup>31</sup> deals with situations where the Court shall presume, the detail listed in a Electronic Signature Certificate is correct, except for when the information specified as subscriber information has not been verified, if the certificate was accepted by the subscriber, unless contrary is proved.

### 3. CONCLUSION

The pace with which the e- commerce industry has grown in this short span is only to show how it has been accepted by the market and its credibility but has also brought to the fore the issues that the legal system of our country would face.

Long gone are the days when internet was a breakthrough phenomenon, it is now akin to our very survival, a basic necessity. Our country's legal system has tried to catch the pace with which the e- commerce industry is growing, with various enactments like the Information Technology Act, 2000 but, this enactment just deals with the host, the internet. It is quite time that India brings forth a special legislation, dealing with e- commerce alone, which would deal with all possible problems that come along with e-commerce. India can take examples from the countries who already have enacted such legislation like the UETA, PIPEDA and others as mentioned in the due course of the paper.

The major problem and the most obvious problem faced by the e-commerce industry can be that of impersonification and that of pixilation detector or rather checking the authenticity and originality of the e-signature. For combating the problem of pixilation detectors as that cannot be comprehended by handwriting experts as well, the suggestion by the Australian courts as they say 'JPEG' format to save the document should be preferred over the 'PDF' version<sup>32</sup>

An effective management strategy, an efficient legislation and in- depth understanding of the entire scenario is the need of the hour for such businesses to thrive in the market and for conduction of safe and secure commerce in India.

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8. Lampleigh v Braithwaite [1615] EWHC KB J17.
9. See Be In, Inc. v. Google Inc., No. 12-CV-03373-LHK, 2013 WL 5568706, at \*6 (N.D. Cal. Oct. 9, 2013).
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11. Pro CD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).
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16. The Information Technology Act, 2000, § 5.
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19. *DDPL Global Infrastructure Pvt & 4 Others v. Alok Mishra & 3 Others*, SL/255/2015.
20. *SMC. Pneumatics (India) Pvt. Ltd. v. Jogesh Kwatra*, Suit No. 1279/2001.

<sup>25</sup>"all documents including electronic records produced for the inspection of the Court, such documents are called documentary evidence. "Proved"".

<sup>26</sup>"When the Court has to form an opinion as to the [electronic signature] of any person, the opinion of the Certifying Authority which has issued the [Electronic Signature Certificate] is a relevant fact."

<sup>27</sup>"Except in the case of a secure [electronic signature], if the [electronic signature] of any subscriber is alleged to have been affixed to an electronic record the fact that such [electronic signature] is the [electronic signature] of the subscriber must be proved.]"

<sup>28</sup>"Proof as to verification of digital signature.—In order to ascertain whether a digital signature is that of the person by whom it purports to have been affixed, the Court may direct—"

(a) that person or the Controller or the Certifying Authority to produce the Digital Signature Certificate;(b) any other person to apply the public key listed in the Digital Signature Certificate and verify the digital signature purported to have been affixed by that person. Explanation.—For the purposes of this section, "Controller" means the Controller appointed under sub-section (1) of section 17 of the Information Technology Act, 2000.]"

<sup>29</sup>"In any proceedings involving a secure electronic record, the Court shall presume unless contrary is proved, that the secure electronic record has not been altered since the specific point of time to which the secure status relates."

<sup>30</sup>"In any proceedings involving a secure electronic record, the Court shall presume unless contrary is proved, that the secure electronic record has not been altered since the specific point of time to which the secure status relates."

<sup>31</sup>"The Court shall presume, unless contrary is proved, that the information listed in a [Electronic Signature Certificate] is correct, except for information specified as subscriber information which has not been verified, if the certificate was accepted by the subscriber.]"

<sup>32</sup> *Getup Ltd v. Electoral Committee*, 2010 FCA 869.

