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## UNDERSTANDING SEASONALITY AND ITS IMPACT ON DEMAND FORECASTING: THE CASE OF INDIAN PAINT INDUSTRY

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### ABSTRACT

*Demand forecasting is a preliminary and mandatory exercise for a company to strategically accomplish its planning and execution route map at all levels and business functions. Forecasting becomes easier if the industry and the organization are operational for a considerable amount of time as the historical data can be consumed to arrive at informed alternatives for decision making. One of these techniques that help us in making better forecast is time series with seasonality. Traditionally Indian paint industry has been driven by seasonality, which has been established by wide discussions and research. Off late, this trend is experiencing a paradigm shift which has been identified by industry bigwigs but the empirical evidence has not yet been established in the available literature both at industry and organizational level. So, the objective of this paper is to understand the seasonality pattern and latest demand trends in Indian paint industry, not only at industry level but also for each organized player in particular, thereby paving the way for data driven demand forecasting & management and aggregate planning. The time series with seasonality technique is being applied to understand the demand patterns in the Indian paint industry.*


### KEYWORDS

seasonality, demand forecasting, decorative paints, aggregate planning.

### JEL CLASSIFICATION

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### INTRODUCTION

 Seasonality is a numeric index of seasonal buying behavior that is consistent from year to year (Mahesh Kumar, Nitin R. Patel and Jonathan Woo, 2002). Understanding seasonality is very much important because the swings in sales and business operations inherent in seasonality may give rise to slow or lost sales, unpredictability of business conditions and cash flow problems (Koenig & Bischoff, 2005; Spencer & Holecek, 2007; Jeffrey Shields & Joyce Shelleman, 2013). Experts can avoid the use of seasonal factors in areas where there is no reason to expect seasonality (such as in the stock market) and rely on them in areas where seasonal factors are obvious, such as for ice cream sales (JS Armstrong, 2006).

Seasonality of demand has been under observation and experience in various businesses. It has been widely quoted in numerous research works too! One best example is decorative segment of Indian paint industry. Sales in the decorative paint segments are seasonal with more than half of the sales coming in the September-November festival season (Ramanuj Mazumdar, 2004). Demand is somewhat seasonal in nature- low during monsoon months and high during festive months. (Ramaswamy, V.S., S. Namakumari, 2002). The demand for decorative paints is highly price sensitive and seasonal. Demand in the festive season (September-December) is significant, while monsoon is the slack season. (V.C.Malshe and Meenal Sikchi, 2008). The demand for these paints is just prior to the festival seasons (Waman S Jawadekar, 2006).

As per the sector analysis report published by equity master, Indian paint industry is currently pegged at Rs 350 billion, dominated by decorative segment at 70% market share and the rest by industrial segment. With respect to decorative segment, 65% of the market is controlled by organized players like Asian paints, Berger paints, Kansai-Nerolac, Akzo Nobel, Shalimar paints and Jenson-Nicholson.

The operational nature of the paint industry is highly working capital intensive with 40-45% of the funds being employed by working capital (Ramanuj Mazumdar, 2004). Low fixed capital is employed for manufacture of paints. The working capital requirements are huge (V.C.Malshe and Meenal Sikchi, 2008). In an interview given to Financial Express on 20<sup>th</sup> November 2005 by Ashwin Dani, then vice chairman & managing director, of Asian Paints Limited confirms it, as he said "Managing working capital is critical to be successful in the paint industry, primarily because you have to manufacture a range of products in different sizes and shades. Also there are a number of raw materials used for the manufacture of paints. Hence inventory management is important in our set-up". Hence understanding seasonality of demand is very crucial in paint industry. This paper attempts to explore and establish the evidences of seasonality and its trends, by enabling the paint industry to come up with accurate sales forecast.

### LITERATURE REVIEW

Efforts to understand seasonality in paint industry wide research has been observational in nature. Towards establishment of empirical evidence through utilization and representation of historical sales data has not yet been done.

The earliest discussion on declining seasonality in Indian decorative paints segment could be traced in a report published in Economic times in 2010. Mr. Hemant Somani, then head of marketing at Akzo Nobel India Ltd had his observations quoted in that report as "With the rise in disposable income and rapid urbanization, the seasonality of the business is flattening out—paints are selling all round the year. Some years ago, the peak period, 45-60 days before the festive season, amounted to 40-45% of yearly sales, but now that number has declined to around 30%"

Devendra Kumar Pandey and Ronald V Mani, (2013) in their research found that "Rising aspirational levels, shift in the perception of paints as having a protective value rather than a mere decorative have diminished the impact of seasonality".

Both the findings were observational in nature and not clearly represented with historical sales data.

Abhishikth K.N. and Sudeep Kundu (2011) attempted to identify the seasonality effect on sales and de-seasonalizing it for Asian paints. So, even in this report, seasonality aspect has been observed but their research objective has not been focused on identifying the declining seasonality and they tried to de-seasonalize the seasonality in order to come up with a better sales forecasting model. Historical sales data has been taken into consideration as they employed Time-series analysis but, their observation has been limited till 2010 sales figures and specific to Asian paints but not to the entire industry.



**RESEARCH METHODOLOGY**

**SAMPLING**

- Since this study has taken organized players into consideration all of them have been taken into account as there are only 6 organized players in the industry
- Locations of survey have been shortlisted using selective diversity sampling but with respect to identifying a retail outlet simple random sampling has been employed

**DATA COLLECTION**

The quarterly sales data of all listed organized players for the 15-year period i.e. from financial year (FY) 2000-01 to 2014-15 has been taken into consideration. For Akzo Nobel, sales data from FY 2008-09 to 2014-15 has been considered as it entered the Indian market by acquiring ICI paints. To identify seasonality, proportion of each quarter sales with respect to average annual sales has been tabulated and charted, both for industry as well as for each company. Also, close to 100 retailers have been contacted and a survey has been undertaken in Ranchi, Raipur, Nagpur, Vijayawada, Guntur, Bhubaneswar, Hyderabad, areas closer to Rural markets like Angul, Sangareddy, Medak, and rural stretches around Guntur and Hyderabad. Irrespective of the locations, retailers have confirmed that seasonality is a thing of past and sales figures is uniform throughout the year with only little variations in monthly demand. Retailers annual revenues were in the range of 60 lakhs to one and a half crore. Hence the variation may not be more at retailer level and they have written off the seasonality factor. But at a macro level, when all retailers are take into consideration, the variation i.e. seasonality factor is clearly visible, but gradually waning.

**INSTRUMENT**

- For fetching sales data companies' annual reports and www.moneycontrol.com has been accessed.
- An open ended questionnaire has been prepared to collection data from retailers with the help of a survey technique.
- Seasonality factor is represented by Seasonal Index which is calculated as
- **Seasonal Index= Quarterly sales/Average Annual sales**

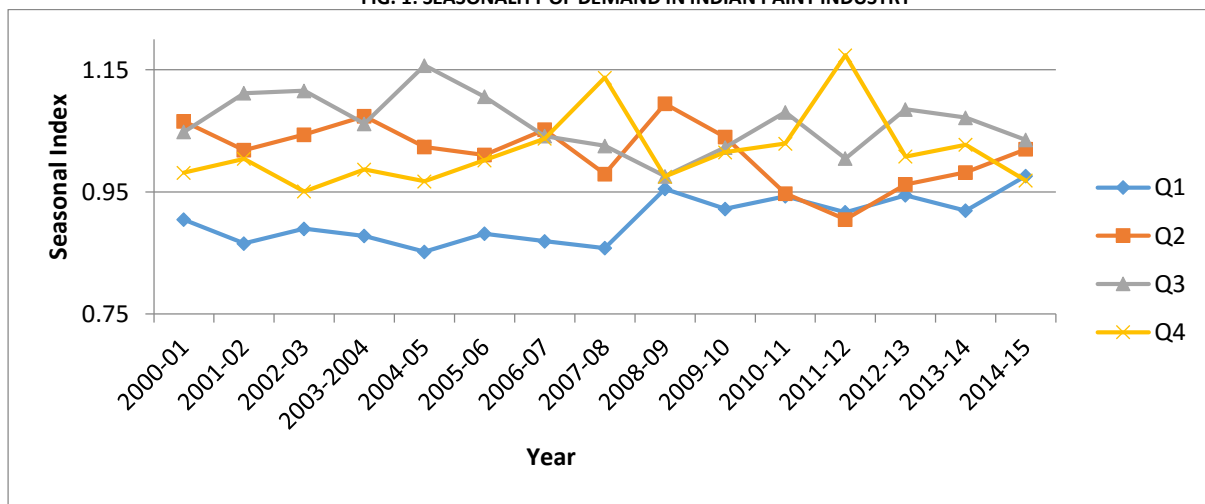
**DATA ANALYSIS AND INTERPRETATION**

**TRENDS IN INDUSTRY**

Till 2008-09 financial year, sales in first quarter i.e. during April-June period posted least sales among all quarters, whereas for Quarter 3, i.e. during October-December period sales recorded were highest, which highlights the role of festive season. Sales of Quarter 2 and Quarter 4 fall in between these two quarters. From 2009-10 financial year onwards the difference of sales among four quarters has been slowly declining. The steep increase of Quarter 4 sales 2011-12 financial year marks the acquisition of ICI paints by Akzo-Nobel. Otherwise the sales gap among four quarters is only declining which emphasizes the following

- Seasonality trend is slowly waning in Indian paint industry.
- Demand patterns are slowly moving from linear growth with seasonality to linear growth.
- Accuracy in forecasting is also being improved with 2 month average giving better sales forecast with little error. This has been observed by doing a trend line fitting, which is a close match to the actual sales.

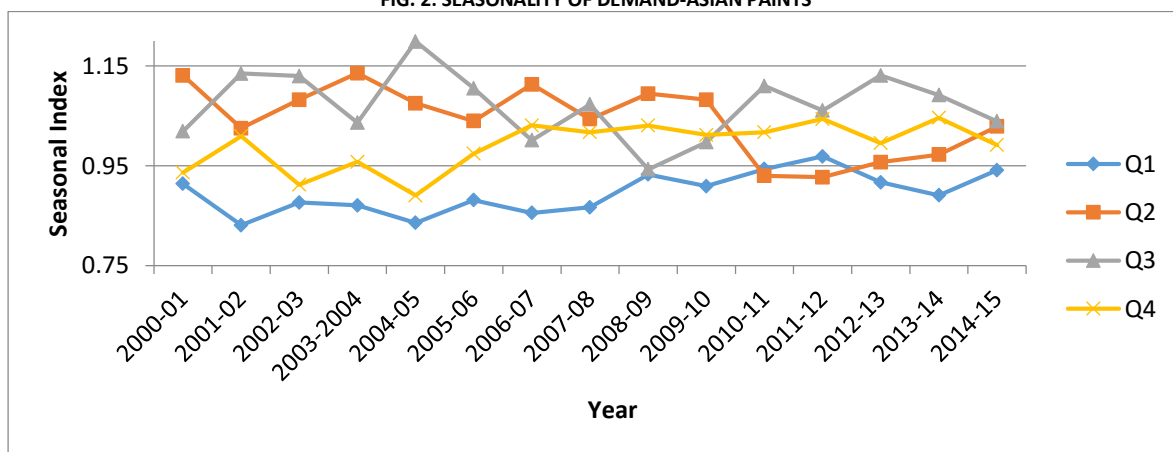
**FIG. 1: SEASONALITY OF DEMAND IN INDIAN PAINT INDUSTRY**



**ASIAN PAINTS**

For Asian paints, the industry leader, Q3 is still the highest revenue earner followed by a close fight between second and fourth quarters for the second spot. Quarter 1, which used to be in the last spot, has gained momentum after 2007-08 financial year. The decreasing sales gap among all quarters only confirms its market leadership which is able to even out the demand among four quarters through strong advertisement spend and distribution network.

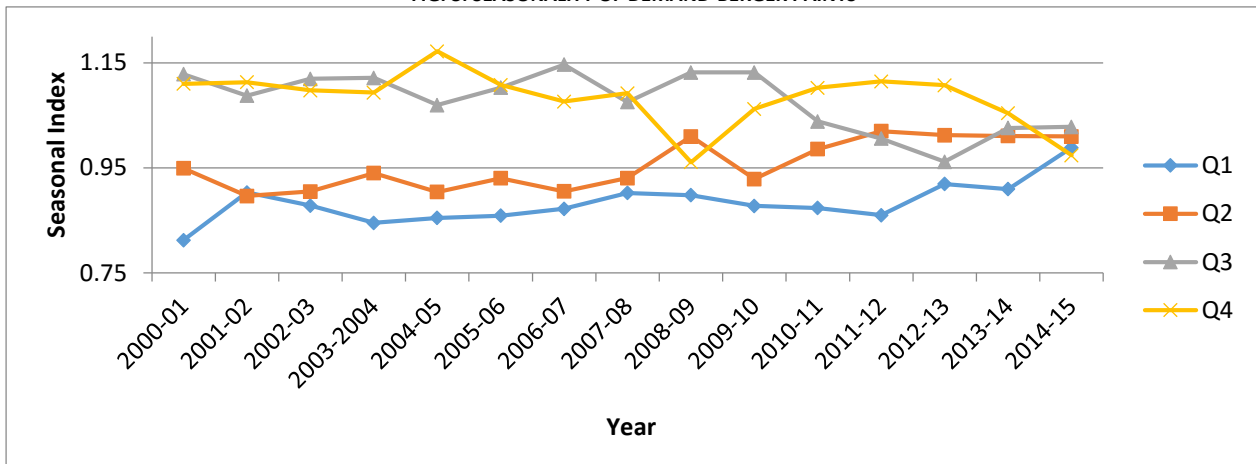
**FIG. 2: SEASONALITY OF DEMAND-ASIAN PAINTS**



**BERGER PAINTS**

For Berger paints comparatively Quarter 4 has been the front runner on many occasions for the past 15 years. It is quite surprising to notice that their performance has been stronger in the last quarter of the financial year rather than the industry peak demand season i.e. Quarter 3. The sales gap between Q3 & Q4 and Q1 & Q2 has been wide till 2008-09 period post which the performance of Q2 & Q1 has been so much improved that the sales gap has almost been negligible among all quarters.

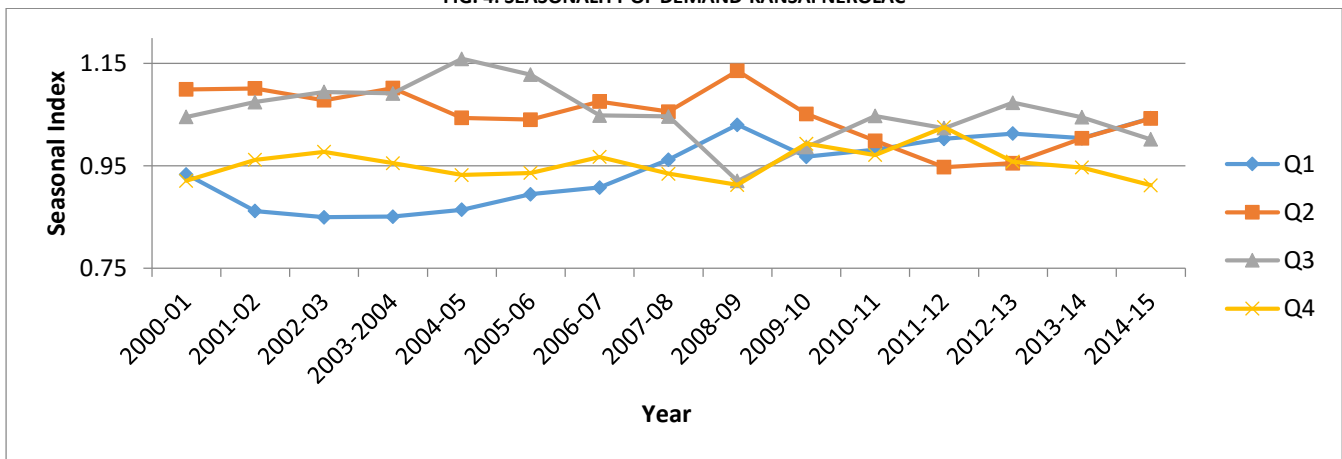
**FIG. 3: SEASONALITY OF DEMAND-BERGER PAINTS**



**KANSAI NEROLAC**

This company consistently reported strong Q2 sales except for the period 2010-11 to 2012-13. Q1 has been on the rise since 2004-05 and now occupied top spot along with Q2. Q4 has a dream run from 2008-09 but its decline started from 2011-12 and it continues since then pushing itself to last position. Though the company performs well in Q3 too, the peak demand season, its highest demand season has been Q2 and now Q1 as well.

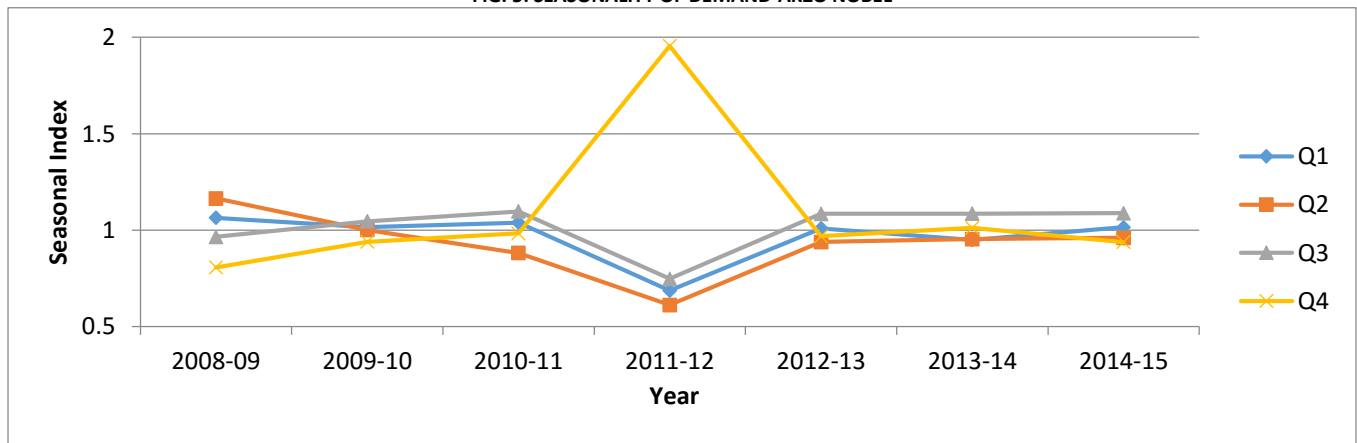
**FIG. 4: SEASONALITY OF DEMAND-KANSAI NEROLAC**



**AKZO-NOBEL**

Except for 2011-12 financial year, where Q4 experienced record sales, it has been a clear dominance of Q3, followed by Q1. Surprisingly Q2 stands last with Q3 taking the third place. But the interesting aspect is the variation in demand has been almost flat with the positions of quarters easily predictable. Also to notice is the sales gap is not so huge among quarters which enable the company in smooth aggregate planning.

**FIG. 5: SEASONALITY OF DEMAND-AKZO NOBEL**

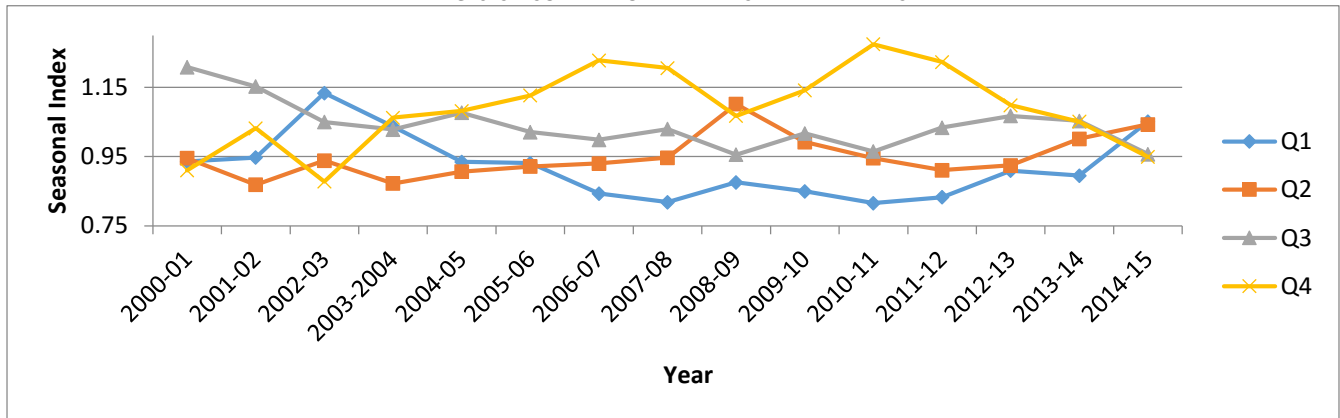


**SHALIMAR PAINTS**

For Shalimar paints Quarter 4 earmarked highest sales till 2012-13 financial year. And there has been no noticeable sales trend which could help the company to plan for better demand forecasting. The variation in sales among all quarters has not only been uneven but also the aspect of seasonality couldn't be attributed

to any of them. Off late, sales data of past three year denote stability in sales across 4 quarters with the gap declined to a greater extent. It is so evident that Q1 & Q2 started outperforming other two quarters for the past two years, which otherwise ranked first.

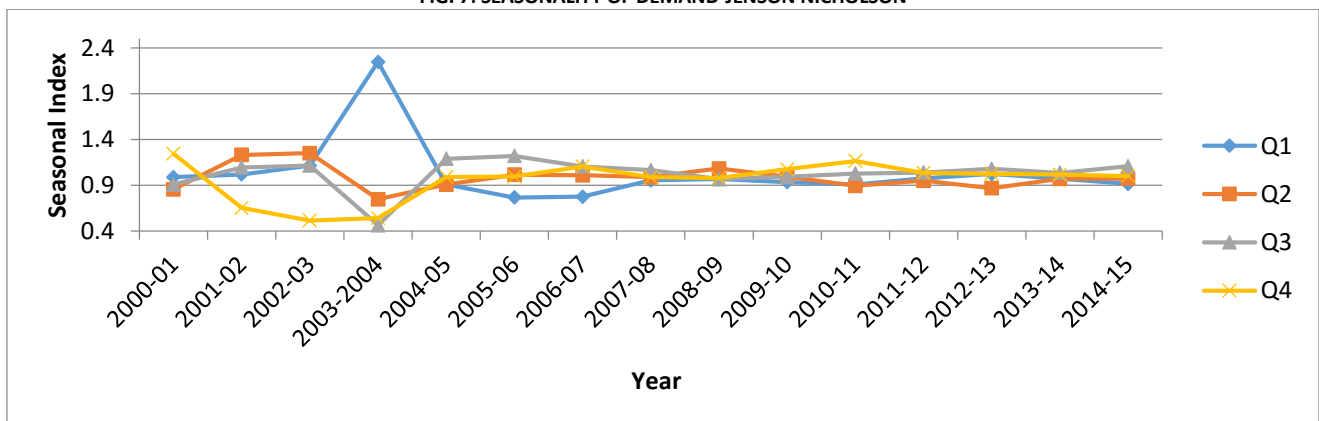
FIG. 6: SEASONALITY OF DEMAND-SHALIMAR PAINTS



JENSON-NICHOLSON

From 2004-05 onwards the concept of seasonality has become a history with Jenson-Nicholson. Though Q3 is still a strong performer the difference in sales with respect to other quarters is minute. There is greater amount of sales fluctuations in Quarter 2 when compared to other quarters for the past 5 years.

FIG. 7: SEASONALITY OF DEMAND-JENSON NICHOLSON



IMPLICATIONS

This research helps in understanding the trends in seasonality in Indian Paint Industry and visualizes how the industry should focus going forward.