**STRATEGY IMPLEMENTATION AS INTERVENING FOR COMPANY'S RESOURCES AND REGULATIONS IN  
ORDER TO FORM BUSINESS PERFORMANCE  
[STUDIES IN UNIT BUSINESSES OF PT PERTAMINA (PERSERO)]**

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**ABSTRACT**

Many concepts and research carried out on the implementation of the strategy, but has not been able to describe the integrative effectiveness of the strategy implementation Programme, Budget and procedures of the Business Performance generated. This study intends to fill the literature gap to produce a concept / model of a more integrative linking Company's Resource, Regulatory, Strategy Implementation (Program, Budget, and Procedures) more effectively that can generate good business performance. The purpose of this study was to (1) Review of Company's Resources, Regulatory, Strategy Implementation and Business Performance in Business Units of PT. Pertamina (Persero); (2) Analyze and prove that Company's Resources and Regulatory Strategy Implementation effect on either partially or simultaneously; (3) Analyze and prove that Company's Resources and regulation affect the Company's business performance, both directly and through Strategy Implementation; & (4) Analyze and prove that Strategy Implementation affect the company's business performance either partially or simultaneously. This research was conducted with descriptive and verification method. A census conducted involving 40 samples of business units in PT. Pertamina (Persero). Data obtained from the results of observations, questionnaires and interviews. Analysis and hypothesis testing are using the Partial Least Square (PLS).

**KEYWORDS**

strategy implementation, company resources, regulations, business performance.

**1. INTRODUCTION**

Pertamina as a large State-Owned Enterprise (SOE) which currently has assets of more than USD 40.88 Billion significantly affect the performance of SOE as a whole and also the State income from dividends. In the business sector of oil and gas in Indonesia, Pertamina is a market leader that has a very significant role both for the stability of the business sector and the economy in general. Therefore, it is very important to maintain and continue to increase the added value of the company in order to create a sustainable competitive advantage. This is certainly a major challenge for Pertamina in the future, primarily associated with the strategy, both at the macro and micro-level / companies.

Pearce and Robinson (2011) stated that the formulation of an effective and efficient strategy is the formulation that combines future-oriented perspective to the internal environment and the external environment. Companies often difficult to predict the future related to erratic changes of the external environment. On the basis of the correspondence between the resource or capability of the company to its environment can create strategies to generate competitive advantage and superior performance of an organization / company (Pearce and Robinson, 2011; Thomson, Peteraf, Gamble and Strickland, 2012; Wheelen and Hunger 2010).

In the perspective of management, the company in general often face the problem of implementation of the strategy has been determined. In carrying out its operational companies often are not integrated or do not align with strategy (Kaplan & Norton, 2004, 2006, 2008) because of internal and external factors. This often led to the achievement of the target company is not in accordance with the plan. As a lot of the framework in the preparation of the strategy, in fact often found that it is more likely to focus attention on the formulation of a strategy oriented than the effectiveness of the implementation of the strategy. Therefore, the existence of a concept based on empirical data to create a model of an effective strategy implementation is needed.

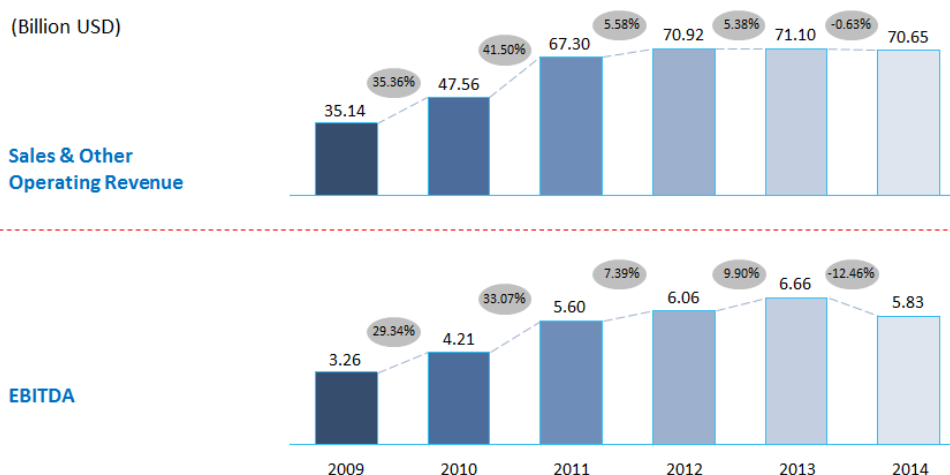
According to Thomas L. Wheelen, J. David Hunger (2010), strategy implementation includes three (3) aspects of the Program, Budgets and Procedures. The effective implementation is dependent on the integration strategy of the operation, as well as the human resources, structures and procedures, capabilities, budget and infrastructure are aligned with the strategy. (Thomson, Peteraf, Gamble and Strickland, 2012; Bossidy and Charan, 2002; Sushil, 2009; Richard L. Daft, 2010; Kaplan & Norton, 2004,2006,2008; Walker, 2009; Morgan, Levitt, and Malek, 2007). Concluded that effective implementation is meant here is the execution that can realize the performance of the project as planned, on time, budget and return (James P. Lewis, 2000).