- Change in seasonality indicates changing consumer preferences. So, product positioning should be revisited by the companies.
- Will there be any impact on sales during relatively lean quarters by increasing marketing spend during those particular quarters?
- Shall discounts or promotional offers be made available during relatively lean periods so that the impact of seasonality completely wanes out, thereby facilitating better forecast and aggregate planning by the companies?

The above mentioned observations themselves lead to further research and give a better clarity of thought in these perspectives.

LIMITATIONS

This research has its own limitations and the findings need to be taken into observation by considering them, which are listed as below.

- This study has taken only organized players into consideration which represent 70% of the market.
- Monthly sales figure would have given better understanding and representation of seasonality rather than quarterly sales figures.
- Correlation coefficient between Quarterly advertisements spends and Quarterly sales would have helped in understanding the impact of seasonality by taking advertising into consideration. Since the data on Quarterly ad spend has not been found during the study, this impact has not been highlighted and discussed.
- Sales data of ICI paints from financial years 2000-01 to 2007-08 has not been found in the noted sources of data. Hence, sales data from financial year 2008-09 to 2014-15 for Akzo Nobel, which acquired ICI paints, has been considered.

CONCLUSION

Seasonality factor still exists in Indian paint industry as a whole, but it is slowly decreasing with each year. Though the sales gap among the quarters is decreasing, seasonality of sales is not same across the companies. For them, no single quarter holds numero uno position over a period of time and each quarter can emerge as a leader. Whichever company understands this change in demand well in advance can emerge as a winner with minimum or no stock-outs or stock surplus.

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## AN EMPIRICAL INVESTIGATION IN THE ROLE OF MICRO-FINANCE INSTITUTIONS FOSTERING FINANCIAL INCLUSION FOR WOMEN IN HARYANA

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### ABSTRACT

*Microfinance started way back in the middle of 1800's when the theorist Lysander Spooner was writing over the benefits of small credits to entrepreneurs and farmers as a way of getting the people out of poverty. The paper attempts to analyse which factors strengthen women empowerment the most and which factors strengthen women empowerment the least. And to compare the effect of the various factors between women who have availed microfinance facility and women who are yet to avail microfinance facility. For the same 250 respondents at random 190 respondents have fully responded. The method of ordinary least squares (OLS) has been used to analyze the data. As mentioned earlier, the aim of this study is evaluate the impact of microcredit on women empowerment. The researcher has found that there is a positive effect on women empowerment with microfinance scheme.*

### KEYWORDS

microfinance, entrepreneurs, ordinary least squares, microcredit, women empowerment

### INTRODUCTION

Microfinance started way back in the middle of 1800's when the theorist Lysander Spooner was writing over the benefits of small credits to entrepreneurs and farmers as a way of getting the people out of poverty. But at the end of World War II with the Marshall plan the concept of Microfinance had a big impact. The today use of Micro financing has its roots in 1970s when organizations such as Grameen Bank of Bangladesh with the Microfinance pioneer Mohammed Yunus started shaping the modern industry of Micro financing. Mohammed Yunus, winner of Nobel Peace Prize, is a pioneer in microfinance and has found Grameen Bank. He reached the poorest of the poor and provided them microfinance to uplift them.

### REVIEW OF LITERATURE

Empowerment is a very broad concept and is likely to be interpreted in different ways as per the requirement of the situation. In a general sense, it tries to encompass self-strength, control, self-power, self-reliance, own choice, life of dignity, independence, own decision making, being free. Empowerment, by definition may be defined as a social process, since it occurs in relationship to others. It is a dynamic process of change: going from a 'disempowered' state to a more 'empowered' one. Empowerment is a multi-dimensional, social process. It is multi-dimensional in the sense that it occurs within sociological, psychological, economic, and other dimensions. Empowerment also occurs at various levels, such as individual, group, and community. Empowerment is also a construct shared by many disciplines and arenas: community development, psychology, education, economics, and studies of social movements and organizations, among others. In recent empowerment literature, the meaning of the term empowerment is often assumed rather than explained or defined. Rappoport (1984) has noted that it is easy to define empowerment by its absence but difficult to define in action as it takes on different forms in different people and contexts. Zimmerman (1984) has stated that asserting a single definition of empowerment may make attempts to achieve it formulaic or prescription-like, contradicting the very concept of empowerment. Although empowerment has now become a familiar and much used term, an adequate and comprehensive definition remains elusive. One problem is that empowerment is a 'latent phenomenon' that is not directly observable: its aggregate results or effects may be visible but the internal dynamism is difficult to examine. Empowerment is also often seen only partially, through the outcomes of increased autonomy and freedom. (Kabeer) 2000 states that empowerment entails a process of change. People who exercise a great deal of choice in their lives may be very powerful, but they are not empowered in the sense in which the word is being used, because they were never disempowered in the first place. Inasmuch the notion of empowerment is about change, it refers to the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them. Empowerment in women is defined as the process by which women take control and ownership of their lives through expansion of their choices. Thus, it is a process of acquiring the ability to make strategic life choices in a context where this ability has previously been defined. The core elements of empowerment have been defined as the ability to define one's goals and act upon them, awareness of gendered power structures, self-esteem and self-confidence Kabeer (2001). Empowerment, as per Rowlands (1997), is a process whereby women become able to organise themselves to increase their own self-reliance, to assert their independent right to make choices, and to control resources which assist in challenging and eliminating their own subordination. Empowerment in women can take place at different levels-individual, household, community and societal. Microfinance programs have been increasingly promoted in India for their positive economic impact and the belief that they empower women. Women empowerment is a process in which women challenge the existing norms and culture, to effectively improve their well-being. Empowerment in women implies that women are gaining greater control over their life, have increased life options and choices (even when those are not chosen), and generally attaining the capability to live the life one wishes to live. Kabeer (2001) defines women's empowerment as "an expansion in the range of potential choices available to women so that actual outcomes reflect the particular set of choices which the women value." While empowerment is relevant to both sexes, women's empowerment necessarily is more complicated by the fact that they face additional disadvantages because of their sex, and the fact that household and intra-familial relationships are a major source of women's disempowerment. Malhotra and Schuler (2005). Empowerment of women is defined as the process by which those who have been denied the ability to make strategic life choices acquire such ability. The ability to exercise choices incorporates three inter-related dimensions: resources which include access to and future claims to both material and social resources; agency which includes the process of decision-making, negotiation, deception and manipulation; and achievements that are the well-being outcomes. Also, it needs to be seen what other factors are important for women empowerment other than microfinance. Women access to saving and credit will increase women's social and political empowerment, and even change traditional gender relationships.

### RESEARCH OBJECTIVES

Based on the research gaps identified, following research objectives have been framed.

1. To analyze the social and economic aspects that affect women empowerment.

2. To analyze which factors strengthen women empowerment the most and which factors strengthen women empowerment the least.
3. To compare the effect of the various factors between women who have availed microfinance facility and women who are yet to avail microfinance facility.
4. To suggest strategies to Microfinance institutes to improve their financing schemes to the women customers.

**DATA COLLECTION**

Questionnaire was used as a method as a Survey technique. Did Pilot Testing by initially distributing it to 20 women. Then after their feedback added some more questions. We had selected 50 branches out of 100 branches of Ujjivan financial services in Haryana. And have included 250 respondents at random 190 respondents have fully responded.

**RESEARCH METHODOLOGY**

The method of ordinary least squares (OLS) has been used to analyze the data. As mentioned earlier, the aim of this study is evaluate the impact of microcredit on women empowerment. The OLS model suits the purpose well in that:

- i) positive effect of microcredit on women empowerment is captured by the coefficient  $\beta_2$ .
- ii) The null hypotheses is that microcredit has no effect on women empowerment. If  $\beta_2$  obtains a significant positive value, it means that the null hypotheses can be rejected and that microcredit has a positive effect on women empowerment.

Women empowerment is measured via an empowerment index. The index is built on the empowerment indicators, which in turn are derived from the respondent's answers on the thirteen empowerment questions in the questionnaire. To be able to measure the respondent's answers to these questions a YES is transformed to a 3-5 and a NO is transformed to a 0-2. The values for each of the thirteen empowerment indicators are then summed into an aggregate index with one M point increments from 0 to 13. An individual with a high aggregate empowerment Index empowerment score is considered to be more empowered than an individual with a low aggregate empowerment index score. The OLS model, in its most basic form, only includes the dependent variable empowerment index and the independent variable microcredit borrower. The model is then built up gradually by adding one independent control variable at a time. This is done to derive how the relationship between microcredit and women empowerment changes when independent control variables are added. There are a total of twelve independent variables conducted for in the model. Thus, there are twelve models, where the most comprehensive model includes twelve independent variables. Thus, with the help of this study we have made an attempt to understand the effect of microfinance on empowerment of women.

**FINDINGS**

Table below presents the strengthening markers of this study, divided into the four subgroups. The markers are relating to the inquiries on strengthening in the poll. To have the capacity to measure the respondent's explanations for these inquiries a YES is converted to a 3-5, and a NO is changed to a 0-2. As such, a respondent given a 1 is seen as more engaged than a respondent given a 0. The expansive picture that rises is that microcredit borrowers are, on normal, more enabled contrasted with impending microcredit borrower. This is seen by means of a higher esteem on every strengthening pointer. Likewise, the dominant part of both micro credit borrowers and impending microcredit borrower show, low strengthening levels in the part of portability, choosing to work outside the home, and area possession. To estimate the effect of micro credit on empowerment this study constructs a multiple linear regression model with the ordinary least squares (OLS) method

**ANALYSIS OF VARIOUS INDICATORS ON RESPONDENTS**

TABLE 1

Parameters	190 respondents		126 female respondents who received micro credit		64 females respondents who have not received micro credit	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
<b>Decision making indicators</b>						
Make a small purchase Without consulting husband	0.25	0.43	0.29	0.46	0.16	0.37
Have a say if she can purchase major goods for the household	0.72	0.45	0.76	0.43	0.64	0.48
Have a say if they can work outside Home	0.11	0.31	0.14	0.35	0.05	0.21
Have a say in using the loan	0.87	0.34	0.90	0.29	0.80	0.41
Have a say in whether or not to send children to school	0.91	0.29	0.97	0.18	0.78	0.42
<b>Ownership indicators</b>						
Land in own name	0.04	0.20	0.06	0.23	0.02	0.13
Valuable owned such as jewellery	0.57	0.50	0.59	0.49	0.55	0.50
Have own operated saving account	0.34	0.47	0.50	0.50	0.02	0.13
<b>Voice indicators</b>						
People in the village listen to ideas and opinions	0.96	0.20	0.98	0.13	0.91	0.29
Comfortable giving opinion to the husband	0.77	0.42	0.82	0.39	0.69	0.47
<b>Mobility indicators</b>						
Comfortable going to the local market	0.15	0.36	0.17	0.38	0.11	0.31
Comfortable going to the neighboring Village	0.01	0.10	0.02	0.13	0.00	0.00

**MODEL SPECIFICATION**

The method of ordinary least squares (OLS) has been used to analyze the data. As mentioned earlier, the aim of this study is evaluate the impact of micro credit on women empowerment. The OLS model suits the purpose well in that a positive effect of micro credit on women empowerment is captured by the coefficient  $\beta_2$ . The null hypotheses is that micro credit has no effect women empowerment. If  $\beta_2$  obtains a significant positive value, it means that the null hypotheses can be rejected and that micro credit has a positive effect on women empowerment. Women empowerment is measured via an empowerment index. The index is built on the empowerment indicators presented earlier, which in turn are derived from the respondent's answers on the thirteen appropriate empowerment questions in the questionnaire. To be able to measure the respondent's answers to these questions a YES is transformed to a 1 and a NO is transformed to a 0. The values for each of the thirteen empowerment indicators are then summed into an aggregate index with one M point increments from 0 to 13. An individual with a high aggregate empowerment Index empowerment score is considered to be more empowered than an individual with a low aggregate empowerment index score. The OLS model, in its most basic form, only includes the dependent variable empowerment index and the independent variable micro credit borrower. The model is then built up gradually by adding one independent control variable at a time. This is done to derive how the relationship between micro credit and women empowerment changes when independent control variables are added. There are a total of twelve independent variables conducted for in the model. Thus, there are twelve models, where the most comprehensive model includes twelve independent variables. Equation 1 below defines the most comprehensive model with all the independent variables.

**EQUATION 1**

$$\text{Empowerment index} = \beta + \beta_1 \text{ Membership} + \beta_2 \text{ Age} + \beta_3 \text{ Micro credit borrower} + \beta_4 \text{ Education} + \beta_5 \text{ Spouse's Business} + \beta_6 \text{ Expenditure} + \beta_7 \text{ Years of Micro credit Program} + \beta_8 \text{ Agriculture work} + \beta_9 \text{ Household Landownership} + \beta_{10} \text{ Own Business} + \beta_{11} \text{ Age at Marriage} + \beta_{12} \text{ Number of Children} + \beta_{13} \text{ Number of Income earners in the Household} + \epsilon$$

Furthermore, this study aims to investigate the impact of micro credit on each of the empowerment indicators. The OLS models are, like before, built up gradually by adding one independent at a time. But the dependent variable is no longer empowerment index. Instead, each of the empowerment indicators is the dependent variable one at a time. In other words, the second OLS model has made small purchases as the dependent variable, the third OLS model has involved in decision to make large purchases as the dependent variable etc. As before, the relationship between the dependent variable and micro credit borrower is first tested, then independent control variables are gradually added.

Empowerment" is being used as an independent variable and Micro credit borrower, Years of Micro credit program membership, age, Education, Expenditure, Agricultural Work, Own Business, Husband's Business, Household Land Ownership, Age at Marriage Number of Children, and Number of Income Earners in the Household are the dependent variables and enter method has been used.

The first table provided by SPSS is a summary of the model that gives the value of R and R<sup>2</sup> for the model. For these data, R is 0.995 and because there is only one predictor, this value represents the simple correlation between "Empowerment" Micro credit borrower, Years of Micro credit program membership, age, Education, Expenditure, Agricultural Work, Own Business, Husband's Business, Household Land Ownership, Age at Marriage Number of Children, and Number of Income Earners in the Household (this can confirm by running a correlation). The value of R<sup>2</sup> is 0.913, which tells us that empowerment can account for 9.13% of the variation in Micro credit borrower, Years of Micro credit program membership, age, Education, Expenditure, Agricultural Work, Own Business, Husband's Business, Household Land Ownership, Age at Marriage Number of Children, and Number of Income Earners in the Household.

The next part of the output reports an analysis of variance (ANOVA). The most important part of the table is the F-ratio, which is calculated using equation (2), and the associated significance value. For these data, F is 33.007, which is significant at  $p < 0.000$  (because the value in the column labeled Sig. is less than 0.005). This result tells that there is less than a 0.0% chance that an F-ratio this large would happen by chance alone. In short, the regression model overall predicts rate of training needs significantly well.

The ANOVA tells whether the model, overall, results in a significantly good degree of prediction of the outcome variable. However, the ANOVA doesn't tell about the individual contribution of variables in the model (although in this simple case there is only one variable in the model and so we can infer that this variable is a good predictor). The table in SPSS Output 3 provides details of the model parameters (the beta values) and the significance of these values. Equation (1) show that  $b_0$  was the Y intercept and this value is the value B for the constant. So, from the table,  $b_0$  is 29.673, 9.231, 4.367, 3.427, 16.926, 60.376, 3.759, -2.108, -10.372, 5.413, -.385 -14.006, and this can be interpreted as meaning that when no there is micro credit borrowings (when  $X = 0$ ), the model predicts that there will be 29.67 times empowerment. All other variables are useful since the significant value  $> 0.05$  and the other values is significant at 95% confidence level except age education and number of Income.

### LIMITATIONS WITH THE CONTROL GROUP METHODOLOGY

The conceivable restrictions with the control bunch technique can be partitioned into four diverse classifications: test choice inclination, reverse causation, drop-outs and, motivational issues. Test determination predisposition alludes to the situation where the control gathering may turn out not to be totally similar with the medicine bunch. In different words, there will be a plausibility that the study experiences inclination due to endogeneity of choices included in program interest and the surreptitiously family unit, individual, and territory qualities. A fundamental concern in evaluating the sway of micro credit will be that program arrangement will be non-irregular and members self-select themselves into the micro credit program (A. Islam, 2007, p. 12). A prospective part chooses that he or she needs to take an interest in the micro credit program. The potential member likewise need to be endorsed by authorities of the microfinance establishment. Subsequently, there will be likely to be detectable and undetectable contrasts in qualities between members and non-members. Borrowers might, for instance, have a more entrepreneurial soul or be more committed. On the off chance that the medication bunch (the borrowers) have a inclination to have a property which will be not normally controlled for (such as entrepreneurial capability), the correlation between the medicine gathering and the control gathering will be pre-deposited since it will attribute accomplishments to the micro credit program that will be in certainty in part due to previous characteristics of the medication bunch. With a specific end goal to assess the project appropriately it is required to consider potential determination predisposition that could emerge for non-arbitrary arrangements of the micro credit system, and basic town particular, family particular and singular particular inconspicuous aspects (Hulme, 2000, p. 84, 85). To dodge inclinations that emerge due to previous characteristics this study use impending micro credit borrowers, acknowledged borrowers who have not yet gained a credit, as the control bunch. This study contends that acknowledged impending micro credit borrowers who have not yet accepted micro credit ought to have comparative entrepreneurial capability and commitment as the individuals who will be as of now micro credit borrowers. To bargain with town particular imperceptible aspects, the forthcoming micro credit borrowers and micro credit borrowers originate from the same towns.

The second potential problem with the control group method is reverse causation, which refers to the situation where some of the independent variables are endogenous. This might be the case when the dependent variable causes at least one of the independent variables, when there are relevant independent variables omitted from the model, or when the independent variables are subject to measurement error (Hulme, 2000, p. 85). Reverse causation is likely to be an issue given the model specification presented earlier. Observing that micro credit borrowers are more empowered than soon to be micro credit borrowers does not necessarily imply that micro credit made borrowers more empowered. For example, if a woman benefits from micro credit she is more likely to become empowered, but she is more likely to benefit from the micro credit if she is empowered.

Thus, the causal link could run from empowerment to benefit of micro credit, not the other way around. Using instrumental variables is a common approach to tackle the issue of endogeneity. This approach addresses the potential problem of reverse causation described above, but it is difficult to find suitable instruments. The instruments must both be uncorrelated with the dependent variable (empowerment index) and correlated with the variable that is suspected of being endogenous (micro credit). Given the number of different empowerment indicators encompassed in the empowerment index, and based on the small data, there does not appear to be any variable suitable to be an instrument for the potential endogenous variable. A review of studies with similar methodological approach used in this study shows that little effort has been devoted to examining the potential of endogeneity bias. This suggests that endogeneity is complicated to handle due to lack of data or not a severe concern in this kind of studies (see for example, Hashemi, Schuler, and Riley 1996).

The third potential problem with using the control group method is referred to as the dropout problem. Dropouts can cause an incomplete bias due to the fact that those who drop out presumably were impacted differently than those who remainder. Those who benefit from participation in a micro credit program invest the micro credit they are given in their business and generate more additional income than the interest they pay back on their loan. Most of these people stay in the micro credit program. Those who are made worse off fail to invest the money and then drop out. By including only those who remain in the program in the treatment group, those who suffer negative impact are ignored. This would lead to an overestimation impact analysis of the micro credit program. However, dropouts can also be generated by success. After successfully improving their business, they develop their own saving, and do not longer need micro credit and therefore leave the program. In this scenario, the impact analysis of the micro credit program would underestimate the impact since the greatest successes are ignored in the analysis. A potential solution to the dropout problem is to replace the dropouts with individuals sampled at random from the original population (Hulme, 2000, p.).

The fourth potential problem with using the control group method is referred to as the motivational problem. It might be the case that the treatment group and/or the control group refuse to reply or feel uncomfortable speaking about topics that are "taboo" in society. Another challenge is to be able to motivate the control group to respond to the questionnaire. The control group has no connection to the program evaluated, and their incentives to cooperate are low (Hulme, 2000, p. 90). This study approaches this potential problem by letting the control group be individuals who have been approved for micro credit but has not yet received micro credit. Consequently, this study argues that this group of soon to be micro credit borrowers should be as motivated to respond to the questionnaire as the treatment group.

### CONCLUSIONS

Following this paper theoretical framework, the hypotheses of this study is that the micro credit variables (micro credit borrower and years of micro credit program membership) will have a positive effect on women empowerment, i.e. their coefficients are positive for women's empowerment. However, it is possible that they

differ in their effects. A combination of women's increased economic activity and control over income resulting from micro credit is expected to improve women's decision making power, ownership of assets, mobility, and voice. In the context of Haryana, there are certain structural inequalities and social norms that reinforce the subservient position within the household and the community. This study doesn't suggest that micro credit will completely reverse these structural inequalities prevalent in the society. However, this study expects that micro credit will help women in contesting those prescribed gender rules and, hence, lead to greater empowerment.

There may be other factors that can have an impact on women's empowerment, and these variables are needed to control for. These independent variables are corresponding to the questions asked in the questionnaire and can be divided into two subgroups: individual and household characteristics. Individual characteristics include age, marital status, education, agricultural work, own business, Spouse's business. Household characteristics include expenditure, landownership, number of children, and number of income earners in the household.

Age can be both positively and negatively related to women's empowerment. It may be the case that younger females, because of their low age, lack power within the household and society. It may also be the case that older women are dependent on their Spouse's or sons for support. Age at marriage is seen as positively related to women's empowerment. This study argues that a woman that gets married at a high age are more prone to enabling herself through education and work, and not getting stuck in a childbearing and dependent state at a low age. Education is chosen to represent whether educated respondents are more or less empowered compared to uneducated respondents. It is expected that education can be both positively and negatively related to empowerment. Agricultural work is expected to have a negative impact on women empowerment since the agricultural sector, in general, brings low income which in turn may put women in a dependent state. Own business is expected to have a positive effect on women empowerment since this study assumes that a woman who has her own business is likely to control both her income and a potential micro credit. On the contrary, Spouse's business is expected to have a negative impact on women empowerment. A potential scenario for a woman who works in her Spouse's business is that she receives micro credit, which is invested in her Spouse's business. Thus, she loses control over both the micro credit and potentially her income. This study suggests that expenditure and land ownership can to some extent determine the household's standard of living. Both these variables are expected to have a positive effect on women empowerment since standard of living is negatively associated with the number of children in the household. A high number of children in the household bring, in general, a higher domestic workload for the woman. Thus, she is less likely to generate her own income and is put in a state of dependence. There is no explicit expectation on the sign of the coefficient linked to the number of income earners in the household. It can be argued that it can take a positive value since a household with more income earners can have a higher standard of living and are therefore more empowered following the earlier reasoning. On the other hand, it can be argued that it can take a negative value since more income earners in the household can lead to less decision making power over household expenditure, thus, negatively affecting women's empowerment.

A summary of the independent variables, including its definition and expected impact on empowerment, is shown in table below.

TABLE 2: SUMMARY OF THE EXPECTED IMPACTS

Parameter	Definition	Impact
Micro credit borrower	The respondent has received micro credit	+(Positive effect)
Years of Micro credit program membership	Number of years of micro credit program Membership	+ (Positive effect)
Age	Age of customers who are availing micro- finance in years	+/- (No effect)
Education	Education qualification of the respondent	+/- (No effect)
Expenditure	Monthly household expenditure	+ (Positive effect)
Agricultural Work	The respondents income earning activity is Agricultural	-(Negative effect)
Own Business	The respondents income earning activity is her Own business	+ (Positive effect)
Spouse's Business	The respondents income earning activity is their Spouse's business	-(Negative effect)
Household Land Ownership	Land ownership is defined in terms of acres	+ (Positive effect)
Age at Marriage	The age at which the respondent got married	+ (Positive effect)
Number of Children	The number of children the respondent has	-(Negative effect)
Number of Income Earners in the Household	The number of income earners in the household	+/- (No effect)

## RECOMMENDATIONS

The researcher has found that there is a positive effect on women empowerment with microfinance scheme. Similar work has also been done by SWAIN, R, L. Mayoux, Salman Asim, Ranjula Bali and many others. They have also concluded that there is a Positive effect on women empowerment with microfinance schemes. Thus, borrowers should avail microfinance as far as possible as it will make them more empowered. The researcher has found that there is a positive effect on empowerment on women with the number of years of microcredit membership. Similarly, Prema Basargekar, Chowdhury J, DEININGER, K. & LIU, Y and many others have also concluded that with mature groups microcredit can have economic benefits in the long run. Thus, it is recommended that women should be associated with the Microfinance as it benefits them. The researcher has found that there is a positive effect on the monthly household expenditure on women's empowerment. Similarly, Jyoti Prakash Basu, Sarahat Salma Chowdhury and others have also concluded the same. Thus, it is recommended that women have microcredit facility are more comfortable in spending the money and fulfilling their financial needs. The researcher has found a positive effect on the own business on women's empowerment. Similar conclusions have been drawn by Vanaja Menon, Mili Sarkar and many others. The same is recommended as her income earning ability increases when she directly invests money for herself. The researcher has found a positive effect on the small land holdings on women's empowerment. Similar conclusions have been drawn by Sureswari Prasad Das, Gerald Pollio and James Obuobie and many others. The same is recommended as they can buy more equipment's for their farm which would further increase their income and thus, make them more empowered. The researcher has found that age at which the respondent has got married has a positive effect on women's empowerment. And similar conclusions have been drawn by Kazi Abdur Rouf and others. The same is recommended as they would be more seasoned to utilise the funds more judiciously. Thus, the companies should also prefer the customers having the above mentioned characteristics. They should provide some additional benefits in the loan schemes to make them lucrative for customers, like they should provide additional EL (Emergency Loan), for the purposes of paying electricity bills, school fees, insurance etc.

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**TABLE 3: VARIABLES ENTERED/REMOVED<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	Number of Income Earners in the Household, Husband's Business, Education, Age at Marriage, age, Expenditure, Own Business, Household Land Ownership, Years of Micro credit program membership, Agricultural Work, Number of Children, Micro credit borrower	.	Enter

a. All requested variables entered.

b. Dependent Variable: empowerment

**TABLE 4: ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8878489.899	12	739874.158	33.077	.000 <sup>a</sup>
	Residual	849984.846	38	22368.022		
	Total	9728474.745	50			

a. Predictors: (Constant), Number of Income Earners in the Household, Husband's Business, Education, Age at Marriage, age, Expenditure, Own Business, Household Land Ownership, Years of Micro credit program membership, Agricultural Work, Number of Children, Micro credit borrower

b. Dependent Variable: empowerment

**TABLE 5: COEFFICIENTS<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	934.917	634.081		-1.474	.009
	Micro credit borrower	29.673	21.841	.721	1.359	.002
	Years of Micro credit program membership	9.231	3.242	.459	2.847	.007
	age	4.367	3.290	.131	1.327	.992
	Education	3.427	7.952	.043	.431	.669
	Expenditure	16.926	23.231	.176	.729	.001
	Household Land Ownership	60.376	41.027	.290	1.472	.009
	Own Business	3.759	21.392	-.333	-.643	.024
	Husband's Business	-2.108	2.770	-.113	-.761	.051
	Agricultural Work	-10.372	4.758	-.268	-2.180	.036
	Age at Marriage	5.413	5.631	.082	.961	.002
	Number of Children	-.385	22.041	-.004	-.017	.006
	Number of Income Earners in the Household	-14.006	40.513	-.068	-.346	.731

a. Dependent Variable: empowerment

**DOMESTIC DEBT, EXTERNAL DEBT AND ECONOMIC GROWTH OF JORDAN**

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**ABSTRACT**

*The present study explores the relationship between domestic debt, external debt and economic growth of Jordan measured by real gross domestic product by using quarterly time series data for the period (2004 Q<sub>1</sub> to 2014 Q<sub>2</sub>). The study used unit root test, Cointegration test, causality test, VAR and VEC models, Impulse response function and variance decomposition function to examine the study hypotheses. The study found that external debt has a positive and significant impact on economic growth of Jordan, while domestic debt is mostly having a negative significant impact on economic growth. The Cointegration test shows that there is a long run relationship between economic growth and domestic and external debt. While the causality test shows that there is a unidirectional relationship running from external debt to economic growth, which means that external debt leads to economic growth.*

**KEYWORDS**

economic growth, external debt, domestic debt, Jordan, causality, cointegration, VAR, VECM.

**1. INTRODUCTION**

The public debt considered as a main source to cover the public budget deficit and it is a tool of fiscal policy used for the management of the national economy. Economists split between supporters and opponents of this policy. Proponents said that the public debt is a key source of public revenue and economic growth. Opponents said that the public debt dispels government savings and affect negatively on economic competition.

The continued increase in the public budget deficit leads governments to borrowing to combat the deficit, which increases the size of the public debt, its burden and its consequences. This leads to problems in the management of the local economy and problems in the management of public debt, which it considered as one of the most important problems that currently facing Jordan.

The main reason of the external debt of developing countries is to fill the gap between savings and investment (Chenery, 1966). Developing countries that have a deficit of balance trade encouraged to borrow from developed countries and rich countries as well as from international institutions to stimulate economic growth. In the same context Gohar, Bhutto, and Butt (2012) wrote that developing countries borrow from countries and institutions to finance the deficit in the public budget in order to promote economic growth and poverty reduction. Also Apere (2014), Hameed, Ashraf, and Chaudhary (2008) Ogunment (2011) and Ayadi and Ayadi (2008) wrote that external borrowing is ought to accelerate economic growth especially when domestic financial resources are not enough and to be supported by foreign funds. While soludo (2003) wrote that countries borrow for macroeconomics reason such as higher investment, higher consumption i.e. education and health or to finance temporary balance of payment deficit to lower nominal interest rates results from the shortage of domestic long term credit or to overcome budget constraint.

The purpose of this study is to explore the relationship between domestic debt (DD), external debt (XD) and economic growth of Jordan measured by real gross domestic product (GDP) by using Cointegration test, Granger causality test, VAR and VEC models. The rest of the study is arranged as follow: section 2, literature review, section 3 data and methodology, section 4 empirical analysis and results discussion and section 5 conclusions.

**2. LITERATURE REVIEW**

A large number of scholar's have found that the external debt has a negative and significant effect on economic growth those scholar's referred that to the presence of debt overhang (Krugman, 1988; Sachs, 1989, Apere, 2014).

Kasidi and Said (2013) investigated the impact of external debt on economic growth of Tanzania for the period of 1990-2010. The study showed that there is positive and significant impact of the external debt on GDP while debt service payment has a negative and significant impact on GDP. The Cointegration test shows that there is no long run relationship between external debt and GDP.

Sulaiman and Azeez (2012) examined the effect of the external debt on economic growth of Nigerian. They used gross domestic product (GDP) as the endogenous variable measuring economic growth and external debt, inflation, and exchange rate as the exogenous variables. They used annual data for the period 1970 to 2010. For examining their study hypotheses, they used Ordinary Least Square (OLS), Augmented Dickey-Fuller (ADF) Unit Root test, Johansen Co-integration test and Error Correction Method (ECM). The cointegration test shows that long-run equilibrium relationship exist among the variables. They found that external debt has a positive and significant effect on Nigerian economic growth. The findings from the error correction method show that external debt has contributed positively to the Nigerian economy. The study recommends that government should ensure economic and political stability and external debt should be acquired largely for economic reasons rather than social or political reasons.

Tunde, (2012) examined the causality between public debt and economic growth in Nigeria for the 1970 to 2010. He used Augmented Dickey Fuller and Philip Perron test. Co-integration test and Vector Autoregressive (VAR). He found that there is a bi-directional causality between public debt and economic growth in Nigeria. They are positively related if the government used the external debt for development of the economy.

Rais and Anwar (2012) examined the impact of public debt (external and domestic debt) on economic growth of Pakistan for the period 1972- 2010. They used per capita income as a proxy for economic growth and external debt to GDP ratio and domestic debt to GDP ratio as measures for public debt and they used multiple linear regression to examine their study hypotheses. They found that external debt and domestic debt have both a negative and significant impact on economic growth and they referred that to both external debt, domestic debt are not well managed and not efficiently used.

Rahman, Bashar and Dey (2012) investigated the relationship between external debt and economic growth in Bangladesh for the period 1972 to 2010, by using Cointegration test and Granger Causality test; they found that there is a positive significant correlation between Gross Domestic Products (GDP) and External Debt. The result of Granger's Causality test implies that there is a bi-directional causality runs from external debt to economic growth and from economic growth to external debt.

Oke and Sulaiman (2012) investigated the impact of external debt on economic growth and the volume of investment in Nigeria between 1980 and 2008. They found that there is a positive relationship between external debt, economic growth and investment.

Amassoma (2011) investigated the causality relationship between external debt, domestic debt and economic growth in Nigeria for the 1970 to 2009 and used a Vector Autoregressive (VAR) and a Vector Error Correction (VEC) models. He found that there is not a long-run relationship between domestic debt and economic growth, while there is a long run relationship between external debt and economic growth, Amassoma also found a bi-directional causality between domestic debt and economic growth and a unidirectional causality from economic growth to external debt in Nigeria.

Malik, Hayat and Hayat (2010) investigated the impact of external debt on economic growth of Pakistan for the period 1972-2005. They found that external debt has a negative and significant impact on economic growth. They also found that debt servicing has significant and negative impact on GDP growth.

Adofu and Abula (2010) examined the relationship between domestic debt and economic growth in Nigeria for the period 1986 – 2005. They found domestic debt has a negative relationship with economic growth.

Reinhart and Rogoff's (2010b) showed that high levels of debt are negatively correlated with economic growth, but that there is no correlation between debt and growth when public debt is below 90 percent of GDP. They showed the threshold effect by using annual data about public debt and GDP for 20 advanced countries for the period 1946 to 2009. They divided the study sample into four groups, first, countries in which public debt to GDP is less than 30 percent of GDP. Second, countries in which the public debt to GDP is between 30 percent and 60 percent of GDP. Third, countries in which the public debt to GDP is between 60 percent to 90 percent of GDP and four, countries in which public debt to GDP is more than 90 percent of GDP. They computed the median and the GDP growth for each group. They found that no a big difference between the first three groups but they found that median and the GDP growth is lower for the fourth group countries which have a public debt to GDP greater than 90 percent of GDP.

Checherita and Rother (2010) examined the impact of government debt on per-capita GDP growth in twelve-euro area countries for the 1970 to 2009. They found a non-linear impact of debt on growth with a turning point beyond which the government debt-to-GDP ratio has a harmful impact on long-term growth at about 90-100% of GDP. They suggested that public debt has a negative impact on economic growth for the levels of 70 percent to 80 percent of GDP. They also showed that the annual change of the public debt ratio and the budget deficit-to-GDP ratio are negatively and linearly associated with per-capita GDP growth. The channels through which government debt (level or change) is found to have an impact on economic growth rate are private saving; public investment; total factor productivity and sovereign long-term nominal and real interest rates.

Liew, and Puah (2010) investigated the effect of external debt and domestic debt on the economic growth of Malaysia for the period 1970 to 2006. Using Cointegration test, Granger causality test. They found that external debt as well as domestic have a negative impact on economic growth of Malaysia. Moreover, they found that causality running from debt to economic growth of Malaysia.

Abdelmawla and Mohammed (2005) examined the impact of external debt on economic growth of Sudan for the period of 1978 to 2001. The study found that export has a significant positive impact on economic growth, while external debt and inflation have negative impact on Sudan's economic growth.

From the previous empirical studies, it observed that some studies focused on the relationship between public debt and economic growth, and between external and or domestic debt and economic growth. Some studies focused on the causality between public debt and economic growth. This study examined the relationship between public debt (external debt, domestic debt) and economic growth by using Cointegration test. The causality between public debt (external debt, domestic debt) and economic growth. In addition, the study examined the impact of the public debt (external debt and domestic debt) on economic growth of Jordan by using VAR and VEC models and impulse and Variance decomposition functions.

### 3. DATA AND METHODOLOGY

#### 3.1 DATA SOURCES

This study used quarterly time series data for the period 2004 Q<sub>1</sub> to 2014 Q<sub>4</sub>. Quarterly Real Gross Domestic Product (RGDP) used as an indicator for economic growth of Jordan, Quarterly external debt (XD) measured by total sum of external borrowing of Jordan, and Quarterly domestic debt (DD) measured by total sum of domestic borrowing of Jordan. We choose this period because the public debt of Jordan (domestic debt as well as external debt) witnessed a high increased. In spite, the public debt reduced to lower levels by the end of year 2000 since the government adopted a number of economic reform programs through the period 1989 to 2003 and used some of the privatization program revenues to pay debt. However, after that the government faced many financial problem, which imposed the government to finance the public deficit from both domestic debt and external debt. All the data collected from the Central Bank of Jordan database (central bank of Jordan, 2014).

#### 3.2 STUDY VARIABLES

3.2.1 Real gross domestic product (RGDP): the gross domestic product at basic prices used as an indicator for economic growth. Governments overall the world used all possible policies to have a good economic growth rates, since an increase in economic growth well increase employment for all available production resources and increasing income for all sectors as well as people and this will increase governments revenues through different taxes imposed in the economy. Economic development also attracts domestic as well as foreign investors to invest in the existing projects through stock markets or establishing new projects to achieve profits (Campbell and Hopenhayn, 2003; Fasvely, Greenaway, and Yu, 2007).

3.2.2 Domestic debt (DD): the total amount of Jordan Government borrowing from domestic market. Government used domestic borrowing to avoid inflation, external crisis and to carry the danger of excess domestic borrowing. It is well known that the government domestic borrowing leads to crowding out effect, which reduces the credit available for private sector and makes a negative pressure on domestic interest rate (Apere, 2014).

3.2.3 External Debt (XD) the total amount of Jordan government borrowing from abroad. The government borrows from abroad for reasons related to public budget deficit, current account deficit and the shortage in the domestic investment, Gohar, Bhutto and Butt (2012).

#### 3.3 THE METHODOLOGY

##### 3.3.1 VAR Model

In order to observe the overall impact of external debt on economic growth of Jordan the equation estimated growth model as suggested by Amassoma. (2011) with some modification to meet the study goals. This study is looking to find an evidence on the relationship between domestic debt, external debt and real GDP the indicator of economic growth of Jordan. The dynamical relationship among domestic debt, external debt and real GDP is investigated by using Vector Autoregressive model (VAR) or Vector Error-Correction Model (VECM). Since a vector error correction model is a special form of the VAR model for I (1) variables which are cointegrated (Griffiths, Hill, and Lim, 2008). VAR model describes a system of equations in which each variable is a function of its own lag and the lag of the other variables in the system (Al-qudah, 2014).

According to Johansen Cointegration Test the study variables are cointegrated have a long run relationship, therefore the study used the restricted VAR model (vector error correction model) (Al-qudah, 2014). The final form of the Vector Error-Correction Model (VECM) was selected according to the approach suggested in (Maddala, 1992; Antonios, 2010).

$$\Delta \text{RGDP} = \beta_1 + \sum_{i=1}^n \beta_2 \Delta \text{RGDP}_{t-i} + \sum_{i=1}^n \beta_3 \Delta \text{DD}_{t-i} + \sum_{i=1}^n \beta_4 \Delta \text{XD}_{t-i} + \lambda \text{ECt} - i + \varepsilon_t$$

where  $\Delta$  is the first difference,  $\text{ECt-1}$  is the error correction term lagged one period,  $\lambda$  is the short-run coefficient of the error correction term ( $-1 < \lambda < 0$ ),  $\varepsilon_t$  is the error term. GDP: Real Gross Domestic Product (proxy for economic growth) DD: domestic debt, XD: external debt, t: time.  $\beta_1$ : intercept of relationship in the model (constant), and  $\beta_2, \beta_3, \beta_4$ : Coefficients.

For estimation process, we used econometric software E Views 6 provided by Quantitative Micro Software.

##### 3.3.2 Study Hypotheses

The study has the following alternative hypotheses:

H1: There is a significant relationship between domestic debt and economic growth measured by real GDP.

H2: There is a significant relationship between external debt and economic growth measured by real GDP.

### 4. ESTIMATION AND ANALYSIS

#### 4.1 UNIT ROOT TEST

The study performed a unit root test for quarterly Real Gross Domestic Product (RGDP) of Jordan, quarterly external debt (XD), quarterly domestic debt (DD) by using the Augmented Dickey-Fuller (ADF) developed by Dickey and Fuller (1981) and Phillips Perron (PP) tests developed by Phillips and Perron (1988). This is important because most time series exhibit non-Stationarity behaviors in their level form, which often postures a serious problem to econometric analysis and may therefore lead to spurious result if appropriate measures are not taken (Amassoma, 2011). If the time series are stationary at level VAR model is used.

However, if they are not stationary at level and the Cointegration equations are statistically significant VECM is used; otherwise, VAR model is used (Eryigit, 2012 and Toraman et al., 2011, Al-Qudah, 2014).

From Table (1) the results of Augmented Dickey Fuller (ADF) unit root test, when we test for unit root test at level and (non, trend, trend and intercept) all variables are not stationary in their level, after the first difference only external debt is stationary and all variables are stationary after the second difference. This enables us to avoid the problems of spurious regressions that are associated with non-stationary time series models.

TABLE 1: AUGMENTED DICKEY FULLER (ADF) UNIT ROOT TEST

Variable	Calculated ADF Statistics	5% ADF Critical Value	Probability	Order of Integration	Stationary/ Not Stationary
RGDP	1.165439	-1.95012	0.9343	I(0)	Not stationary
DD	1.39565	-2.935	0.9987	I(0)	Not stationary
XD	1.530016	-1.9491	0.9669	I(0)	Not stationary
RGDP	1.165439	-1.95012	0.9343	I(1)	Not stationary
DD	-1.61637	-1.94961	0.0991	I(1)	Not stationary
XD	-4.14682	-1.94932	0.0001	I(1)	Stationary
RGDP	-5.3105	-1.951	0.0000	I(2)	Stationary
DD	-12.4648	-1.94961	0.0000	I(2)	Stationary
XD	-7.48215	-1.94986	0.0000	I(2)	Stationary

4.2 LAG SELECTED

The lag selection criteria is used to select the optimum lag because it is necessary to avoid over parameterizing model, (Al-Eitan 2012, al-qudah, 2014). The optimal lag is necessary to perform Cointegration test, Granger Causality test, VAR and VECM. To determine the appropriate number of lag length. VAR lag order selection criteria is used. The lag selection criteria results are shown in Table (2). We use Akiake Information Criteria (AIC), Schwarz information Criterion (SC) criteria and Hannan-Quinn information criterion (HQ). Which indicate that the optimal lag is (4) lags.

TABLE 2: VAR LAG ORDER SELECTION CRITERIA

Endogenous variables: RGDP, DD, XD

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-907.9254	NA	1.91E+18	50.60697	50.73893	50.65302
1	-770.4878	244.3335	1.52E+15	43.47154	43.99938	43.65577
2	-756.8404	21.98755	1.19E+15	43.21335	44.13707	43.53576
3	-725.7761	44.87056	3.61E+14	41.98756	43.30716	42.44814
4	-708.5353	22.02992*	2.42E+14	41.52974	43.24522*	42.12849*
5	-697.6489	12.09604	2.40E+14*	41.42494*	43.5363	42.16186
6	-689.2557	7.926903	2.90E+14	41.45865	43.96589	42.33374

\* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

4.3 COINTEGRATION TEST

After testing for unit roots, we proceed to test for co-integration (long run relationship between variables). The Johansen co-integration test is applied to examine the long-run relationship between the variables. The Trace test as well as Max-eigenvalue test indicates (1) cointegrating equation at the 0.05 level. This imply that there is a long run relationship between domestic debt (DD), external debt (XD) and real GDP. So we have to use vector autoregressive model (VECM) which it is a restricted (VAR). This result is consistent with result of Sulaiman and Azeez (2012), Kasidi and Said (2013).

TABLE 3: UNRESTRICTED COINTEGRATION RANK TEST (TRACE)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.506531	35.28796	29.79707	0.0105
At most 1	0.148777	9.155024	15.49471	0.3513
At most 2	0.082729	3.195025	3.841466	0.0739

Trace test indicates 1 cointegrating equation (s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

TABLE 4: UNRESTRICTED COINTEGRATION RANK TEST (MAXIMUM EIGENVALUE)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.506531	26.13294	21.13162	0.0091
At most 1	0.148777	5.959999	14.2646	0.6183
At most 2	0.082729	3.195025	3.841466	0.0739

Max-eigenvalue test indicates (1) cointegrating equation (s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

4.5 PAIRWISE GRANGER CAUSALITY TESTS

After the unit root test and the Cointegration test are established, the study employed Pairwise Granger causality test, to know the direction of causality between public debt (domestic debt, external debt) and economic growth in the economy of Jordan. Whether domestic debt causes real GDP or real GDP causes domestic debt. External debt causes real GDP, or real GDP causes external debt, and domestic debt causes external debt or external debt causes domestic debt, since this causality may be bidirectional or unidirectional between study variables.

H0: domestic debt does not Granger cause Real GDP and vice versa.

H1: domestic debt does Granger cause Real GDP and vice versa.

H0: external debt does not Granger cause Real GDP and vice versa.

H1: external debt does Granger cause Real GDP and vice versa.

H0: domestic debt does not Granger cause external debt and vice versa.

H1: domestic debt does Granger cause external debt and vice versa.

To test the above hypotheses, we use (F- statistic) If the P value is less than 5%, we reject null hypothesis and accept alternative hypothesis. From Table (5), we can see that external debt does Granger cause real GDP, since F-statistic is (5.68563) and P value is (0.0017) which is less than 5% so we can reject H0 and accept H1 that means external debt causes economic growth of Jordan. Therefore, there is a unidirectional causality running from external debt to real GDP of Jordan the indicator of economic growth. While domestic debt does not Granger cause Real GDP since F-statistic is (1.14504) and P value is (0.3552) so we accept H0 and reject H1 that means domestic debt does not cause real GDP. and there is a bi-directional causality between external debt and domestic debt, this means that both external debt and domestic debt leads to one another. This result consistent with results of ( Leiw and Puah, 2010; Tunde, 2012; Rahma, Bashar and Dey, 2012).

TABLE 5: PAIRWISE GRANGER CAUSALITY TESTS

Null Hypothesis:	Obs	F-Statistic	Prob.
DD does not Granger Cause RGDP	38	1.14504	0.3552
RGDP does not Granger Cause DD		1.98536	0.1231
XD does not Granger Cause RGDP	38	5.68563	0.0017
RGDP does not Granger Cause XD		2.41221	0.0718
XD does not Granger Cause DD	38	3.1742	0.028
DD does not Granger Cause XD		2.98148	0.0354

4.6 IMPULSE RESPONSE FUNCTION

Sims (1980) suggested the use of impulse response and variance decomposition to help in explaining the VAR system response to shocks that represent positive residuals of standard deviation unit in each equation in the system. A one random shock in the VAR system produces a series of reactions over time in all variables in the VAR system. Impulse response functions calculate these reactions (Alqudah, 2014).