In the initial study on the performance of PT Pertamina (Green Book 2009-2014) found that in general, the company's performance is still quite good, but the actual financial performance has not yet been achieved in accordance with the plan. Illustration of it is presented in the following figure below:

**FIGURE 1: CONSOLIDATED FINANCIAL PERFORMANCE PERTAMINA**

**FINANCIAL CONSOLIDATION 2009 - 2014**

(Billion USD)



As empirical data that the past performance of the investment program Pertamina projects generally average can be realized only about 60% of the target as the company's internal reports that are not published. Where realization of the project is the largest component of the company's business performance and growth. This is supported by statements Benko and McFarlan (2003) that the company's project portfolio encourage added value for the future. Striving for an optimal realization of the project is increasing is the most important thing in order to encourage the increase of the value-added companies.

## 2. RESEARCH QUESTION

Based on the background described above, the research questions in this paper can be stated as follows:

1. How Resources, Regulatory, Implementation Strategy and Business Performance in Business Units Pertamina?
2. How Resources and Strategy Implementation Regulations effect on either partially or simultaneously?
3. How Resources and regulations affect the business performance, both directly and through the Implementation Strategy?
4. How Strategy Implementation affect the company's business performance either partially or simultaneously?

## 3. COMPANY RESOURCES

As the study of theory, organizational resources is determined there are three types of physical assets, the assets of HR and organizational assets (physical capital resources, human capital resources, and organizational capital resources) (Barney, 1991; Wheelen and Hunger, 2012). Montgomery (2005: 30) suggests three types of resource companies, namely: tangible assets, intangible assets and organization capability. The temporarily the Hill and Jones (2004: 147) found two types of resource companies, namely: tangible assets and intangible assets. Resource Company in this respect Infrastructure, Capital, Organizational Culture, Leadership, Structure, Patents, System Information and Human Resources (Daft, 2010; Thomson, Peteraf, Gamble and Strickland, 2012), a company that is precious (valuable), rare (rare), it is hard to replicate (imperfectly limitable), and there is no substitute (Barney, 1991; Pearce & Robinson, 2011), it will be able to implement its strategy to achieve competitive advantage.

Resources and capabilities of the Company's resource very decisive advantages of the company and a source of core competencies to create competitive advantage and long-term role in supporting the competitiveness and viability of the company. So the company's resources are an important determinant of success or failure implementasi strategy / execution (Walker, 2009; Hart, 1995; Barney, 1991; Mahoney and Pandian, 1992; Sucherly, 2003).

## 4. REGULATIONS

Government regulations are external factors that affect the implementation of the strategy in the implementation of the company's business units Pertamina which includes approval, licensing and land acquisition. (Wheelen and Hunger 2010; Jennifer M. George and Gareth R. Jones, 2006; Pearce and Robinson, 2011; Andy 2006, Liisa Sallinen, Inkeri Ruuska and Tuomas Ahola, 2013; Regulation of central and local government)

External factors identified that the main things that affect the performance of the investment program projects are Approval, project permitting, and land acquisition. Approval is influenced by the authority to approve of oil and gas projects, namely SKK Oil and Gas, Ministry of Energy and shareholders, for example, regulation of the Minister of Energy and Mineral Resources No. 027 of 2006 on the management of the utilization of data obtained from the general survey, exploration and exploitation of oil and gas. Licensing related project with the Local Government where the project is located, as in the drilling project at the Banyu Urip field in Bojonegoro influenced the publication of Regulation No. 23 of 2011 on the construction of supporting facilities which will affect the time and cost of the project. While the acquisition of land or land acquisition follows the Act No. 2 of 2012 and Perpers No. 71 of 2012 which will be associated with the institution SKK Migas, BPN, Local Government and the Department of Forestry.