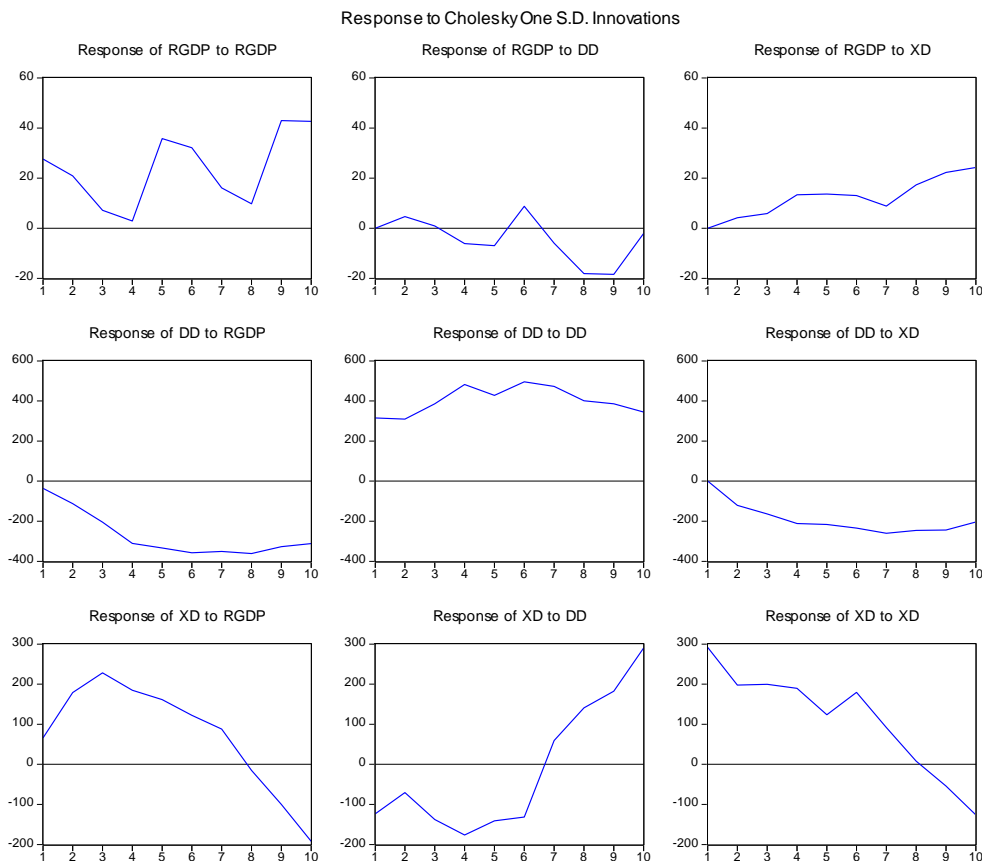
We applied the Impulse Response Function based on VEC model to find real GDP responds to own shocks, external debt shocks and domestic debt shocks. Plotting the response to Cholesky one standard deviation functions is a practical way to explore the response of each variable to a shock immediately or with various lags (Eryigit, 2012, Alqudah, 2014). Figure (1) shows the impulse-responses results for a positive shock of one standard deviation of real GDP, external debt and domestic debt to real GDP, external debt and domestic debt.

From Figure (1), the response of real GDP to own shocks. It is well illustrated that real GDP reacts positively to own shocks for the (10) quarters. but this response is not constant since the response ranged between increasing and decreasing and this is due to the economic growth in Jordan is not growing at a steady and sustainable way influenced by internal, regional and international economic and political conditions.

The response of real GDP to domestic debt shocks. It shows that domestic debt has a positive effect on real GDP for the (1, 2 and 3) quarters but it has a negative effect on real GDP for the other quarter the negative effect is very strong for the (8 and 9) quarters. So the domestic debt effect is mostly negative and significant this could be attribute to the fact the domestic debt is used for capital projects such as construction of roads, schools, hospitals etc. instead of used it in boosting economic and enhancing economic growth. In addition, it is well known that the internal debt leads to the crowding out effect. The crowding out of the public sector to the private sector on the funds available to finance private enterprises from the banking sector, and this leads to slower the private sector ability to grow and maximize profits. this is reflected negatively on the government taxes returns, which increases government needs of borrowing to finance public deficit, financing installments due and current expenditure. This leads to enter the economy in case of decline and contraction because of the absorption of liquidity from the economy. This result consistent with result of (Abdelmawla and Mohammed, 2003; Malik, Hayat and Hayat, 2010; Dofu and Abula, 2010 and Leiw and Puah, 2010) and they referred that to the bad management and efficiency of the domestic debt.

The response of Real GDP for external debt, the graph shows that the external debt has a positive and significant effect on real GDP; this could be attributed to the fact that the external borrowing has been channeled to highly productive activities that would increase the overall output of the economy and enhancing economic growth. This result is consistent with result of (Suleiman and Azeez, 2012; Tude, 2012; Rahman, Bashar and Dey, 2012; Kasidi and said 2013, and Oke and Sulaiman, 2012) they attributed this positive significant impact for the well managing of the external debt and using it in productive projects.

FIGURE 1: RESPONSE TO CHOLESKY ONE STANDARD DEVIATION (SD) INNOVATION



**4.7 VARIANCE DECOMPOSITION OF REAL GDP**

Vector Autoregressive (VAR) system is characterized by its ability of forecasting especially the short-term one. Variance decomposition shows how much a random shock to one innovation is responsible for forecasting the other innovation subsequent fluctuation that is not accounted by its own prior fluctuation (Sims, 1980; Al-Qudah, 2014). Therefore, the study used the variance decomposition function as the second method to estimate the dynamic response of real GDP, domestic debt (DD) and external debt to an unexpected change for the variable its self or the change in other variables. The study developed variance decomposition under VEC environment to examine how real GDP, respond to own and domestic debt (DD) and external debt (XD) shocks, over a period of 10 quarters. Table (6) shows the variance decomposition of real GDP.

**TABLE 6: VARIANCE DECOMPOSITION OF REAL GDP**

Variance Decomposition of RGDP				
	S.E.	RGDP	DD	XD
1	0.276012	100	0	0
2	0.3517687	96.89339	1.705611	1.400998
3	0.3638318	94.44719	1.650746	3.902068
4	0.3932594	81.36287	3.8676	14.76953
5	0.5529377	82.93525	3.544414	13.52034
6	0.6583571	82.28206	4.273732	13.44421
7	0.6859625	81.26144	4.693958	14.0446
8	0.7366446	72.20736	10.12533	17.66731
9	0.9002326	71.08278	10.98741	17.92981
10	1.02527	72.06651	8.512969	19.42052

From Table (6) in the first quarter, 100% of the change in real GDP expressed by its own shocks, 0.00% of the change expressed by domestic debt and external debt. In the third quarter, 94.4% of the change in real GDP expressed by its own shocks, 1.65% and 3.9% of the change are expressed by domestic debt (DD) and external debt (EX) respectively. It can be seen that in quarter (5) 82.2% of the change in real GDP expressed by its own shocks, 3.5% and 13.5% of the change are explained by domestic debt and external debt respectively. While in quarter (10) 72% of the change in real GDP expressed by its own shocks, 8.5% and 19.4% of the change expressed by domestic debt and external debt. So, external debt has a higher impact on real GDP. This result confirms the result of impulse response and granger causality test.

From Table (7) concerning the response of domestic debt (DD) to its own shocks is 98.74% of the change in domestic debt expressed by its own shocks in the first quarter. In quarter 10 56.6% of change in domestic debt expressed by its own shocks while 29% and 14% of the change in domestic debt (DD) expressed by real GDP and external debt (XD) respectively.

**TABLE 7: VARIANCE DECOMPOSITION OF DOMESTIC DEBT (DD)**

Variance Decomposition of DD				
Period	S.E.	RGDP	DD	XD
1	3.173489	1.257926	98.74207	0
2	4.728597	6.22054	87.21171	6.56775
3	6.646088	12.69109	77.87216	9.436746
4	9.030775	18.70088	70.71074	10.58838
5	1.07536	22.79335	65.69574	11.51091
6	1.258741	24.69086	63.42909	11.88005
7	1.413896	25.72614	61.45975	12.81411
8	1.533129	27.42723	59.1082	13.46457
9	1.632751	28.20483	57.68699	14.10817
10	1.709874	29.04073	56.6684	14.29087

From table (8) concerning the response of external debt (XD) to its own shocks is 81.2% of change in external debt is expressed by its own shocks while 4.1% and 14.5% of the change in external debt expressed by real GDP and domestic debt.

**TABLE 8: VARIANCE DECOMPOSITION OF EXTERNAL DEBT (XD)**

Variance Decomposition of XD				
Period	S.E.	RGDP	DD	XD
1	3.235434	4.167352	14.55555	81.2771
2	4.250259	20.1242	11.18774	68.68805
3	5.39833	30.31993	13.44145	56.23862
4	6.266823	31.20387	17.90694	50.88919
5	6.738524	32.73443	19.87889	47.38669
6	7.200646	31.54327	20.756	47.70074
7	7.335438	31.82585	20.65378	47.52037
8	7.471718	30.71739	23.46892	45.81369
9	7.774601	30.02049	27.17792	42.8016
10	8.611961	29.44821	33.52252	37.02927

**5. CONCLUSIONS**

The objective of the current study is to examine the relationship between domestic debt, external debt and economic growth of Jordan measured by real GDP. In addition, examine the causality between domestic debt and real GDP and the causality between external debt and Real GDP. By using Quarterly time series data for the period (2004 Q<sub>1</sub> to 2014 Q<sub>2</sub>). The study used unit root test, Cointegration test, Granger Causality test VAR, VEC impulse response function and variance decomposition function to examine the study hypotheses.

The results of Cointegration test shows that there is a long run relationship between external debt and domestic debt and economic growth measured by real GDP.

The results of Granger causality tests show that there is a unidirectional causality between external debt and economic growth measured by real GDP. Running from external debt to real GDP. This implied that external debt leads to an economic growth. (Suleiman and Azeez, 2012; Tude, 2012; Rahman, Bashar and Dey, 2012; Kasidi and said 2013, and Oke and Sulaiman, 2012) referred that to the well managing of the external debt and using it in productive projects.

The impulse response shows that a shock to external debt has a significant and positive effect on real GDP almost after the first quarter. This due to that external debt is used in boosting economy. countries should obtain external debt basically for economic reasons rather than social or political reasons. This would increase the productivity of the countries.

The impulse response shows that a shock to domestic debt has almost a negative significant impact on real GDP. This means that domestic debt has a negative impact on economic growth. this could be attribute to the fact the domestic debt is used for capital projects such as construction of roads, schools, hospitals etc.

instead of used it in boosting economic and enhancing economic growth. In addition to the crowding out of the public sector to the private sector on the funds available to finance private enterprises from the banking sector which leads to increase interest rates and decreasing investment and private consumption and then decline economy. (Abdelmawla and Mohammed, 2003; Malik, Hayat and Hayat, 2010; Dofu and Abula, 2010 and Leiw and Puah, 2010) referred that to the bad management and inefficiency of the domestic debt.

The response of the real GDP to its own shocks is positive and significant for the 10 quarters but this positive effect is fluctuated, this due to the Jordan economic growth is not growing steady way. Because it is affected positively and or negatively by the regional and international economic and political conditions since the Jordan economy is an opened economy where the external trade represents more than 80% of Jordan GDP.

The variance decomposition results show that real GDP is affected by external debt by a percentage greater than domestic debt. While Real GDP is highly affected by its own shocks since, it was 100% in the first year and 72% in quarter (10).

The policy implication of the study results is that external debt will stimulate economic growth of Jordan. Thus, government should rely more on external debt in stimulating growth rather than domestic debt. Under a condition, the external debt must be invested in productive projects. In addition, Jordanian policy makers' should play an effective role in monitoring Jordan's total debt position, to avoid overhang situation, which is according Reinhart and Rogoff's (2010b) is more than 90% of GDP.

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## EVIDENCE AGAINST EXISTENCE OF SIZE EFFECT IN THE INDIAN CONTEXT

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**ABSTRACT**

*This paper presents evidence against the size effect in the Indian context. The size effect is the phenomenon of small cap stocks generating higher returns than large cap stocks. The size effect can also be stated as the phenomenon of small cap stocks generating returns more than is predicted by their beta (beta of Capital Asset Pricing Model). The study considers the BSE SmallCap index to represent the small cap segment in India. The Jensen's alpha (Jensen, 1968) is found to be statistically insignificant for the BSE SmallCap index. This confirms that the BSE SmallCap index generates returns in conformity with that estimated by the CAPM and is an evidence against the size effect in the Indian context. The Jensen's alpha for the BSE MidCap index (a representative index of the midcap segment in India) is also computed to compare the results with that obtained for BSE SmallCap. The results are same as that for the BSE SmallCap, that is, the Jensen's alpha for the BSE MidCap index too is statistically insignificant. The betas of both these indices, that is, the BSE SmallCap and the BSE MidCap are statistically significant and greater than one implying that their systematic risk is greater than that of the market. And of the small cap and the midcap indices, the beta of the former is greater than that of the latter. The period of the study is April 2003 till March 2015.*

**KEYWORDS**

size effect, BSE SmallCap, BSE MidCap.

**INTRODUCTION**

The size effect is the phenomenon of small cap stocks generating higher returns than large cap stocks. The size effect can also be stated as the phenomenon of small cap stocks generating returns more than is predicted by their CAPM beta. Since the phenomenon of size effect is unexplained by the Capital Asset Pricing Model (CAPM) the phenomenon is considered an anomaly. Since its documentation by Banz (1981), the size effect has received lot of attention in the Finance research literature all over the world. Many authors have presented evidence in support of the size effect in the Indian context too.

In order to test the size effect, it would suffice to test if the returns to the small cap stocks in India are in conformity with that predicted by the CAPM. If the returns to the small cap stocks are in excess to that estimated by the CAPM it can be inferred that the size effect exists in India.

The study considers the BSE SmallCap index of the Mumbai Stock Exchange (BSE) to represent the small cap segment in the Indian context. The BSE MidCap index, the midcap index of the BSE has also been included in the study just to see if size effect is observed in the midcap stocks as midcap stocks are of lower market capitalization than the large cap stocks. Two proxies for the market are considered, one, the BSE Sensex and two, the BSE 500 index. The period of the study is April 2003 till March 2015.

Surprisingly enough, the study finds that for both the market proxies considered the BSE MidCap and the BSE SmallCap do not earn returns in excess of that predicted by the CAPM and that their returns are in conformity with that predicted by the CAPM. This is evidence against the existence of size effect in India. It is found that the betas of both these indices, that is, the BSE SmallCap and the BSE MidCap are statistically significant and above one implying that their systematic risk is greater than that of the market. And of the small cap and the midcap indices, the beta of the former is greater than that of the latter.

**REVIEW OF LITERATURE**

Blume and Friend (1974) study common stocks on the New York Stock Exchange (NYSE) for the period 1928-68 and come to the conclusion that the beta performs relatively better for large capitalization stocks as compared to small capitalization stocks. Levy (1978) after a study of a sample of 101 stocks listed on the New York Stock Exchange (NYSE) comes to a conclusion consistent with that of Blume and Friend (1974) by stating that for widely held stocks beta seems to provide a better explanation for price behaviour while for stocks that are not held by many investors, variance seems to provide a better explanation for price behaviour. Levy (1978) claims consistency by stating that we could possibly assume large capitalization stocks to be widely held stocks. The time period of the Levy (1978) study is 1948-68.

Banz (1981) and Reinganum (1981 a) document the size effect – that size (measured by market capitalization) and average stock returns were inversely related. They observe that small-capitalization firms generated higher average returns than estimated by the Sharpe-Lintner capital asset-pricing model (CAPM). Banz studies the monthly returns for the period 1931-75 for New York Stock Exchange (NYSE) listed stocks. For this period, the fifty smallest stocks perform better than the fifty largest by an average of one percentage point per month when risk adjusted returns are considered.

Keim (1983) studies the month to month stability of the size effect for the time period 1963-1979 for a sample of NYSE and AMEX stocks. The study gives evidence in support of the size effect and also documents that about fifty percent of the average magnitude of the size effect could be attributed to the January effect - the phenomenon of high abnormal returns in January relative to the rest eleven months.

Schultz (1983) does a decile ranking of NYSE and American Exchange (AMEX) stocks taken together on the basis of market capitalization for the time period 1963 till 1979. The study finds that for holding periods of one year the smallest decile of stocks earn average risk adjusted returns of about 31 percent per year net of transaction costs. So the study concludes that higher transaction costs of small cap stocks cannot explain the size effect.

Fama and French (1993) study all the NYSE Stocks on the CRSP database for the time period 1963 till 1991 to demonstrate that a three factor model (which is popularly called the Fama-French Three Factor Model) with market, size (measured by market capitalization) and value (measured by ratio of book equity to market equity) factors is able to describe stock returns better than the CAPM thus providing additional support for the size effect and also highlighting the inability of the CAPM and beta in describing small capitalization stock returns.

There have been many studies supporting the view that the Fama-French model is a good descriptor of stock returns in the Indian market and other emerging economies. Connor and Sehgal (2001) and Mohanty (2001) state that the Fama-French three factor model well describes the stock returns in the Indian context. Drew (2003) gives evidence supporting the applicability of the Fama-French model in Hong Kong, Korea, Malaysia and the Philippines. Bundoo (2008) states that the Fama-French three factor model is a good descriptor of returns for stocks listed on the Stock Exchange of Mauritius. Tripathi (2008), Bahl (2006) and Taneja (2010) are among the other authors who have given evidence in support of the Fama-French three factor model in the Indian context.

The fact that the Fama-French three factor model has found support in the context of India and other countries implies support for the size effect in these countries.

**DATA AND METHODOLOGY**

The well-known Sharpe (1964) and Lintner (1965) Capital Asset Pricing Model (CAPM) is given by

$$R_i = R_f + \beta_i (R_m - R_f), (1)$$

where,  $R_i$  is the return of the  $i^{\text{th}}$  stock,  $R_f$  is the risk free rate of return,  $\beta_i$  is the beta of the  $i^{\text{th}}$  stock and  $R_m$  is the return of the market.

The excess return earned by a stock, index or a portfolio over and above the return estimated for it by the CAPM can be determined by computing the Jensen's alpha given by Jensen (1968). It is the alpha given in the below equation.



$$R_i - R_f = \alpha_i + \beta_i (R_m - R_f) \quad (2),$$

where  $\alpha_i$  is the alpha of the  $i^{\text{th}}$  asset.

Two proxies for the market have been considered, one the BSE Sensex and two, the BSE 500 index. The data for these two market proxies as well as for the BSE SmallCap and BSE MidCap indices have been obtained for the time period April 2003 till March 2015 from the official website of the Mumbai Stock Exchange (BSE), [www.bseindia.com](http://www.bseindia.com). It is to be noted that the BSE website does not have any data for the indices BSE SmallCap and BSE MidCap before April 2003. The interest rates data on Central Government Dated Securities for the time period April 2003 till March 2015 obtained from the official website of the Reserve Bank of India, [www.rbi.org.in](http://www.rbi.org.in), have been considered as the proxy for the risk free rate. The monthly percentage returns for the two market proxies, the BSE Sensex and BSE 500 index as well as for the BSE SmallCap and BSE MidCap indices were computed for the time period May 2003 till March 2015 using the monthly closing values of the indices. The annual interest rates obtained from the Reserve Bank of India website were converted to monthly rates.

## RESULTS & DISCUSSION

The regression for the Jensen's alpha equation stated earlier is run for the BSE SmallCap and BSE MidCap were run using the EasyReg econometric software (Bierens, 2015) and the Jensen's alpha is obtained for the indices BSE SmallCap and BSE MidCap using both BSE Sensex and BSE 500 as market proxies. Surprisingly, the Jensen's alpha for both the indices BSE SmallCap and BSE MidCap are statistically insignificant for both the market proxies, BSE Sensex and BSE 500. The EasyReg software reports heteroscedasticity consistent t-values, standard errors and p-values (observed significance levels) based on White's heteroscedasticity consistent variance matrix (White, 1980). The EasyReg outputs for the Jensen's alpha equation regression for the indices BSE SmallCap and BSE MidCap for both the market proxies follow.

FIGURE 1: EASYREG OUTPUT FOR BSE SMALLCAP USING BSE SENSEX AS THE MARKET PROXY

```

EasyReg International [May 27, 2015]
Session date: Sunday March 27, 2016
Session time: 13:05:08
-----
Dependent variable:
Y = BSE SmallCap - Rf

Characteristics:
BSE SmallCap - Rf
  First observation = 1
  Last observation  = 143
  Number of usable observations: 143
  Minimum value: -3.3113601E+001
  Maximum value:  5.1331634E+001
  Sample mean:    1.7019129E+000

X variables:
X(1) = Sensex - Rf
X(2) = 1

Model:
Y = b(1)X(1) + b(2)X(2) + U,
where U is the error term, satisfying
E[U|X(1),X(2)] = 0.

OLS estimation results
Parameters      Estimate      t-value      H.C. t-value
                (S.E.)      (S.E.)      (H.C. S.E.)
                [p-value]   [p-value]
b(1)            1.2422606    17.140      14.639
                (0.07248)   (0.08486)
                [0.00000]   [0.00000]
b(2)            0.1927963    0.371       0.392
                (0.51927)   (0.49229)
                [0.71043]   [0.69533]

Notes:
1: S.E. = Standard error
2: H.C. = Heteroskedasticity Consistent. These t-values and
   standard errors are based on White's heteroskedasticity
   consistent variance matrix.
3: The two-sided p-values are based on the normal approximation

```

FIGURE 2: EASYREG OUTPUT FOR BSE MIDCAP USING BSE SENSEX AS THE MARKET PROXY

EasyReg International [May 27, 2015]  
 Session date: Sunday March 27, 2016  
 Session time: 13:07:58

-----  
 Dependent variable:  
 Y = BSE MidCap - Rf

Characteristics:  
 BSE MidCap - Rf  
 First observation = 1  
 Last observation = 143  
 Number of usable observations: 143  
 Minimum value: -3.3928456E+001  
 Maximum value: 4.3324998E+001  
 Sample mean: 1.4954530E+000

X variables:  
 X(1) = Sensex - Rf  
 X(2) = 1

Model:  
 $Y = b(1)X(1) + b(2)X(2) + U$ ,  
 where U is the error term, satisfying  
 $E[U|X(1), X(2)] = 0$ .

OLS estimation results

Parameters	Estimate	t-value (S.E.) [p-value]	H.C. t-value (H.C. S.E.) [H.C. p-value]
b(1)	1.1525525	23.763 (0.04850) [0.00000]	18.934 (0.06087) [0.00000]
b(2)	0.0953152	0.274 (0.34751) [0.78387]	0.286 (0.33274) [0.77453]

Notes:

- 1: S.E. = Standard error
- 2: H.C. = Heteroskedasticity Consistent. These t-values and standard errors are based on White's heteroskedasticity consistent variance matrix.
- 3: The two-sided p-values are based on the normal approximation.

FIGURE 3: EASYREG OUTPUT FOR BSE SMALLCAP USING BSE 500 AS THE MARKET PROXY

EasyReg International [May 27, 2015]  
 Session date: Sunday March 27, 2016  
 Session time: 12:45:11

-----  
 Dependent variable:  
 Y = BSE SmallCap - Rf

Characteristics:  
 BSE SmallCap - Rf  
 First observation = 1  
 Last observation = 143  
 Number of usable observations: 143  
 Minimum value: -3.3113601E+001  
 Maximum value: 5.1331634E+001  
 Sample mean: 1.7019129E+000

X variables:  
 X(1) = BSE 500 - Rf  
 X(2) = 1

Model:  
 $Y = b(1)X(1) + b(2)X(2) + U$ ,  
 where U is the error term, satisfying  
 $E[U|X(1), X(2)] = 0$ .

OLS estimation results

Parameters	Estimate	t-value (S.E.) [p-value]	H.C. t-value (H.C. S.E.) [H.C. p-value]
b(1)	1.2328445	24.081 (0.05120) [0.00000]	19.537 (0.06310) [0.00000]
b(2)	0.0597305	0.148 (0.40324) [0.88224]	0.156 (0.38273) [0.87598]

Notes:

- 1: S.E. = Standard error
- 2: H.C. = Heteroskedasticity Consistent. These t-values and standard errors are based on White's heteroskedasticity consistent variance matrix.
- 3: The two-sided p-values are based on the normal approximation.

FIGURE 4: EASYREG OUTPUT FOR BSE MIDCAP USING BSE 500 AS THE MARKET PROXY

EasyReg International [May 27, 2015]  
 Session date: Sunday March 27, 2016  
 Session time: 12:41:16

-----  
 Dependent variable:  
 Y = BSE MidCap - Rf

Characteristics:  
 BSE MidCap - Rf  
 First observation = 1  
 Last observation = 143  
 Number of usable observations: 143  
 Minimum value: -3.3928456E+001  
 Maximum value: 4.3324998E+001  
 Sample mean: 1.4954530E+000

X variables:  
 X(1) = BSE 500 - Rf  
 X(2) = 1

Model:  
 $Y = b(1)X(1) + b(2)X(2) + U,$   
 where U is the error term, satisfying  
 $E[U|X(1), X(2)] = 0.$

OLS estimation results

Parameters	Estimate	t-value (S.E.) [p-value]	H.C. t-value (H.C. S.E.) [H.C. p-value]
b(1)	1.1242200	40.334 (0.02787) [0.00000]	30.027 (0.03744) [0.00000]
b(2)	-0.0020385	-0.009 (0.21954) [0.99259]	-0.009 (0.21468) [0.99242]

- Notes:
- 1: S.E. = Standard error
  - 2: H.C. = Heteroskedasticity Consistent. These t-values and standard errors are based on White's heteroskedasticity consistent variance matrix.
  - 3: The two-sided p-values are based on the normal approximation.

The results of the EasyReg outputs for the two indices for both the market proxies are summarized in the table below:

TABLE 1: SUMMARY OF THE EASYREG OUTPUTS FOR THE TWO INDICES

Index	Market Proxy	$\alpha_i$	$\alpha_i$ H.C. t-value	$\alpha_i$ H.C. p-value	$\beta_i$	$\beta_i$ H.C. t-value	$\beta_i$ H.C. p-value
BSE SmallCap	BSE Sensex	0.1928	0.3920	0.6953	1.2423	14.6390	0.0000
BSE MidCap	BSE Sensex	0.0953	0.2860	0.7745	1.1526	18.9340	0.0000
BSE SmallCap	BSE 500	0.0597	0.1560	0.8760	1.2328	19.5370	0.0000
BSE MidCap	BSE 500	-0.0020	-0.0090	0.9924	1.1242	30.0270	0.0000

Note: H.C t-value and H.C p-value in the above table refer to heteroscedasticity consistent t-values and heteroscedasticity consistent p-values respectively.

It can be inferred from the above table that for the two indices BSE SmallCap and BSE MidCap, the Jensen's alphas are statistically insignificant even at 10% level of significance for both the market proxies considered.

The betas for both the indices BSE SmallCap and BSE MidCap are statistically significant at 1% level of significance for both the market proxies. It can also be seen that for both the market proxies the betas of both BSE SmallCap and BSE MidCap are greater than one implying that the small cap and the midcap indices have a greater systematic risk than the market. It could also be observed that the beta of the small cap index is greater than the beta of the midcap index.

## CONCLUSIONS

It is seen that the Jensen's alpha for the BSE SmallCap index is statistically insignificant implying that the returns of the small cap index are in conformity with that predicted by the CAPM. This is serious evidence against the existence of the size effect in the Indian context. The Jensen's alpha for the BSE MidCap index too is statistically insignificant implying that the returns of the mid cap index too are in conformity with that predicted by the CAPM.

The study finds that the betas of the small cap and the midcap indices are greater than one implying that the small cap and midcap stocks have higher systematic (non-diversifiable) risk than the market. And among the small cap and midcap stocks the small cap stocks have a higher systematic risk (since the beta of the small cap index is greater than the beta of the midcap index).

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**DETERMINANTS OF MOST INFLUENCING REFERENCE GROUP IN BUYING DECISION OF RURAL CONSUMER**

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**ABSTRACT**

*The consumer purchase decision process refers to actions and mental conjecture done by consumers when empowered by the prerequisite or aspiration of purchase. The consumer buying preferences are rapidly changing and moving towards high-end latest technology products with acculturation. Buying decision in general is a complex process and in case of rural consumers it becomes more complex hence, has to be treated distinctly. Since the reference group is the most important influencing factor in the buying decision of every individual, the present study is an attempt to determine the most influencing reference group in buying decision of rural consumer. The analysis of the study reveals that spouses is most influencing reference group with the highest mean value of 3.12 and have a significant relation with income, education and occupation.*

**KEYWORDS**

rural consumer, reference group, influence, buying decision.

**INTRODUCTION**

Consumer purchase decision process refers to actions and mental conjecture done by consumers when empowered by the prerequisite or aspiration of purchase. In the Marketing context, the relationship between the consumer decision making process and the influence received by his/her family and social context has been targeted by relevant discussion in the academic field, as well as in the corporate (Beraden, Netemeyer and Teel, 1989). The Indian rural market consists of nearly 625 million consumers, almost 74% of the total market share for consumer goods (as cited in Kumar & Joseph 2015). Rural consumers are different from urban consumers as their needs and demands are very much different from the urban counterparts in terms of design, size, colour taste and media habits. While the overall average penetration levels for consumer durables in the country is quite low, it is more so in the rural areas. There exists huge latent market waiting to be tapped in rural India with the right product-price combination. There is a shifting consumer preference for durables for the past decade with the influx of modern technology. The consumer buying preferences are rapidly changing and moving towards high-end latest technology products with acculturation. Buying process is complex process in case of rural consumer which has to be treated distinctly. There are many factors influencing the consumer behaviour, many considerations taking into account before making a purchase decision. Kotler (2012) recognizes five different roles, people might play in buying decision. They are Initiator, Influencer, Decider, Buyer, and User. Consumer reference group is that group to which the consumer has close relationship and proximity and which the consumer uses for references and which affect his buying behavior. The concept of reference group was originated by Hyman in 1942 to describe the kind of group used by an individual as a point of reference for his own judgment, belief and behaviour. The reference group will affect the level of aspiration and type of behaviour through establishing conventional patterns of personal expenditure. An understanding of the points of reference of the target consumers it is easy to the company to formulate relevant and effective marketing strategies / programmes. Generally, we have three types of reference groups which can be explained as under:

- I) **Primary and secondary reference groups:** A primary reference group is one with which an individual interacts on a regular basis and whose opinion is of importance to him. They can be family, neighbors, close friends, colleagues and co-workers are examples of primary reference groups. Secondary reference groups are those with which an individual interacts only occasionally and does not consider their opinion very important.
- II) **Formal and informal reference groups:** Labor unions, social clubs and societies are other types of formal reference groups to which individuals may belong. A formal reference group has a highly defined structure, specific roles and authority positions and specific goals. In contrast, an informal reference group is loosely defined and may have no specified roles and goals.
- III) **Membership and symbolic reference groups:** A membership reference group is one to which a person belongs or qualifies for membership. A symbolic reference group is one which an individual aspires to belong to, but is not likely to be received as a member.

**REVIEW OF LITERATURE**

Nishar Ahamed N. (1997) examined the influence of reference groups and factors determining purchase and post-purchase behavior in two wheeler buying. Findings of the study revealed that friends and neighbors' form the most important source of information which is followed by one's own experience, family members, newspapers and observations.

Bhavani Prasad and Sitakumari (1987) while evaluating the influencers for the buying of durables and observed that 'friends' and 'relatives' are the main influencer followed by Advertisement for the consumer durables.

Venketesharlu et al (1987) studied on factors influencing consumer's decision making process towards biscuits found that parents and children were more or less equally involved in decision making. Consumers perceived quality and taste were important influencing variables that determined brand loyalty.

Rout (1987) in his study on consumer's attitudes towards advertising pointed out, 89 percent of the respondents believed advertising is useful to the consumers, for giving convenient information about the products and to increase consumer awareness. It also provides an opportunity to the consumers to make comparison and make shopping easier to the consumers hence, it can be concluded that advertisement is an influencer to the majority of the people.

Parker and Anderson (1994) examined the consumer's preferential expectation concerning attributes, the objects and their post-trial perception of the attributes. The findings suggested that differences did exist among individuals in terms of the appropriateness of various preference models.

Kumar (2002) revealed that, the majority of consumers are highly enlightened and are concerned of quality of the products. He also revealed that, the consumers uniformly both in urban and rural areas, desire to have quality of the products at reasonable price and trust more the advice of the retailers.

Dhumal et al (2009) observed that peer group has a significant effect on the purchasing pattern of rural consumers especially for branded products.

Gupta and Mittal (2009) observed that head of the family has the highest influence on the purchase of products followed by retailers, family members and relatives.

Velayudhan (2009) found that the influence of personal sources of information is higher in rural areas when compared to urban areas. He also found that informal referent groups largest sources of information in rural markets. Incidentally, more educated consumers also used informal referent groups.

Unnithan. B. Anandakuttan and Hari Sundar (2008) observed that the role of friends and relatives have an important role in influencing the purchase decision of the rural folk relating to the consumption of mopeds. The study carried out in the border districts of TamilNadu namely Kanyakumari and Nagercoil proved that 31% of the sample was influenced by friends and 20% by relatives.

Kumar (2013) reveals the importance of reference group opinion in purchase. Six important member opinions were taken into consideration. It is necessary to find out whose opinion has major impact on purchase decision. The mean values obtained from the respondents ranged between 2.81 and 3.57. From the mean values it is concluded that spouse decision is more important for taking purchase decision (3.57), followed by self-decision (3.52) and children's opinion (3.40). Friedman test is applied to test whether the opinion of people vary among the reference groups.

### HYPOTHESIS

1. There is no difference among reference groups influencing in buying decision of rural consumer.
2. There is no demographics association with influence and reference group.

### OBJECTIVES

1. To determine the most influencing reference group in buying decision of rural consumer.
2. To establish a demographic relationship with most influencing reference group.

### METHODOLOGY

The paper is empirical in nature hence, both primary and secondary data were collected from different sources. Secondary data were collected from newspapers, magazines, journals, websites, articles etc. Primary data were collected through a structured questionnaire (in Hindi) distributed among 200 respondents of Dehradun district from two Blocks namely Raipur and Doiwala (5 villages from each block & 20 respondents from each village) which have been selected on the basis of convenience and their accessibility. Data analyzed with the help of spss. t- test applied to test the most influencing group among all the groups and Chi-square test is applied to establish the relationship between demographics and most influencing reference group.

### LIMITATION

Due to time and money constraints this study is being limited up to two blocks of Dehradun district. Only few variables have been taken for study. The study is based mainly on individual information which would be subjective, thus the result could not be the ultimate fact.

### ANALYSIS AND INTERPRETATION

Respondents Profile: Among the respondents the majority (56 %) was of male respondents whereas remaining (44%) were female. In the education distribution a majority (28%) was of the graduate while more than one fourth (28%) were higher secondary passed. In the income bracket a majority (45%) belongs up to Rs. 20000 slab and one fourth (25%) from 30000 to 40000 slabs. In the occupation a majority (42%) was involved in business and about one third (34%) are engaged in service (Table 1).

TABLE 1: DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Demographic Variable		Frequency	Percent
Gender	Male	112	56.0
	Female	88	44.0
	Total	200	100.0
Age	20-30	47	23.0
	31-40	70	35.0
	41-50	56	28.0
	51 and above	27	14.0
	Total	200	100.0
Education	Primary	14	7.0
	Secondary	44	22.0
	Higher secondary	56	27.0
	Graduation	55	28.0
	Post-graduation	31	16.0
	Total	200	100.0
Income	Less Than 10000	09	5.0
	10001-20000	87	44.0
	20001-30000	35	18.0
	30001-40000	50	25.0
	40001-50000	11	4.0
	More Than 50000	08	4.0
	Total	200	100.0
Occupation	Agriculture	23	11.0
	Business	85	43.0
	Service	67	34.0
	Others	25	12.0
	Total	200	100.0

### MOST INFLUENCING REFERENCE GROUP

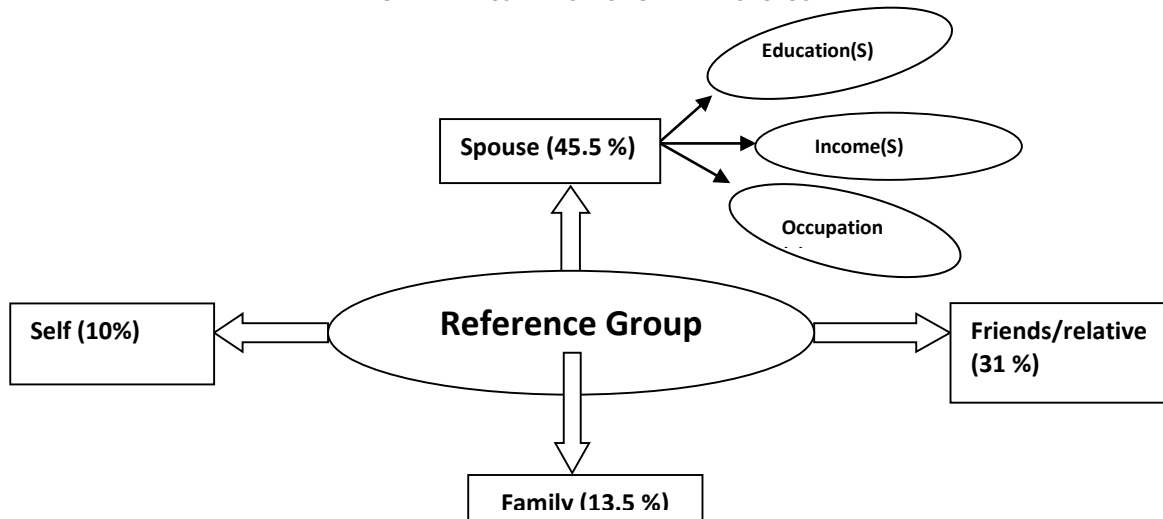
Reference group does play an important role in buying decision however, there are number of reference group that influence an individual while making decision. Therefore, it is essential to know which reference group does have more influence on an individual so that could be focused while formulating promotional strategies by the marketers. To know the most influencing group to the rural consumer their views on the issue have been taken on five point likert scale and the following observations have been made:

**TABLE 2: MOST INFLUENCING REFERENCE GROUP IN BUYING DECISION**

Reference group	Frequency	Percent	Valid Percent	Cumulative Percent
Spouse	91	45.5	45.5	45.5
Family	62	31.0	31.0	76.5
friend/neighbor	27	13.5	13.5	90.0
Self	20	10.0	10.0	100.0
Total	200	100.0	100.0	

The above table reveals that spouse is the most influencing reference group in buying decision of rural consumer with the highest response (45.5%) followed by family (31%), neighbor and relatives (13.5%). There were people also who do not get influence by any one, however, the number was quite low (10%).

**GRAPH 1: MOST INFLUENCING REFERENCE GROUP**



Hypothesis: There is no difference among reference groups towards influencing buying decision of rural consumer.

**TABLE 3: ONE-SAMPLE STATISTICS**

	N	Mean	Std. Deviation	Std. Error Mean
Spouse	200	3.12	.990	.070
Family	200	3.01	.830	.059
Friend/Neighbors	200	1.95	.906	.064
Self	200	1.92	1.113	.079

**TABLE 4: SAMPLE TEST**

Reference group	Test Value = 0					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Spouse	44.560	199	.000	3.120	2.98	3.26
Family	51.219	199	.000	3.005	2.89	3.12
Friend/Neighbors	30.424	199	.000	1.950	1.82	2.08
Self	24.386	199	.000	1.920	1.76	2.08

The above table (table 4) shows the respondents' views regarding importance of reference group opinion in purchase decision. Four possible variables were taken into consideration to find out which variable have major influence in purchase decision of rural consumer. The mean values obtained from the respondents ranged between 1.92 and 3.12 which conclude that spouse is the most influencing reference group in view of taking purchase decision (3.12), followed by Family (3.05), Friends/ neighbor opinion (1.95) and self (1.92).

- There is no significant association between gender and most influencing reference group.

**TABLE 5: GENDER Vs. SPOUSE CROSS TABULATION**

Reference group /Gender	SPOUSE				Total
	SPOUSE	FAMILY	Friends/Nb	SELF	
Male	48	39	12	13	112
Female	43	23	15	7	88
Total	91	62	27	20	200

**TABLE 6: CHI-SQUARE TESTS**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.711 <sup>a</sup>	3	.294
Likelihood Ratio	3.726	3	.293
Linear-by-Linear Association	.245	1	.621

The above table (Table 6) shows that calculated value of chi-square (3.711) is less than tabulated value (3.92) at degree of freedom 3. Hence, the null hypothesis is accepted. It means gender is not significantly associated with the buying decisions getting influenced by spouse.

- There is no significant association between age and most influencing reference group.



**TABLE 7: AGE Vs. SPOUSE CROSS TABULATION**

Reference group/ Age	SPOUSE				Total
	SPOUSE	FAMILY	F/N	SELF	
20-30	20	17	6	4	47
31-40	31	23	9	7	70
41-50	31	12	6	7	56
51 and above	9	10	6	2	27
Total	91	62	27	20	200

**TABLE 8: CHI-SQUARE TESTS**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.162 <sup>a</sup>	9	.620
Likelihood Ratio	7.111	9	.626
Linear-by-Linear Association	.111	1	.739

As table 8 indicate that calculated value of chi-square (7.620) is more than tabulated value (3.325) at degree of freedom 9. Hence, the null hypothesis is accepted. It means age is not significantly associated with the buying decisions getting influenced by spouse.

- There is no significant association between Education and most influencing reference group.

**TABLE 9: EDUCATION Vs. SPOUSE CROSS TABULATION**

Reference Group/ Education	SPOUSE				Total
	SPOUSE	FAMILY	F/N	SELF	
Primary	4	2	4	4	14
Secondary	23	14	4	3	44
Higher secondary	23	17	10	6	56
Graduation	29	15	6	5	55
Post graduation	12	14	3	2	31
Total	91	62	27	20	200

**TABLE 10: CHI-SQUARE TESTS**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.167 <sup>a</sup>	12	.050
Likelihood Ratio	24.328	12	.042
Linear-by-Linear Association	13.610	1	.005

As table 10 indicated that calculated value of chi-square (22.167) is more than tabulated value (7.162) at degree of freedom 12. Hence, the null hypothesis is accepted. It means education significantly associated with the buying decisions getting influenced by spouse.

**TABLE 11: INCOME Vs. SPOUSE CROSS TABULATION**

Reference group/income	SPOUSE				Total
	SPOUSE	FAMILY	F/N	SELF	
LESS THAN 10000	4	2	1	2	9
10001-20000	41	23	15	8	87
20001-30000	16	12	4	3	35
30001-40000	20	17	7	6	50
40001-50000	6	4	0	1	11
MORE THAN 50000	4	4	0	0	8
Total	91	62	27	20	200

**TABLE 12: CHI-SQUARE TESTS**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.835 <sup>a</sup>	15	.046
Likelihood Ratio	28.456	15	.039
Linear-by-Linear Association	15.701	1	.045

As table 12 indicated that calculated value of chi-square (26.835) is more than tabulated value (7.162) at degree of freedom 15. Hence, the null hypothesis is accepted. It means Income significantly associated with the buying decisions getting influenced by spouse.

**TABLE 13: OCCUPATION VS. SPOUSE CROSS TABULATION**

Reference group/ occupation	SPOUSE				Total
	SPOUSE	FAMILY	N/R	SELF	
Agriculture	13	9	1	0	23
Business	45	21	10	9	85
Service	29	24	10	4	67
Others	4	8	6	7	25
Total	91	62	27	20	200

**TABLE 14: CHI-SQUARE TESTS**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.866 <sup>a</sup>	9	.005
Likelihood Ratio	25.332	9	.003
Linear-by-Linear Association	13.714	1	.000

As table 14 indicated that calculated value of chi-square 23.866 is more than tabulated value (3.325) at degree of freedom 9. Hence, the null hypothesis is accepted. It means Occupation significantly associated with the buying decisions getting influenced by spouse.

**POLICY IMPLICATION**

This study points out the most influences reference group. This will enable the business community to sustain in the market with suitable modifications. It also gives a very useful advice for marketers and advertisers to select the right type of retail outlets and media to reach rural consumers.

**CONCLUSION**

Reference group plays a significant role in a decision making of rural consumer. Rural consumer gets influenced by many factors such as friends, relatives, neighbor, spouse, peers and self-etc. for their purchasing. Spouse considered the most influencing group as score highest mean value of 3.12. Kumar (2013) also found that spouse decision is more important for purchase decision with the highest mean value (3.57). Further the findings also revealed that Education, Income and Occupation are significantly associated with most influencing group (i.e. spouse) whereas, Gender and Age are not significantly associated with the most influencing reference group.

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**DECISION SUPPORT SYSTEM IN SUPPLY CHAIN NETWORKS: A CRITICAL REVIEW**

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**ABSTRACT**

*This article is a review of work published in various journals/books/conference proceedings/news on the topics of Decision Support System and Supply Chain Networks between June 2003 and March 2015. A total of 73 articles from 49 journals/books are reviewed. The article intends to serve three goals. First the article will help researchers in understanding various questions addressed, models proposed in the area of DSS and SCN with major emphasis on agriculture and food processing industry. Second, the article will be a useful resource for searching for research topics related to DSS in SCN of agriculture and food processing industry. Third, it will serve as a comprehensive bibliography of the articles published during the period. The literature is analyzed under 4 major themes and nine sub-themes.*

**KEYWORDS**

Decision Support System (DSS), Supply Chain Network (SCN), system, model, agriculture, Food Processing Industries (FPI).

**1. INTRODUCTION**

**D**ecision support systems (DSS) is the natural framework where decision models should be included in order to support farmers, advisers or livestock management specialists, supply chain management and operational team in the effective decision making process. During last years, the increment of competition between food product producers caused the marginal benefits per unit of product to reduce. In this context, there is an increasing interest in DSS tools capable of dealing with the uncertainty inherent to food production systems for practical decision support. In this paper various DSS models in supply chain networks, the development of DSS in agricultural or other industries representing either the productive and transportations over time and their mathematical foundation are reviewed. DSS in SCN is an industry-driven concept and system and is universally accepted by manufacturing industry as well as food processing industry (to a certain extent) as a practical solution to achieve integrated information system. The academic research community has been contributing to the field in various ways. A typical way of contributing to a field is by publishing archival journal papers for public benefits. This article is a review of work published in various journals/books/conference proceedings/news on the topics of Decision Support System and Supply Chain Networks between June 2003 and March 2015. A total of 73 articles from 49 journals/books are reviewed. No restrictions are imposed on the field of the journals/book/conference proceedings/reports/websites thus representing truly multi-disciplinary views on DSS in SCN.

As national and international concern over sustainable resources becomes more prevalent, the need for decision support systems (DSS) increases. The article will enable the researchers in understanding the applicable uses of successful DSS in SCN models proposed or designed in field of agriculture and allied industries as well as other industries.

The article is divided into four remaining sections. Section 2 describes the methodology followed in collecting and analyzing the articles. Section 3 provides the aggregate properties of these articles for each major theme. Some analyses of statistics on the reviewed articles along with a few obvious trends are provided in Section 4. The paper concludes with Section 5.

**2. METHODOLOGY**

The criteria for choosing articles/book section/reports for the review are as follows. First of all, the article must have been published in a peer-review, archival journal. The conference proceedings, book section and reports should also be from well-established publication. Second, only the articles and publications with 'DSS in Agriculture' and 'DSS in SCN' as a part of their titles were selected. The exceptions are those articles that are explicitly dealing with 'DSS in food processing industry' or 'DSS in SCN in agriculture' but for some reasons the authors decided not to use 'DSS' or 'SCN' in the title. The inclusion of such articles is inevitably *ad hoc*. Consequently, it is possible that there exist more of such articles which are not surveyed in this article. In an attempt to avoid never ending revision of the article, March 2015 was selected as the cut-off date. According to these criteria, an effort has been made to collect and compile all the available journal articles and publications through exhaustive internet browsing, database search, reference checking, etc. However, it is always possible that some of the articles are mislaid from this list. The complete list of the journals, books, conference proceedings and reports along with the number of articles appeared respectively is presented in Table 1,2,3 and 4 respectively.