## 5. STRATEGY IMPLEMENTATION

Program is an activity or set of activities the company's business units Pertamina to resolve short-term planning or projects that make the implementation of the strategy can be implemented in the form of action that includes the purpose of the project / investment, work plans, monitoring and integrated investment portfolio. (Thomas L. Wheelen, J. David Hunger, 2010; Sushil, 2009; Peter, 2008; Gray and Larson, 2006; Gusman Nawani, Lim Kong Teong and Siti Norezam Othman, 2013; Monique Aubry, He le'ne Sicotte, Nathalie Drouin, He le'ne Vidot-Delerue and Claude Besner, 2012; Taiwen Feng, 2013).

Budget is the allocation of funds for new activities of a program or project business units Pertamina company that makes the implementation of the strategy can be implemented which include the availability of budget, budget approval, and rewards and incentives (Thomas L. Wheelen, J. David Hunger, 2010; Sushil, 2009; Kaplan & Norton, 2006; Phyllis, Richard, Jag, 2004; Ning Hongyu, Zhou Mingjian, and Wen Qiang Lu Liqun, 2012).

The procedure is the detail of the steps sequence from the technical details of an activity that must be performed on all programs Pertamina, which covers the structure, procedures and authority system, the process of investment approval, and payment processing. (Watson, 2005; Thomas L. Wheelen, J. David Hunger, 2010; Arthur A. Thompson, MA Peteraf, John E. Gamble and AJ Stricklan III, 2012; Sushil, 2009)

## 6. BUSINESS PERFORMANCE

The concept of organizational performance in general is based on the idea that the organization related to the productivity of its assets including human resources, physical capital and to achieve a common goal. The performance assessment is a periodic determination of the operational effectiveness of an organization, part of the organization and its employees by objectives, standards and criteria established in advance. Wheelen & Hunger (2012: 332) states that business performance can be measured by sales, market share and profitability.

Assessment of performance in this study refers PKPU emphasis on finance and markets. This is related to the uniformity of the indicators for the 40 business units. Assessment of financial performance is critical because it is the consequence of an economic decision taken and that the planning, implementation and evaluation of the implementation strategy that is reflected from the target can be measured by sales, profitability, ROI, or ROE.

## 7. DISCUSSION

From the initial assessment may be indicated that it was due to effective strategy implementation is still lacking, particularly in terms of the realization of investment projects Pertamina. (effective: the realization of the performance of the project according to plan, on time and on budget (Lewis, 2000). Morgan, Levitt, and Malek (2007), identifies that strategy execution is the result of the execution right of a set of project strategic to the right path. So there is only one way is to do it with a project portfolio management. Consistent with previous studies, stating that the company's project portfolio encourages added value for the future (Benko and McFarlan, 2003).

Companies in general often face the problem of implementation of the strategy has been determined. In carrying out its operational companies are often not integrated / align with the strategy because of internal and external factors. This often led to the achievement of the target company is not in accordance with the plan.

The basic elements of the implementation of the strategy is the Programme, Budget and procedures, where those three things depend on Resources and Capabilities of the company. Effective implementation of the strategy depends on integration with the operating strategy, as well as the people, culture, structure and procedures, capability, budget and infrastructure are aligned with the strategy. It was concluded that the implementation of an effective strategy is meant here is the execution that can realize the performance of the program or project as planned, on time, budget and return. Improving the effectiveness of the strategy implementation of investment projects can create competitive advantage for the organization.

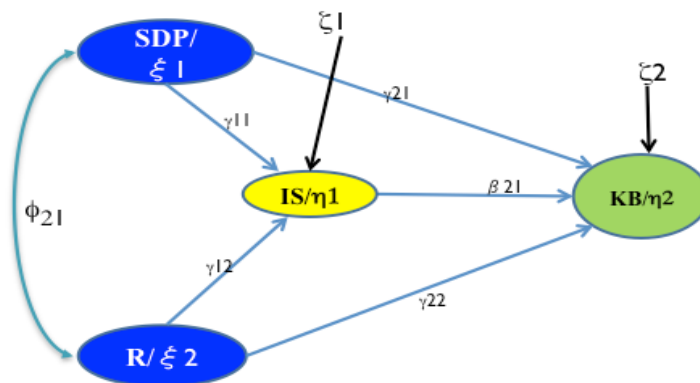
The method used in this dissertation to solve problems by using the Partial Least Square (PLS). PLS is an alternative method of analysis with Structural Equation Modelling (SEM) which is based on variance. This method uses the indicator or variables to see a strong correlation. The variables used were Exogenous latent variables consisting of Resource Companies, Regulatory, Implementation Strategy, and Business Performance