TABLE 1: NUMBER OF ARTICLES IN EACH JOURNAL /BOOK SECTION/CONFERENCE PROCEEDINGS/REPORTS/ WEBSITES (ALL IN ALPHABETICAL ORDER)

<i>Name of Journal</i>	<i>Number of articles</i>
Agrociencia	1
Biosystems Engineering	1
Croatian Operational Research Review	1
Decision Support Systems	4
European Commission Report 2006 :ICT and E-Business	1
European Journal of Operational Research	3
Expert Systems with Applications	1
Food and Agriculture Organization of the United Nations	1
Industrial Journal of Productivity and Performance Management	1
Industrial Management and Data System	2
Information Systems & Supply Chain Management	1
Innovations in Agri-Food Systems	1
International Journal of Computer Science Issues	1
International Journal of Engineering and Science	1
International Journal of Information Systems and Supply Chain Management	1
International Journal of Logistics and Supply Chain Management Perspectives	1
International Journal of Logistics Research and Applications	2
International Journal of Physical Distribution and Logistics Management	2
International Journal of Production Research	4
International Journal on Food System Dynamics	1
Issues in Information Systems	1
Journal of Business and Industrial Marketing	2
Journal of Enterprise Information Management	1
Journal of Food Engineering	1
Journal of Manufacturing Technology Management	1
Journal of Marketing Channels	1
Journal of Purchasing and Supply Management	1
Omega	1
Production Planning and Control	10
Supply Chain Management :An International Journal	1
TEKNOLOGI	1
Transportation Planning and Technology	1
<b>Total</b>	<b>53</b>

TABLE 2: NUMBER OF BOOKS /BOOK SECTION ON DSS IN SCN (All in alphabetical order)

<i>Name of Book</i>	<i>Number of Chapters</i>
Agro-Industrial Supply Chain Management: Concepts and Applications	1
Decision Support Systems in Agriculture, Food and the Environment: Trends, Applications and Advances	3
Encyclopedia of Decision Making and Decision Support Technologies	1
Handbook on Decision Making	1
<b>Total</b>	<b>6</b>

TABLE 3: NUMBER OF CONFERENCE PROCEEDINGS ON DSS IN SCN (All in alphabetical order)

<i>Name of Conference</i>	<i>Number of Publications</i>
14th Euroma 2007 Conference	1
3rd Annual IEEE Conference on Automation Science and Engineering	1
8th International Symposium on Process Systems Engineering	1
AFITA 2010 International Conference	1
ESCIE-The Socializing model for online learning	1
IEEE Conference of Industrial Electronics and Applications	1
IEEE International Conference on Systems,Man and Cybernetics	1
International Hop Growers' Convention	1
Procedia Computer Science	1
Proceedings of the 38th Annual Hawaii International Conference	1
Recent Researches in Computational Intelligence and Information Security	1
The Quality Information for Competitive Agricultural Based Production System and Commerce	1
<b>Total</b>	<b>12</b>

TABLE 4: REPORTS/WEBSITES ON DSS IN SCN

<i>Name of Report/Website</i>	<i>Number of Publications</i>
Arkansas Business article	1
Vista Foods Report	1
<b>Total</b>	<b>2</b>

TABLE 5: MAJOR THEMES AND SUB-THEMES WITHIN DOMAIN OF DSS IN SCN

Themes
<b>1. Decision Support System</b>
Models
Case Study
General
<b>2. IT intervention in Food Industry</b>
<b>3. Supply Chain Management</b>
In Agriculture Sector
In Allied Industries
Basic outline in various sector
<b>4. DSS in Supply Chain Network</b>
Structural Design/Framework in a particular sector
Tools and Tactics
General study

The major themes defined in this article are (1) Decision Support System, (2) IT intervention in food industry, (3) Supply Chain Management, (4) DSS in Supply Chain Network. Under (1) Decision Support System theme, following three sub-themes are defined: (a) models, (b) case study, (c) general. For (2) IT intervention in food industry, there is no sub theme. For (3) Supply Chain Management theme further three sub-themes are there namely: (a) In agriculture sector, (b) In allied industries and (c) basic outline in various sector. For (4) DSS in supply chain network, we have three sub-theme: (a) Structural design/framework in a particular sector, (b) tools and tactics and (c) general study. Table 5 shows these themes and sub-themes used in this article.

A comprehensive table comprising of these themes and their classified references for each theme is provided in Table 6. The references are in APA style following alphabetical order. It is unavoidable to have an article that is relevant to more than one theme. For example, an article may address supply chain management issue in agriculture sector but also provide general study on DSS in SCN. In such a case, more weighted theme is chosen to classify the article according to the author's judgment.

TABLE 6: MAJOR THEMES AND SUB-THEMES WITHIN DOMAIN OF DSS AND SUPPLY CHAIN NETWORK

Themes	References
<b>Decision Support System</b>	
<i>Model</i>	(Agrahari and Tripathi, 2012)_(Burhanuddin, Ahmad and Desai, 2007)_(Noori and Salimi, 2005)_(Okongwu et al., 2012)_(Seema, Kaur and Kumar, 2014)_(Suroso and Ramadhan, 2012)_(Widodo et al., 2006)
<i>Case Study</i>	(Adam, Csaki, Prier and Bufacchi, 2012)_(Aragones, 2010)_(Lam and Dai, 2012)_(Laurensona, Buwaldab, and Walkerc, 2010)_(Pavlovic et al., 2008)_(Stiakakis and Sifaleras, 2010)_(Xie, Allen and Ali, 2014)
<i>General</i>	(Arason et al., 2010)_(Bakhrankova, 2010)_(Demirtas and Ustun, 2008)_(Manos, Matsatsinis, Paparrizos and Papatthanasidou, 2010)_(Pavlovic and Koumbouli, 2009)
<b>IT Intervention in Food Industry</b>	(ICT adoption and e-business activity in 2006, 2006)_(Jayaraman, Ross and Agarwal, 2008)_(Liang, 2013)_(Van der Vorst, Beulens and Van Beek, 2005)_(Wicki and Dabrowska, 2013)
<b>Supply Chain Management</b>	
<i>In Agriculture Sector</i>	(Ahumada and Villalobos, 2009)_(Apaiah and Hendrix, 2005)_(Bryceson, 2005)_(Dabbene, Gay and Socco, 2008)_(Van der vorst, Silva, & Trienekens, 2007)_(Keizer et al., 2014)_(Lembito, Seminar, Kusnadi and Arkeman, 2012)_(Sutopo, Hisjam and Yuniaristanto, 2012)_(Taylor, 2005)
<i>In Allied Industries</i>	(Perez, Castro, Simons and Gimenez, 2010)_(Silvija and Soric, 2010)_(Singh, 2009)_(Soysal, Bloemhof and Van der Vorst, 2012)_(Traub, 2012)
<i>General Study of various sectors</i>	(Dreyer et al., 2009)_(Giannakis and Louis, 2011)_(Ngai, Cheng and Ho, 2004)_(Verdouw, Beulens, Trienekens and Van der Vorst, 2011)_(Wu and O'grady, 2005)
<b>DSS in Supply Chain Network</b>	
<i>Structural Design/Framework in a particular sector</i>	(Beheshti, 2010)_(Blackhurst, Wu and O'grady, 2007)_(Costantino et al., 2009)_(Dotoli et al., 2003)_(Felice and Petrillo, 2013)_(Ferrell, Rogers, Ferrell and Sawayda, 2013)_(Hernandez et al., 2014)_(Kristianto, Gunasekaranb, Heloa and Sandhu, 2012)_(Kumar and Viswanadham, 2007)_(Kumar et al., 2011)_(Lam, Choy and Chung, 2011)_(Liu et al., 2014)_(Liu et al., 2013)_(Maheut et al., 2014)_(Manuj and Sahin, 2011)_(Marimin et al., 2011)_(Marimin, Djabatna, Suharjito, Nugeraha and Bahar, 2010)_(Ngai et al., 2012)_(Ngai, Peng, Alexander and Moon, 2014)
<i>Tools and Tactics</i>	(Jakhar and Barua, 2014)_(Koh et al., 2013)_(Van der Vorst, Tromp and Van der Zee, 2009)
<i>General Study</i>	(Fink, Jurgen, & Stefan, 2005)_(Koh et al., 2013)_(Vorst et al, 2007)

**3. OVERVIEW OF THE ARTICLES**

In this section, a brief summative of the articles for each theme is provided. It is not intended to provide detail description of each article. Rather, an attempt to draw a collective summary is made in this section. For the articles reviewed for each theme, refer to Table 6 above.

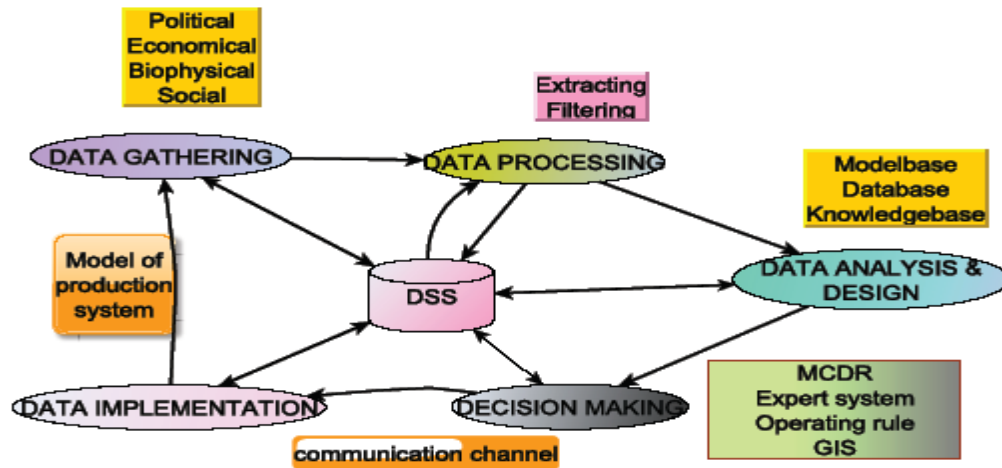
**3.1 Decision Support System**

Decision Support System (DSS) is an interactive, flexible, and adaptable computer based information system that utilizes decision rules, models, and model base coupled with a comprehensive database and the decision makers own insights, leading to specific, implementable decisions in solving problems that would not be amenable to management science models. Making the decision could be defined as integration of result produced at stages of process with computer, human logic and integration of previous developed model. Thus, a DSS supports complex decision making and increases its effectiveness (Tripathi, 2011).

A group of articles are classified under a sub theme of 'Model'. These articles typically utilize analytical methods, such as decision analysis, optimization algorithms, program scheduling routines, and so on, for developing models to help decision makers formulate alternatives, analyze their impacts, and interpret and select appropriate options for implementation (Adelman, 1992).

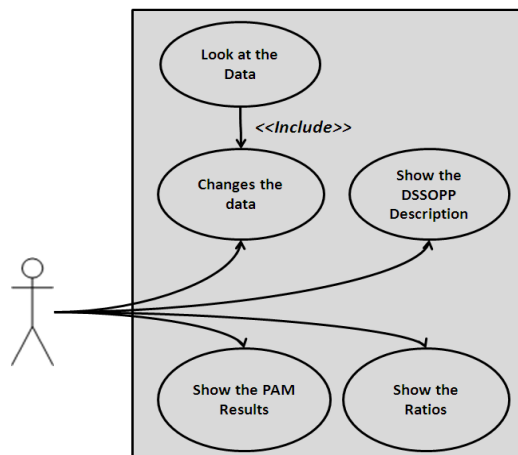
Most of the articles have used real dataset to test and compare the results. Techniques namely Decision Making Grid (DMG), cross-functional multi-criteria decision-making, customer-relationship management (CRM) and knowledge-driven marketing, Policy Analysis Matrix (PAM) are used to propose new DSS. Few models proposed by researchers under this sub theme are as follows:

FIG. 1: THE PROPOSED FRAMEWORK OF DSS BUILDING DATA DRIVEN DSS FOR AGRICULTURE



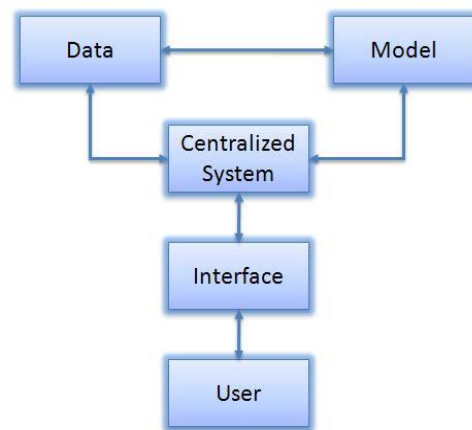
Source: Agrahari and Tripathi, 2012

FIG. 2: DSSOPP BUSINESS USE-CASE DIAGRAM



Source: Suroso and Ramadhan, 2012

FIG. 3: DSSOPP ARCHITECTURE



Major papers under sub theme 'Case Study' emphasized on computerized decision support system designed to provide a standard framework for the encapsulation of respective science into decision support "tools" for ultimate clientele. These decision support tools will thus provide information which will help decision makers with specific management decisions.

Finally, group of articles under sub -theme 'General' address agriculture sector focusing on the exposition of innovative methodologies, from web-mobile systems to artificial intelligence and knowledge-based DSS, as well as their applications in every aspect from harvest planning to international food production and land management. They aim to monitoring all functions of an agricultural process and facilitating decision making by proposing scenarios towards satisfying specific performance criteria and restrictions. Their aim is to contribute in research by bridging the gap between theory and practice.

**3.2 IT intervention in Food Industry**

Information is playing an increasing role in today's economy. It is treated as a more valuable resource than traditional material goods. The management of the flow of goods and services and their accompanying information is the subject of logistics. Current logistics systems in various sectors of the economy, especially that of production, are supported by dedicated integrated IT systems.

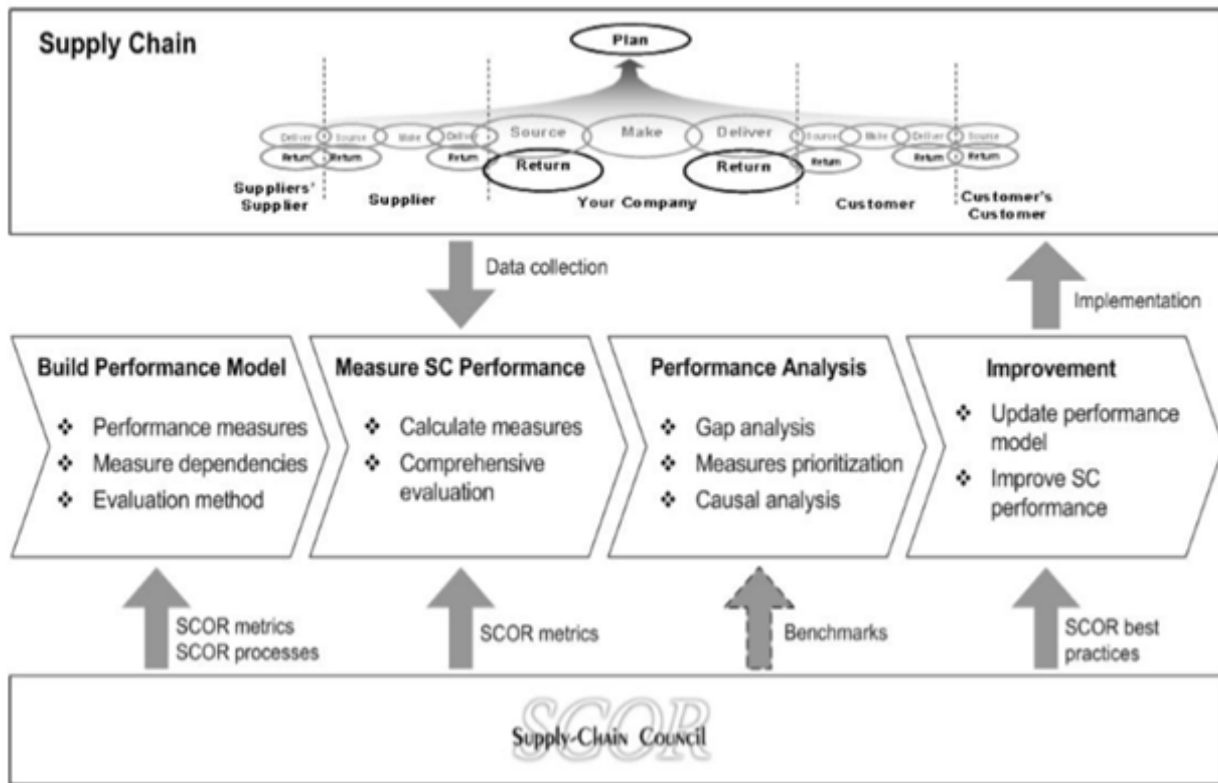
Most papers under this theme deals with identifying problems that companies face when they handle product returns along the channels and present the critical role that information technology and collaboration can play to mitigate many of the problems and deficiencies. These papers attempt to highlight a key element in reducing uncertainties in the different stages of the reverse channel of a supply chain which is access to accurate and timely information on the status, location, and condition of products moving about in the supply chain. Their analysis is based on literature, interviews, case studies and survey among decision-makers in respective enterprises.

**3.3 Supply Chain Management**

The supply chain of agricultural products has received a great deal of attention lately due to issues related to public health. Something that has become apparent is that in the near future the design and operation of agricultural supply chains will be subject to more stringent regulations and closer monitoring, in particular those for products destined for human consumption (agri-foods). Agribusiness firms are responding to the emerging challenges in global economy by seeking the benefit of greater collaboration and integration with both their suppliers and customers to ensure more sustainable and profitable trading arrangements

A group of articles are classified under sub-theme of 'In Agriculture sector'. These articles typically investigate main contributions in the field of production and distribution planning for agri-foods based on agricultural crops. The articles belonging to this sub-theme tend to focus on individual cases such as VAG (a prototype animated, interactive, three-dimensional virtual environment model of a supply chain in the agribusiness sector), lean value chain improvement techniques and Supply-Chain Operations Reference (SCOR model to assist firms in increasing the effectiveness of their supply chains, and to provide a process-based approach to SCM) model to name a few.

FIG. 4: SUPPLY-CHAIN OPERATIONS REFERENCE (SCOR) MODEL WITH METRICS



Source: SCOR version 10, Supply Chain Council, 2010., Lembito et. al., 2012

Some generalisations are occasionally provided in these articles but emphasis is majorly on those models which have been successfully implemented. Articles under sub-theme 'In Allied Industries' particularly address the supply chain models for agricultural fresh products such as catalian pork, olive oil as well as retail industry. Supply chain management (SCM) models of agricultural fresh products are more complicated than the SCM models of the usual industrial products with no deterioration, because the amount of harvestable fresh products depends on the growing process of the related plants on farmland, and because the deteriorating process of the fresh products starts immediately after harvested (Widodo, Nagasawa, Morizawa, Ota, 2006). What differentiates agri-food supply chains from other supply chains is the importance played by factors such as food quality and safety, and weather related variability (Salin, 1998). Because of all these issues, in the context of agri food supply chain, under this sub-theme, three main functional areas: harvesting, storage and production, are taken into consideration. Case research methodology is generally used in the articles with a conceptual model proposal as a tool to carry out the assessment. Some articles attempt to understand the direction of various industries towards their respective supply chains. Under sub-theme 'General study of various sectors' articles mainly proposes framework of decision support system for the management disruptions and mitigation of risks in manufacturing supply chains. The operation of global supply chains is challenging due to the complexity in product and information flows, diversity in sites, localization and processes and the information processing needed for coordination and control. Most of the articles under this sub-theme presents global control model, performance measurement system, information and communications technology (ICT) and organization of roles and responsibilities. Along with this an article on Trans-Net [critical success factors (CSFs) of web-based supply-chain management systems (WSCMS)] is also covered in this sub-theme.

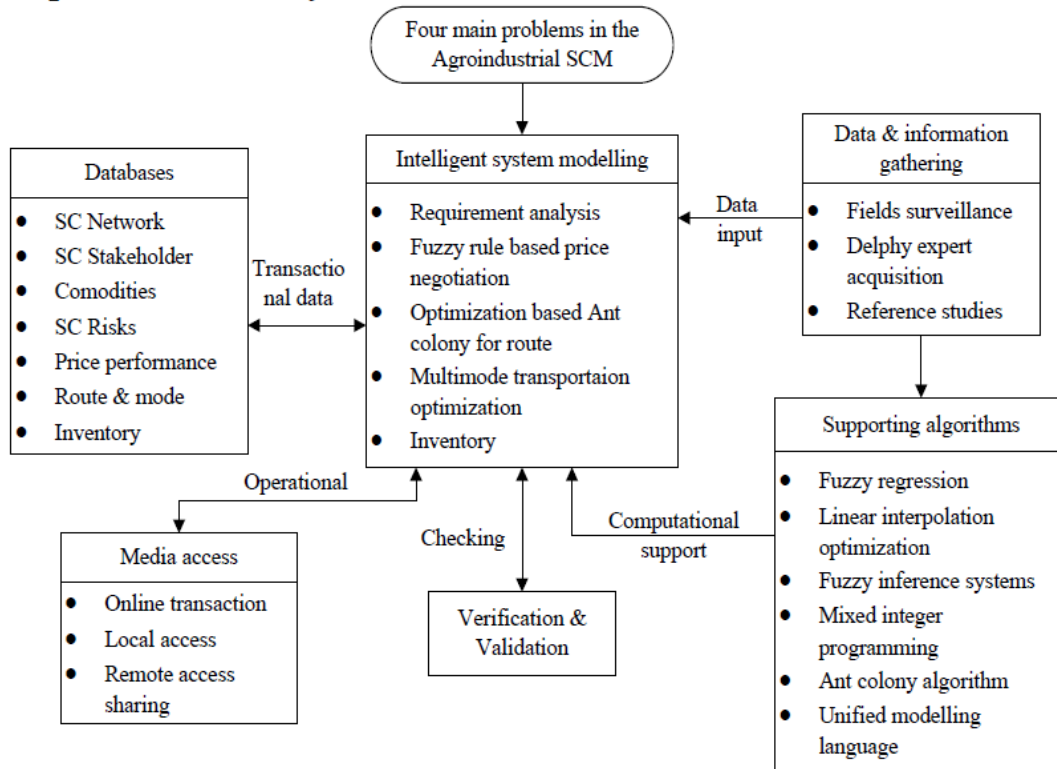
**3.4 DSS in Supply Chain network**

The agri-food sector is facing global challenges that can only be met with support of information technologies (IT), (Schiefer, 2004). IT opportunities are key tools in the agri-food supply chain activities and contribute to the optimization and to an efficient decision making process. The decision support systems involve the storage and processing of collected information, methods and techniques giving the new information useful for efficient decision making and in this way make the planning process more structural and promising. The most famous decision support systems are Enterprise Resource Planning (ERP) and Supply Chain Analytics (SCA), or Advanced Planning Systems (APS).

Reflecting such a level of importance, the largest number of articles belongs to this theme 'DSS in Supply Chain Network'. It comprises more than 40% of the entire articles. Some articles attempt to explain why decision making in agri-business sector, in particular, is complex and what needs to be done to achieve desirable results. Also, various models of implementation stages and different implementation methodologies are presented. Several articles present various types of framework or models of DSS in SCN. They range from a conceptual model that explains the DSS, to the taxonomy of success factors of DSS implementation and to a user acceptance model.

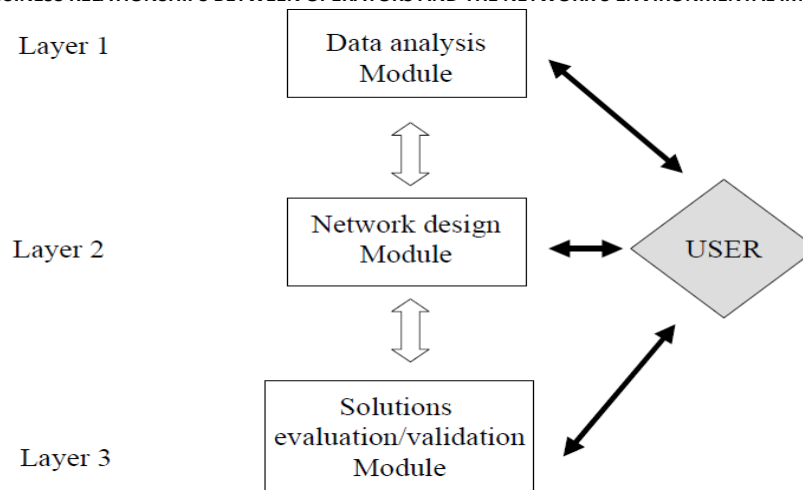
One of the popular topic in DSS in Supply Chain network is ' Structural Design/Framework in a particular sector'. The articles seek to present a decision support model for improving supply chain performance. In most of the articles focus is to develop a comprehensive model of supply chain and supply chain decision-making complexity that provides an understanding of the drivers of supply chain complexity and strategies to manage supply chain and supply chain decision-making complexity and outcomes. While there is growing concern with ethics, corporate social responsibility, and sustainability, the current state of the field is fragmented with the majority of articles reviewed focusing on specific issues rather than a more holistic approach. Major industries explored for case studies are manufacturing industry, automotive industry, machine tool industry and agri-business industry. A set of articles in this sub -theme proposes a decision-focused knowledge framework including a multi-layer knowledge model (to capture the know-why and know-with together with the know-what and know-how), system dynamic based computer simulation model, ethical decision making models and green supply chain management (GSCM) practices. Decision models have been developed using Soft System Methodology, Hard System Methodology, Montecarlo approach, analytic network process, grounded theory methodology, generalisable network based methodology (to model supply chain operations and the uncertainty of system attributes such as lead time and cost) and artificial intelligence system shells VisiRule and Flex, to name a few. Most of the articles have adopted case-based reasoning to support managers and other ultimate clientele in making appropriate decision arising in supply chain networks. They have retrieved similar cases in the past and have adapted in reference to their new model/framework and then conducted case study to illustrate the feasibility and effectiveness of the proposed system. The models proposed in various articles under this sub-theme provides the foundation for future research as well as support for decision making when various decision makers are involved. The results of the research will help practitioners better understand the sources and outcomes of supply chain complexity and how to manage it.

FIG. 5: CONCEPTUAL FRAMEWORK OF IDSS (Intelligent decision support system for Agricultural business and industry supply chain management)



Source : Marimin, Djatna, Suharjo, Nugraha and Bahar, 2010.

FIG. 6: THE THREE LAYERED STRUCTURE OF DSS (A DECISION SUPPORT SYSTEM FOR INTEGRATED PRODUCTION NETWORK DESIGN CONSIDERING ALSO THE E-BUSINESS RELATIONSHIPS BETWEEN OPERATORS AND THE NETWORK'S ENVIRONMENTAL IMPACT)



Source: Dotoli et al., 2003

The articles belonging to sub-theme 'Tools and Tactics' address important performance evaluation criteria (supply chain planning performance, supply chain partnership performance, production performance, delivery and logistic performance and customer service and satisfaction performance) and corresponding sub-criteria. As per articles covered under this sub-theme simulation tools are often used for supporting decision-making on supply chain (re)design when logistic uncertainties are in place, building on their inherent modeling flexibility. One article in particular has proposed a new integrated approach towards logistics, sustainability and food quality analysis, and implement the approach by introducing a new simulation environment as quality change is intrinsic to the food supply chains industry.

Under sub-theme 'General' authors have attempted to identify methodological shortcomings in existing tools, and proposing a supply chain (SC) framework which provide businesses with a holistic understanding of their supply chains and ensuring partners within supply chain collaborative networks. They have discussed about opportunities to use time-dependent product quality information to improve the design of food supply chain networks. Data warehouses and data mining can be used to store and analyze product, inventory, and sales information. Simulation and optimization, which can be found in advanced planning and scheduling systems, can be employed for e.g. inventory, production, procurement, and distribution planning. Intelligent agents can e.g. communicate with different partners in the supply chain, assist in collecting information, share product information, negotiate prices, and distribute alerts throughout the logistics networks. They have proposed heterogeneous yet complementary ensemble of various real world decision situations contributing to a minitrack which deals with intelligent decision support in whole field of e-logistics and supply chain management. Research carried out in these articles have implications for future sustainability research in supply chain, decisions science, management theory, practice and policy.

#### 4. ANALYSIS

The field of DSS has matured in a relatively short period of time. As Table 4 shows, the number of journal articles published from 2003 has steadily increased, but there is a sign of stabilizing in recent years. Considering the fact that most of journal articles started appearing in late 1990s, this field certainly gained significant research interests from many researchers in a short period of time.



TABLE 7: NUMBER OF JOURNAL ARTICLES ON DSS IN SCN DURING 2003–2015 (as of March 2015)

Year	Number of publications
2003	1
2004	2
2005	6
2006	2
2007	5
2008	6
2009	7
2010	10
2011	5
2012	14
2013	6
2014	8
2015	1
<b>Total</b>	<b>73</b>

From table 6 it could be inferred that almost 40% articles have published from year 2010-2012. In early years, more articles were written to share the experiences of implementing decision support systems or based on opinion survey studies. As more experiences have been gained with the implementation process, different topics such as the importance of using DSS in supply chain network, DSS framework in agri-business and food processing industry seem to be becoming of interests to the researchers. Also, the mature status of the field is evident in the rigor and thoroughness of the articles in recent years.

## 5. CONCLUSION

Several areas for future research seem promising. A large scale, simultaneous survey studies might generate useful insights on this subject. Major articles present the development of DSS for managing agricultural and environmental systems, focusing on the exposition of innovative methodologies, from web-mobile systems to artificial intelligence and knowledge-based DSS, as well as their applications in every aspect from harvest planning to international food production and land management, warehouse management, logistics and supply chain management. The concept of DSS seems to be growing and expanding. As agricultural production and environmental management involve high risk decisions, risk analysis and management tools have enjoyed increased popularity over the last years as well, by the time that food supply chain management, ecosystem governance, conservation of biodiversity and global climate change have among other issues hotly entered the agenda. It will be useful to investigate topics such as how the companies (FMCG in particular) using the decision support system perceive this trends, how they will cope with the changes, what tools, methodologies, models are useful in their expansion efforts.

This article provides a comprehensive review of research articles related to the application of decision support in supply chain networks of various industries with major emphasis on agribusiness units. Data were obtained from 73 articles published from 2003 to 2015. A comprehensive list of journal articles identified in this study provides insights and relevant references for both researchers and practitioners on the application of decision support system to various stages of supply chain. In light of the developed classification framework, gaps could be identified for the use of the decision support system in the industry and suggest potential and applicable research areas for further consideration in this subject area.

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## CONSUMER AWARENESS AND FEEDBACK TOWARDS PURCHASE INTENTION OF CSR RELATED PRODUCTS USING SEM

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### ABSTRACT

**Purpose:** Corporate Social Responsibility (CSR) has presumed a new meaning in today's competitive world. CSR has extended the boundaries of the firms into the society. This article investigates the consumer's awareness and feedback towards purchase intention of CSR related products using primary data. **Design:** This is done by testing the hypothesis using the Structured equation modeling (SEM). In this study CSR awareness, Consumer Feedback, Purchase intention, CSR benefit are the latent variables. In each latent variable there are three or four statements (observed variables) that measures the latent variable. In this study CSR awareness and Consumer feedbacks are the Exogenous latent variable. Purchase intention and CSR benefits are the Endogenous latent variables that are influenced by the model directly or indirectly. **Findings:** As a result of the research analysis, it has been observed that established model has acceptable fit indices. Positive consumer feedback, more awareness on CSR initiatives will lead to Ethical Purchase intention that would benefit the Society and the Organisation. There is a slight difference among male and female consumers with regard to CSR awareness. There is a huge difference among age groups with respect to CSR awareness. **Managerial Implications:** This research would be an insight for managers who facilitate and allocate resources as well as manpower for CSR initiatives. The general view is that the consumers are still not aware about the CSR initiatives taken by the organization. Managers need to identify different modes of communicating their CSR actions to the consumers and emphasis on the consequence that would occur if not done. **Original/value:** This paper examines the awareness and feedback of Consumers towards CSR initiatives that makes them purchase the products associated with CSR. This study also emphasis on the benefits of the CSR initiatives by the MNCs.

### KEYWORDS

corporate social responsibility, ethical purchase intention, consumer awareness, consumer feedback.

## 1. INTRODUCTION

The BCSD-World Business Council for Sustainable Development has defined that the main purpose of a business is to provide goods that are affordable and to provide good services to the society which will lead to economic and community development. This purpose is related to the various challenges present in our society, such as climate change, poverty, pollution, unemployment, natural disaster and so on. These problems have to be taken care for the development of the society. The companies cannot focus only on the generation of short-term profit for its shareholders, they have to build up a strong community trust for the company and maintain a healthy environment (Manzoni, J. et al. 2006) by taking corporate social responsibility (CSR). Most of the companies have started presenting new socially responsible initiatives in an attempt to satisfy stakeholders and show that they are concerned about the world (Cravens & Piercy, 2013). This development is seen as one of the most essential corporate developments since the start of the new era (Barnea & Rubin, 2005). The concept of corporate social responsibility (CSR) is vital for attaining growth. (Carroll & Shabana, 2010). India is the first country to enact the mandatory minimum CSR spending law and the rules came into effect from 1 April 2014 (Companies Act, 2013), but still there is low CSR awareness level towards customers. Much needs to be done to change the attitude and behavior of the customers towards CSR initiatives.

## 2. REVIEW OF LITERATURE

### CONSUMERS AS STAKEHOLDERS

A Company which is socially responsible should initiate the concerns and satisfy the demands of their stakeholders (Donaldson & Preston, 1995; Jones, 1995; Maignan, Ferrell & Hult, 1999; Waddock, 2000) who could be affected either directly or indirectly by the activities of the corporate in terms of consumers, merchandiser, shareholders and regulators (Freeman, 1984). What is the reason for the consumers to act in an altruistic way such as monetary contributions towards NGO's, funding or donating for preservation of environment? One reason is to make human experience warmth and uplift their living condition (Andreoni, 1990). Consumers are the most important stakeholders of companies in the process of exchange marketing (Folkes & Kamins, 1999; Hunt & Vitell, 1992). However, there is not enough research on the relationship between the activities of CSR and consumer's preferences, their intentions and their attitudes towards buying the product. Additionally, the research on the responses of consumers towards CSR related products are minimal. This paper highlights the question as to how consumers would respond to the activities of CSR, when would they do this and why would they respond.

### STAKEHOLDER PERSPECTIVE

The perspective of the stakeholders is promising to gradually gain increase and now the corporates have come under tremendous pressure to showcase their CSR activities in every country of operation. This effort of the corporates would make them good corporate citizens of the country (Pinkston & Carroll, 1994). Corporate social responsibility (CSR) has gained immense popularity and the term CSR is used by the corporates, practitioners and academicians (Brown & Dacin, 1997; Handelman & Arnold, 1999; Osterhus, 1997). It is highly recommended that the activities of CSR be considered as the entry point to do business in the 21<sup>st</sup> Century (Altman, 1998). Elaborating on Carroll's (1998), the different phases of corporate citizenship are economic, legal, ethical and philanthropic segments. Lantos (2001, 2002) prefers to reject the Philanthropic CSR but include the economic, legal and ethical components. Corporates are these days obligated towards fulfilling the legal, economic and ethical responsibilities not only for the shareholders but also for the employees, consumers and society on the whole (Sen & Bhattacharya, 2001).

### CONSUMER PERSPECTIVE

There are similar studies on the literature of marketing and management on the behavior of consumers. The Anglo Saxon writing depicts the behaviour of consumers dating back to the 1970's and most of the literature refers to the writings of Berkowitz and Lutterman (1968) on the social responsible personality of the traditional society. The studies were mostly focused on the demography, then socio graphic and finally psycho graphic areas to find the most appropriate consumer areas where marketing efforts can be taken on a large scale. (Anderson & Cunningham, 1972; Brooker, 1976; Kinnear & Taylor, 1973; Kinnear, Taylor & Ah med, 1974; Mayer, 1976; Webster, 1975; Scherhorn & Grunert, 1988). The theory on Attribution states that first individuals are silent spectators of events and later they comment as well as provide a reason and description of the event (Kelley and Michela, 1980). It is the cognitive process through attribution theory that proposes the consumer outcome. Many studies on consumer behavior is attributed with the cognitive function of the information processing process. As an example Dean

(2003) studied the perception of consumers with regard to donations of corporate and interlink between the donations and the social responsibility of the organizations. The behavior and the intention of the people depend on the action of the organizations. There are certain scholars who have tested and found that CSR promotion influences consumer's perception and intention (Becker Olsen et. al, 2006), and that the responses of consumers towards the sponsorship is fit as a part of corporates (Becker Olsen and Simmons, 2002). Sen and Bhattacharya (2001) studied the corporate initiatives and the connection between the initiatives taken by the corporates and its societal effect (Sen & Bhattacharya, 2001). Previous research ascertained the effects of attribution towards corporate social responsibility on the responses of the consumers (Ellen et al., 2000; Dean, 2004). The Researchers have highlighted that the processing of consumer information had benefited the pioneers (Alpert & Kamins, 1995; Carpenter & Nakamoto, 1989; Kardes & Kalyanaram, 1992). The initiatives taken for CSR would encourage the consumers and create a good perception which in turn would improve the morale of the organization (Sen & Bhattacharya, 2001; Gurhan-Canli & Batra, 2004; Berens et. al, 2005; Matute-Vallejo et. al, 2011; Shauki, 2011). Certain researchers have found that CSR acts a product attribute for customers (Luo & Bhattacharya, 2006; Du et al, 2007; Auger et al, 2008; Matute-Vallejo et al, 2011). The practical results of previous researchers have proved that the consumers perception level on CSR has direct and positive effect on the company's evaluation process (Brown and Dacin, 1997; Ricks, 2005). Hence for this study the author has taken Product association and Company Evaluation as Consumer Feedback variable. The purpose of the research is to create a theoretical framework to analyze that some CSR activities result in positive outcomes where as other don't.

**3. OBJECTIVES**

1. To achieve an understanding of what CSR means to Consumers
2. To examine the consumer feedback towards CSR initiatives

**4. HYPOTHESIS FRAMING**

Hypothesis was framed to test the objectives. Hypothesis was framed to find if there is relationship between CSR awareness and Purchase intention and CSR Benefit. Hypothesis was also framed to examine the relationship between Consumer feedbacks and Purchase intention as well as Benefit. Alternative hypothesis is formulated to analyse if there could be a difference among age groups with respect to Purchase intention and CSR Benefit. Hypothesis is also formulated to analyse if there could be significant difference among male and female with respect to Purchase intention and CSR Benefit.

**5. RESEARCH METHODOLOGY**

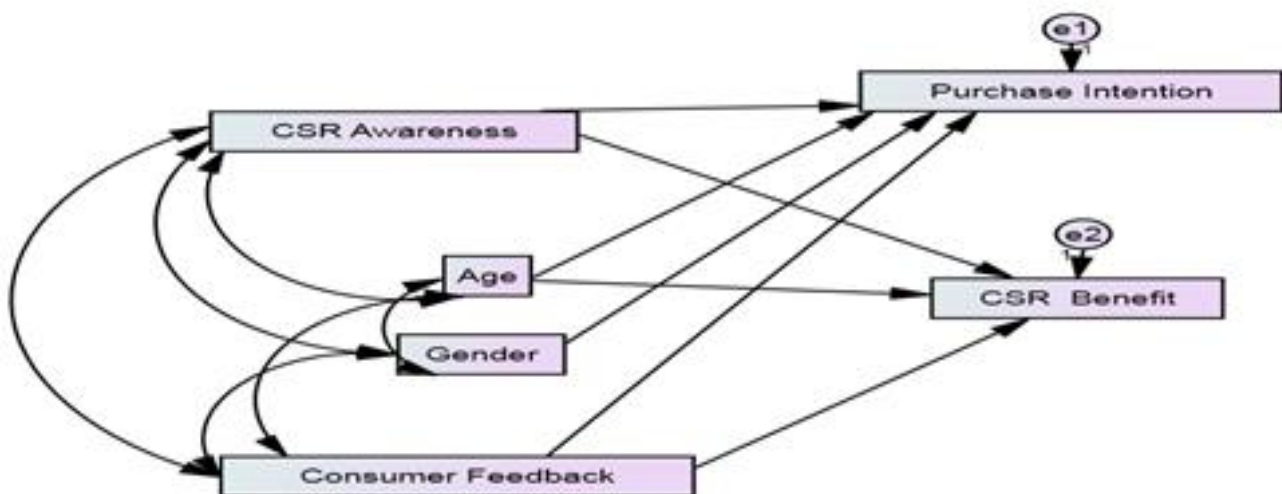
This SEM model is tested using empirical data collected from a sample of 375. Among 375 samples 349 contained usable data. Convenient Sampling is used in this study for collection of data from shopping mall visitors of Chennai metropolitan city. The data was collected in phoenix mall and Forum Vijaya mall which is the largest mall in Chennai. Phoenix mall has a largest retailer super store Big Bazaar. Forum Vijaya mall has SPAR, which is a famous retail Super store. The questionnaire was given to the participants and if any difficulty in reading the author would read and give a clear explanation to the participants of the survey. Once the questionnaire was answered every item of questions were checked.

**6. DATA ANALYSIS**

SEM analysis is used to analyse the hypothesis (Hancock and Freeman 2001; Kline 2005). Structural Equation Modeling (SEM) uses multivariate analyses of data, which evaluates a series of inter-related dependence relationships simultaneously. In the measurement instrument, the variables are classified as latent and observed variables. The variables that are not observed directly are called latent variable. The scores that are measured are called manifest variables or observed variables and variables are the underlying factors of the SEM constructs. In this study CSR awareness, Consumer Feedback, Purchase intention, CSR benefit are the latent variables. Each latent variable there are three or four statements (observed variables) to measure the latent variable. There are Exogenous and Endogenous latent variables. Exogenous latent variables are also named as independent variables. For the study the CSR awareness and Consumer feedbacks are the exogenous latent variable. Purchase intention and CSR benefits are the Endogenous latent variables that are influenced by the model directly or indirectly. The SEM constructs was used to test whether the model is fit using the following measures: CMIN, CMIN/df, RMSEA, RFI,CFI, NFI (normed fit index), and TLI. To determine that the model is fit the acceptable measures of SEM constructs need to be achieved (Hair et al.1998; Kline 2005).

**7. FIGURES AND TABLES**

FIG 7.1



Source: Author's own model

**ONE WAY ANOVA**

CSR Awareness					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	580.378	3	193.459	24.570	.000
Within Groups	2716.408	345	7.874		
Total	3296.785	348			

**TABLE 7.2.2: MULTIPLE COMPARISONS**  
Dependent Variable: CSR Awareness

	(I) Age	(J) Age	Mean Difference (I-J)	P value
Tukey HSD	18-24	25-34	-1.79267*	0
		35-44	-3.88759*	0
		45 and above	-2.4023	0.131
	25-34	18-24	1.79267*	0
		35-44	-2.09492*	0
		45 and above	-0.60963	0.943
	35-44	18-24	3.88759*	0
		25-34	2.09492*	0
		45 and above	1.48529	0.542
	45 and above	18-24	2.4023	0.131
		25-34	0.60963	0.943
		35-44	-1.48529	0.542

\* Significant mean difference at 0.05 level.

The one-way ANOVA has indicated that there is a significant difference among age groups as related to the CSR mean. There is a great difference among all four age groups (18-24, 25-34, 35-44, 45 and above) as the p value is < 0.05. The F value is (3, 345) = 24.50 p = 0.001. Since the null hypothesis was rejected Post hoc test was used. The researcher had used Post hoc comparisons (Tukey HSD) to find the mean score for the age groups. The age group of 35-44 (M= 15.5, SD= 2.4) is slightly different from the age group of 45 and above (M= 14.0, SD=.1) and from 25-34 (M= 13.39). The highest mean difference (3.8759) is between the 18-24 and 35-44 age groups with regards to CSR awareness.

**TABLE 7.2.3: LEVENE'S TEST**

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
CSR Awareness	Equal variances assumed	10.296	.001	.781	347	.435	.25842
	Equal variances not assumed			.798	342.715	.426	.25842

As the P value (0.001) is < than 0.05, the null hypothesis is rejected at 5 % level of significance. This shows that there is a slight on CSR awareness between male and female. Based on the Mean score, Male consumers (13.5 %) are slightly better than Male consumers (13.2 %) with regard to awareness of CSR initiatives by the MNCs.

**MODEL FIT SUMMARY**

**TABLE 7.2.4: CHI SQUARE**

Model	NPAR	X <sup>2</sup>	DF	P	X <sup>2</sup> /DF
Default model	19	.189	2	.910	.095
Saturated model	21	.000	0		
Independence model	6	238.797	15	.000	15.920

In SEM comparatively a small chi-square value supports the proposed theoretical model being tested. In this model the value is 0.189 and is small compared to the value of the independence model (238.797). Hence the X<sup>2</sup> value is good.

Even though the X<sup>2</sup> seems good, it is also appropriate to check the value of divided by df (Wheaton et al; 1977) as the X<sup>2</sup> statistics are mostly sensitive to the size of the samples i.e. the model could be rejected as the sample size increases, hence chi-square (X<sup>2</sup>) divided by df is suggested to be a metric that as a good fit (Bentler and Bonnett, 1980). It is suggested that the metric does not exceed 5 for models with good fit (Bentler, 1989).

For current model, as shown in table was  $\frac{X^2}{df} = 0.095$  (X<sup>2</sup> = 0.189; df = 2), suggesting acceptable model fit as the P value (0.910) is > than 0.5. This suggests that the model is accepted.

The other different model-fit measures are mentioned below:

**TABLE 7.2.5**

Fit statistics of the Measurement model		
Fit statistic	Recommended	Obtained
X <sup>2</sup>	-	0.189
df	-	2
X <sup>2</sup> significance	p > 0.5	0.910
X <sup>2</sup> /df	< 5.0	0.095
GFI	> 0.90	1.000
AGFI	> 0.90	0.998
NFI	> 0.90	0.999
RFI	> 0.90	0.994
CFI	> 0.90	1.000
TLI	> 0.90	1.061
RMSEA	< 0.08	0.001
RMR	< 0.10	0.006

In the above mentioned table the GFI - Goodness of Fit index is 1.000 which is above the recommended value of 0.90. AGFI - Adjusted Goodness of Fit Index achieved here is 0.998 which is above the recommended value of above 0.90. The values of NFI - The Normal fit Index, RFI - Relative Fit index, CFI - Comparative Fit index and TLI - Tucker Lewis Index (TLI) are 0.999, 0.994, 1.000, 1.061 respectively which is greater than recommended level of above 0.90. RMSEA is 0.001 and is well below the recommended limit of 0.08. The RMI - Root Mean Square Residual is also well below the recommended limit of 0.10 at 0.006. Here it is interpreted that the model given an explanation on the correlation which is within the average error of 0.084. This can be interpreted as meaning that the model explains the correlation to within an average error of 0.084 (Hu and Bentler, 1990). Hence this model shows an overall acceptable fit. Fit model shows that the alternative hypothesis is accepted which proves that there is a significant relationship between CSR awareness and Purchase Intention as well as CSR benefit.