The analysis used in this study consists of two types, namely: (a) descriptive analysis, describe the characteristics of the studied variables and (b) verification analysis, to determine the relationship between variables through a hypothesis based on the data in the field.

Research is also done using, the PLS model, consists of two linear equations, namely, (1) structural equation (Structural Model) and (2) measurement model (measurement model).

In general, structural equation using the framework of the relationship between the flow of latent variables based on the hypothesis proposition like in the picture below.

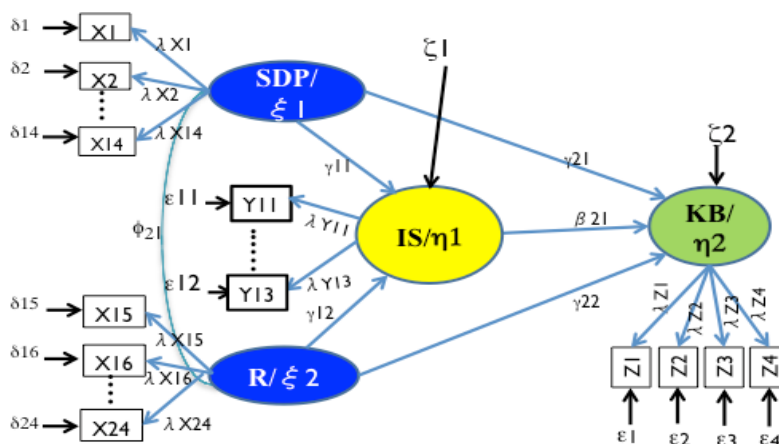
FIGURE 2: PATH DIAGRAM



Where SDP is a latent variable Company Resources, R is the Regulation, the IS is a latent variable Strategy Implementation, KB is a latent variable Business Performance. On the path diagram, the arrow represents the relationship between the latent variables (constructs). Latent variables in the path diagram is divided into two exogenous latent variables ( $\xi$ ) and endogenous ( $\eta$ ). This research on structural models, exogenous variables are Resources Company (SDP); Regulatory (R) and endogenous variables are the Implementation Strategy (IS); Business Performance (KB).

In general, the path diagram is based on the hypothesis proposition like in the picture below.

FIGURE 3: RESEARCH MODEL PATH DIAGRAM



Based on the concept of research model can be formulated in mathematical form. Structural equation models (inner model) which connects the latent variables. The basic assumption of the PLS is all the information of the variable indicator / manifest aimed at latent variables. This has two implications. First, the PLS model does not involve a direct correlation between manifest variables. Second, the error measurement model of one block is assumed to be uncorrelated with the errors of measurement models of the other block.

8. CONCLUSION

Companies in general often face the problem of implementation of the strategy has been determined. In carrying out its operational companies are often not integrated / align with the strategy because of internal and external factors. This often led to the achievement of the target company is not in accordance with the plan.

The basic elements of the implementation of the strategy is the Programme, Budget and procedures, where those three things depend on Resources and Capabilities of the company. Effective implementation of the strategy depends on integration with the operating strategy, as well as the people, culture, structure and procedures, capability, budget and infrastructure are aligned with the strategy.

It was concluded that the implementation of effective strategies meant here is affected by the Resource Company and Regulations. The better the Enterprise Resource better the implementation of strategies that lead to better company performance. Similarly, the regulations, the more organized and clear rules are increasingly positive impact on company performance.

Improving the effectiveness of the strategy implementation of investment projects can create competitive advantage for an organization that could ultimately improve company performance.

Implementation of the strategy should always be linked to the value of the company and the drivers of cost (cost driver), where companies can compete with the value and driving costs the same but different whether or not the results that they produce.

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