**8. FINDINGS**

The findings in this paper contribute to the available literature on CSR awareness and Purchase Intention. The study also brings insight into the available CSR literature. If Consumers are more aware on the CSR initiatives by the MNCs they would showcase ethical Purchase Intention which has been suggested by Sen and Bhattacharya (2001). This relationship would occur when the whole sample is used. In this study there is a slight difference among male and female consumers with regards to CSR awareness. There is also a great difference among age groups with regards to CSR awareness. Previous researchers have investigated the

impact of CSR on the consumers buying intention as well as product evaluation with the use of experimental methodology (Brown & Dacin, 1997; Sen & Bhattacharya, 2001; Ehrlich & Irwin, 2005). Though these studies establish a causal relationship between variables, the consumers reaction towards CSR in real situation is not evaluated. This research examines the Consumer feedback towards the ethical Purchase Intention and benefits of the CSR initiatives. There is a significant relationship between CSR awareness and Purchase Intention as well as between CSR awareness and Benefits of CSR initiatives. There is an association between Consumer feedbacks to Purchase Intention and CSR benefits. This research may be useful to the top level management who facilitate and allocate CSR initiatives within the organizations. The study reveals that in general consumers are ignorant of the initiatives taken by the organization. As consumers become more aware of ethical behaviors, their motivation is increasingly toward a balance between personal and social benefits (Roy, 1994; Hemingway and MacLagan, 2004). Managers should look for better way to communicate their CSR initiatives and actions towards society. They should stress on the consequences that might occur when these initiatives are not taken.

## 9. CONCLUSION AND FUTURE RESEARCH

This indicates that dilemmas and debates about CSR conceptualizations can be resolved with a contract that CSR initiatives always generate positive outcomes irrespective of the initiatives (Luo and Bhattacharya, 2009; Blomgren, 2011). This study examines the relationship between Consumer's demography and Consumer CSR feedbacks. There is a slight difference among male and female consumers with regards to CSR awareness. There exists a major difference among age groups with respect to CSR awareness. This article discovers consumer's responses to CSR and results confirm that there is a positive link between CSR and consumers' Corporate Evaluation (Brown and Dacin, 1997; Ricks, 2005), Product Association (Sen and Bhattacharya, 2001) and Purchase Intention (Becker-Olsen et al., 2006; Berens et al., 2005; Carrigan and Attalla, 2001). As Structured Equation model is fit, there exist a positive association between CSR awareness and Purchase Intention and also between CSR awareness and Benefits of CSR initiatives. The association between Consumer feedbacks to Purchase Intention and CSR benefits is strong. If the awareness to CSR increases, the consumers would Purchase the CSR related products more. Both the society and the organization is benefited through CSR initiatives. In addition, spending for CSR initiatives is an investment that will yield good will and result in positive outcomes. (Sirsly and Lamertz, 2007; Callan and Thomas, 2009). Future research can be done extending this study into different consumer samples (e.g. students, consumers with different socio-economical status) and ethical contexts (e.g. Other CSR activities done by different industries,) Comparisons can be made within different consumer groups and also CSR initiatives by different industries (eg Automobile, IT/ITES, Manufacturing). Also research can be done on Consumer emotions towards CSR initiatives.

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## EFFECTS OF IRREGULAR SHIFT WORK ON THE MARITAL LIFE AND PARENTING DIFFICULTIES (A STRUCTURAL EQUATION MODELING)

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### ABSTRACT

**Purpose:** The researcher uses SEM modeling to find the relationship between Irregular shift work and the marital satisfaction as well as Parenting Difficulties. Simple Linear Regression and Pearson's correlation is used to justify that there is a significant relationship between Irregular shift work and the marital satisfaction as well as Parenting Difficulties. The workers from logistic Industry with children were the respondents. **Methodology:** Sample size of 297 was taken and the SEM modeling was run to find whether the model is fit. The model was found to be fit between the exogenous variable and the endogenous variable. Simple Linear Regression showcased that there is a strong relationship between Irregular shift work and the marital satisfaction as well as parenting difficulties. Pearson's correlation test was also done between the Irregular shift work and marital satisfaction as well as between Irregular shift work and Parenting Difficulties. **Findings:** The SEM was found to be fit. The simple linear regression and Pearson's correlation test found a strong relationship between Irregular shift work and marital satisfaction of the employees as well as the relationship between Irregular shift work and the Parenting Difficulties. These tests have also confirmed that the couples working in Irregular shift work suffer when it comes to fulfilling their marital obligations as well as the growth of their children. **Management Implications:** These days it is very important to understand the problems of employees working in Irregular shift work. Here the data was collected from logistics industry as it works round the clock. This paper would be an eye opener for the employers of logistics industry to know the problems of the employees who work in night or rotational shifts.

### KEYWORDS

SEM modeling, logistics, marital satisfaction; parenting difficulties; night shift; irregular shift work.

### 1. INTRODUCTION

Shift work called non-standard schedules or Irregular shift work is the work done away from the normal working hours of 8 AM to 6 PM. These days' employees in firm or organization need to work 24/7 and are required to work in Irregular shift works. These changes have happened in many countries around the globe especially in India, Philippines, China etc., here the employees are expected to work round the clock to take care of the needs of the customers. Irregular shift work is required since globalization took over (Shu-Yu Tai et al, 2014). In an economy that is globalized, in India it has become mandatory to work 24/7 that caters to the need of the customer around the globe. This kind of work has improved the standards of the economy as well as provided employment for the citizens of India. The Indians who work in Irregular shift works are paid well when they start working in Irregular shift work this has not only increased the economic standards of the country but also the economy standards of the citizens.

Irregular schedules would affect the employees and their families in many ways. A set of past studies have studied the effects of irregular schedules and have put forward the problems that are faced by the family members and the stress that is created within the family system. In the study it is found that communication within the family is very minimal which makes it difficult to carry out the family activities. Interaction and communication within the family is associated with happiness in the marital relations, conflict within the couples and poor adjustment among the family (Bohle & Tilley, 1998; Grosswald, 2004; Presser, 2000; Staines & Pleck, 1983, White & Keith, 1990).

Varied roles may lead to chaos and confusion if it is done at the same time. The communication and interaction can go either in a complementing way or create conflicts because of the source of stress. This turns into conflict when the actions performed by the individuals are out of their reach and when they are not comfortable. A male member when he is in a position to take care of the chores related to the female it is not compatible and exceeds the capabilities of the concerned person. The two important part of life is family and work, most research has been dealing with the relationship between these two parts (Frone MR, Russell M, Cooper ML, 1992) conflict arise due to the interference of work life with the family life and conflicts arise due to the interference of family life on work life.

### 2. REVIEW OF LITERATURE

A new study that was conducted by Shu-Yu Tai et al (2014) studied the effects of Irregular shift work on the nurses. This empirical study clearly exhibited that the nurses who worked continuously in night or rotational shifts faced problems in the functioning of their families and this was pertaining to the married nurses. There is always an effect of Irregular shift work on the work and family life causing work-family conflict. The study compared the day shift nurses and the night as well as rotational shift nurses and found that the night and rotational shift nurses were more affected since their family functioning and marital commitments were affected.

Shift work such as Structural work requirements as well as (Staines & Pleck, 1983) extended working hours (Fenwick & Tausig, 2001) causes social and psychological pressure, in terms of the lot of family responsibility, more tasks to be fulfilled, more work load etc. Psychologically the individual faces a lot of stress at home and this leads to poor family functioning and also work dissatisfaction. This causes higher degree of marital dissatisfaction (Kinnunen & Mauno, 1998). The structural and social demands of the family were related with higher levels of marital dissatisfaction (Hill, Yang, Hawkins & Ferris, 2004) as these lead to negative consequences such as the feeling of increased stress, dissatisfaction with the family members, worn out feeling and less efficient in Marital and child care functions (Frone & Yardley).

A study conducted by Robert Perrucci et al (2007) found that workers in irregular shifts compared to workers with general shift reported greater negative effects in their marital and family life and working in irregular shifts affects the interaction of parent and child. The workers of irregular shift also reported lesser community and social involvement.

A study conducted by Jansen et al (2004) found that Irregular shift work workers had a greater amount of marital dissatisfaction and work – family problems when compared with the day shift workers and that this shift work interfered with the family life to a greater extent as the days working in shift work went by. Irregular shift work workers need to sacrifice their sleep hours if they want to have time with their spouses and children, the lack of sleep would further make them inefficient at work. According to the study conducted by Ariel Kalil et al (2010) suggest that work in an important means for marital stability and the findings extends beyond what presser found that irregular shift work leads to divorce.



In the study conducted by Olav Muurlink et.al (2014) found that the irregular shift workers job affected the relationship with the partner thus bringing a greater negative effect on the work-life balance and consequently leading to greater marital dissatisfaction.

Hakola and Harma (2003) found that as the shift work causes an effect on the employee's wellbeing, it is very important to study the work-family conflict. Grosswald (2003) in a very interesting study found out that the employees who worked in rotational shift were the most affected when compared to the workers in permanent day or permanent night shift. Here in this study it is noted that work to family spillover is more in the employees who work in rotational shifts. Since in rotational shifts employees are expected to keep changing their shifts on and off according to Amelsvoort et al (2004) this has a negative impact on the house chores and duties. The team found that rotational shift workers had more problems on health, even more lack of sleep and greater work-family conflict as well as greater marital dissatisfaction.

Barnett and Gareis (2008) ventured into an interesting findings to study the effect of Irregular shift work on the married women of dual earner couples who work in day shift or Irregular shift work and especially those who have children aged between 8 to 14 years indicates that mothers who spend greater time interacting with their children regardless of their work schedule would not affect the children's perception about their mother and would not feel alienated but if not monitored or if not taken seriously may lead to in-confidence in the children. In the event of spending time with the children or not it is clearly evident that the mother faces more psychological distress and quality of her marital life

A very interesting national survey taken by Staines and Pleck (1983), based on the 1977 Quality of Employment Survey highlighted that Irregular shift works are related with the difficulties to schedule the family chores, working in weekends and working on variable days lead to more insufficient time with spouses as well as children and increase in conflicts among the family members especially the spouses since both spouses weren't able to adjust themselves to the demanding work as well as family commitments. Kingston and Nock (1985) used the same data to find the effect of the no of hours the employee worked and the impact on marital dissatisfaction. They found that there is a greater relationship between the no of hours worked and the amount of time spent by the couples leading to greater marital conflict and greater work-family conflict.

Staines and Pleck's subsequently conducted an analysis of the time diary data which was available from the study of time use in 1981. (Kingston & Nock, 1987) proved that in both couples who worked in Irregular shift work spent very less time with one another leading to marital instability hence it was found that Irregular shift work was linked to the marital quality of the couples. He quoted that it was not clear whether this Irregular shift work has any link with the work hours and whether longer hours in Irregular shift work increased marital instability. He made it clear that interviews and time study can only indirectly explain the relationship between the work hours and marital quality.

According to Tilastokeskus (2014) the percentage of employees working in Irregular shift work has increased and it increases every year to a larger extent. These days Irregular shift work also called as non-standard working hours have started in every field mostly in the service industry where people need to be there round the clock. These days non-standard working hours have become more common among women and in order for women to become independent she has started working in whatever shifts are given. Women have started also working in different areas. The logistic industry sees a lot of people working in Irregular shift work as it is a service industry catering to the customers worldwide. In logistic industry shipments are being sent through ship or air on a continuous basis and this involves huge number of people working 24/7. Transportation sector has increased rapidly with logistics and most of the employees in the transportation sector are committed to working non-standard working hours. (Hakola et al, 2003) It is typical for non-standard working hours, that the shifts usually do not follow any particular pattern. It is also very common that the employees are working longer shifts, their off-time is shorter and the amount of work days in a row can be longer than five days. (Hakola et. al. 2003) found that irregular work takes place in varied timings. Though the members are committed to working nine hours they are forced to extend their working hours to fulfill the demand of the clients. Non-standard schedule includes the evening and night shift. There are night shifts which start at 7 in the evening, 9 in the evening or even at 12 midnight. The shift schedule depends on the work location as well as the customer interest.

These days work becomes a part of family life as it is not confined to one place or one particular time frame. The employee should be ready and prepared to change according to the organizations demands. Atleast the flexible option of working from home has come into place hence many employees prefer to take up this option in order to fulfill their family commitments, but the management expects them to be attentive round the clock. (Kinnunen & Mauno, 2012) found that most of the employees expressed concern the work disrupted their well being and marital life.

On the basis of the above literature, the aim of the study was to find the relationship between the below mentioned

1. To find the relationship between Irregular shift work (Exogenous Variable) and the marital satisfaction of workers from logistics industry (Endogenous Variable).
2. To find the relationship between Irregular shift work and Parenting Difficulties.

### 3. HYPOTHESIS

SEM was used on the hypothesized relationship between the exogenous and endogenous variables as shown in fig 1. The model is fit with all the values within the recommended limit. The hypothesis was framed firstly to justify there is a relationship between Irregular shift work and employee's marital satisfaction; secondly to justify there is a relationship between Irregular shift work and Parenting Difficulties. Irregular shift work Difficulties, Age of the employees, Years in Irregular shift works, Years married and age is taken as the exogenous variable whereas Marital satisfaction and Parental Difficulties are taken as the endogenous variable.

### 4. METHODOLOGY

The samples in the study are the employees of Logistics companies who are married with children and have been working in Irregular shift work. The data was collected from logistics companies by issuing questionnaires. The questionnaires with 25 questions including the demographic variables were circulated (5 questions Demographic and 20 pertaining to irregular shift work). A total of 350 employees were targeted but 297 questionnaires were found to be appropriate for the study. Lickert Scaling measurement was used to find the level of effect on the employees hence parameters such as 1 (Strongly disagree) to 5 (Strongly agree) were used. The questions were all pertaining to the difficulties the employees faced in performing the family responsibilities, meeting their marital commitments and child rearing. Convenient sampling method was used to collect data from the employees. The data was collected from both male and female.

### 5. RELIABILITY AND VALIDITY

Reliability of the variables is measured using the Cronbach alpha test in SPSS. All the 20 items leaving the demographic variables (5 questions) were tested to see the reliability. The demographic variables of 5 questions were not considered for this test. The items were tested using reliability analysis. The Cronbach alpha test is used to measure for internal consistency to see how the different items are closely related. As the value is higher there would be high internal consistency. The reliability coefficient of .70 or higher is found to be acceptable. In this study the reliability coefficient is .959 which has good internal consistency.

Case Processing Summary			
		N	%
Cases	Valid	297	100.0
	Excluded <sup>a</sup>	0	.0
	Total	297	100.0

Reliability Statistics	
Cronbach's Alpha	N of Items
.959	20

**6. DATA ANALYSIS AND INTERPRETATION**

The researcher has used Pearson’s correlation to find the significance level of correlation between Irregular shift work and marital satisfaction as well as the significance of correlation between the Irregular shift work and Parenting Difficulties. The Bivariate analysis also tests the level of significance between marital satisfaction and Parental Difficulties.

CFA and SEM is used to test the hypothesis. CFA was used as a measurement modeling to test the variables and their relationship with one another. The items of Irregular shift work were tested to bring a relationship between them so that the study is free of errors.

The structural equation modeling was later used to test the hypothesis and bring out the relationship between the Independent variables and the dependent variables. SEM gives a clear explanation on the relationship and presents the measurement in the simplest way. The Structural equation modeling presents the relationship between the demographic influence on the marital satisfaction and Parenting Difficulties.

Here the exogenous latent variables are the demographic variables comprising of questions regarding Irregular shift work, age, Years married, Years spent in Irregular shift work and Level in the organization. The researcher has taken marital Satisfaction and Parenting Difficulties as the endogenous variables. The study shows that the endogenous variable is influenced by the exogenous variable.

SEM consists of two models, one is the Measurement model and the other is the structural model. The measurement as well as the structural equation modeling is used to the extent to which a hypothesized data fits or summarizes the data sample.

The model fit steps were undertaken to find whether there is goodness of fit between the hypothesis model and the data sample. Goodness of fit verifies the extent to which the specified model reproduces the observed co-variance matrix among the indicator items.

For all goodness of fit measures, statistics are given in a continuum, with the independence model as the most restricted model and the saturated model as the least restricted one. Once the model is estimated, model fit ensures to compare the theory. If the theory is perfect, the observed and estimated covariance matrices will be the same.

**6.1 PEARSON’S CORRELATION**

**TABLE 1: CORRELATION BETWEEN IRREGULAR SHIFT WORK AND MARITAL SATISFACTION**

		Irregular shift work	Marital Satisfaction
Irregular shift work	Pearson Correlation	1	.871
	Sig. (2-tailed)		.000
	N	297	297
Marital Satisfaction	Pearson Correlation	.871	1
	Sig. (2-tailed)	.000	
	N	297	297

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

The results shown on the above Table indicate that there is a strong relationship between Irregular shift work difficulties and Marital Satisfaction. The Pearson’s r is .871 which is close to 1 indicating that the correlation between both variables is strong. Hence here in this table as one variable increases the other variable also increases. As the P value is 0.000 which is <0.01, the correlation is highly significant at 1% level so as the Irregular shift work difficulties increase the marital dissatisfaction also increases.

**TABLE 2: CORRELATION BETWEEN IRREGULAR SHIFT WORK AND PARENTING DIFFICULTIES**

		Irregular shift work	Parenting Difficulties
Irregular shift work	Pearson Correlation	1	.837
	Sig. (2-tailed)		.000
	N	297	297
Parenting Difficulties	Pearson Correlation	.837	1
	Sig. (2-tailed)	.000	
	N	297	297

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

The results shown on the above table indicate that there is a strong relationship between Irregular shift work and Parenting Difficulties. The Pearson’s r is .837 which is close to 1 indicating that the correlation between both variables is strong. Hence here in this table as one variable increases the other variable also increases. The P value (Sig (2-Tailed)) here is 0.000 which is <0.01, the correlation is highly significant at 1% level so as the Irregular shift work difficulties increase the Parenting Difficulties.

**TABLE 3: CORRELATION BETWEEN MARITAL SATISFACTION AND PARENTING DIFFICULTIES**

		Marital Satisfaction	Parenting Difficulties
Marital Satisfaction	Pearson Correlation	1	.731**
	Sig. (2-tailed)		.000
	N	297	297
Parenting Difficulties	Pearson Correlation	.731**	1
	Sig. (2-tailed)	.000	
	N	297	297

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

The results shown on Table 7.1.3 indicate that there is a strong relationship between Marital Satisfaction and Parenting Difficulties. The Pearson’s r is .731 which is quite close to 1 indicating that the correlations between both variables are quite strong. Hence here in this table as one variable increases the other variable also increases. As the P value is 0.000 which is <0.01, the correlation is highly significant at 1% level so as the Marital dissatisfaction increase the Parental Difficulties also increases.

**6.2 SIMPLE LINEAR REGRESSION (IRREGULAR SHIFT WORK DIFFICULTIES AND MARITAL SATISFACTION)**

**TABLE 4: MODEL SUMMARY**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871 <sup>a</sup>	.759	.758	3.31487

a. Predictors: (Constant), Irregular Shift work

**TABLE 5: ANOVA**

Model		Sum of Squares	Mean Square	F	Sig.
1	Regression	10212.981	10212.981	929.437	.000 <sup>b</sup>
	Residual	3241.564	10.988		
	Total	13454.545			

a. Dependent Variable: Marital Satisfaction

b. Predictors: (Constant), Irregular Shift work

TABLE 6: COEFFICIENTS

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.403	.668		8.087	.000
	Irregular Shift work	.888	.029	.871	30.487	.000

a. Dependent Variable: Marital Satisfaction

The model summary in Table 4 gives us the correlation coefficient and coefficient of determination for the regression model. A coefficient of .871 indicates that there is a strong positive relationship between Irregular shift work and marital Satisfaction of the employees. Here we can suggest that as long as the Shift difficulties increase there will be an effect on the marital life of the employees.

The model is statistically significant as the P value is <0.05, here the Anova in Table 5 shows us that the regression model is a statistically significant proportion of the variance.

Hence there is a relationship between Irregular shift work and the marital Satisfaction of the employees.

6.3 SIMPLE LINEAR REGRESSION (IRREGULAR SHIFT WORK AND PARENTING DIFFICULTIES)

TABLE 7: MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837 <sup>a</sup>	.701	.700	2.83206

a. Predictors: (Constant), Irregular Shift work

TABLE 8: ANOVA

Model		Sum of Squares	Mean Square	F	Sig.
1	Regression	5537.206	5537.206	690.374	.000 <sup>b</sup>
	Residual	2366.073	8.021		
	Total	7903.279			

a. Dependent Variable: Parenting Difficulties

b. Predictors: (Constant), Irregular Shift work

TABLE 9 COEFFICIENTS

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.290	.571		2.261	.025
	Irregular Shift work	.654	.025	.837	26.275	.000

a. Dependent Variable: Parenting Difficulties

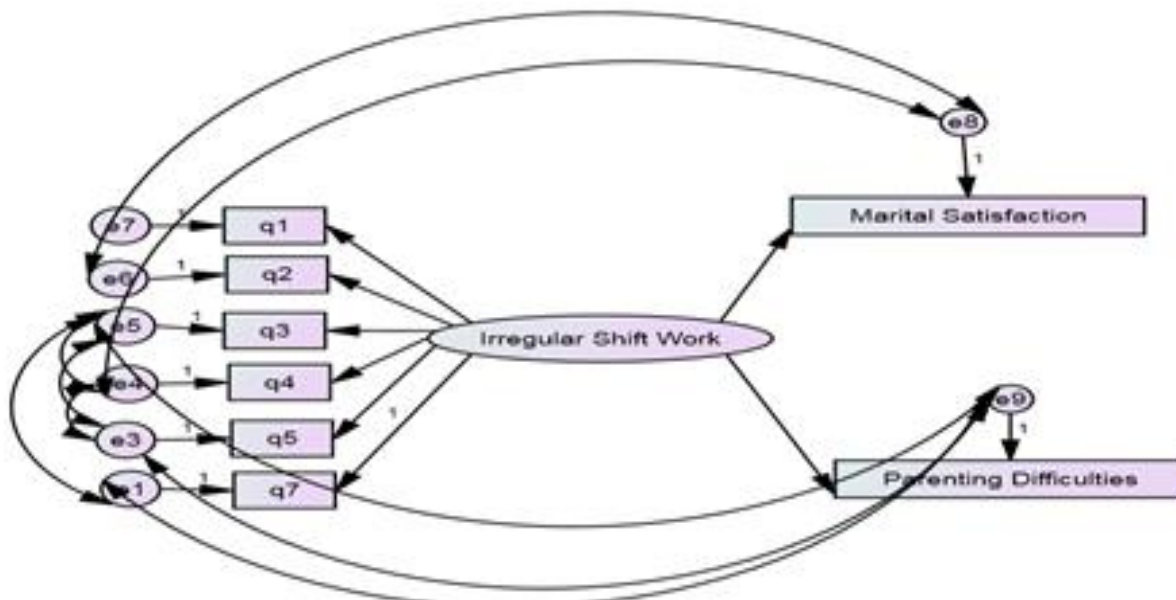
The model summary in Table 7 gives us the correlation coefficient and coefficient of determination for the regression model. A coefficient of .837 indicates that there is a strong positive relationship between Irregular shift work difficulties and parenting difficulties of the employees. Here we can suggest that as long as the Irregular shift work exists there will be Parenting Difficulties. The model is statistically significant as the P value is <0.05, here the Anova in Table 8 shows us that the regression model is a statistically significant proportion of the variance.

Hence there is a relationship between Irregular shift work difficulties and the marital Satisfaction of the employees.

6.4 CONFIRMATORY FACTOR ANALYSIS AND SEM USING AMOS

CFA was run using Amos. The CFA which is the measurement model is used to find the established acceptable levels of goodness of fit and to validate the constructs. Validity is to check whether the variables are accurate and have accurately measured what they have intended to do. The CFA finds the relation between the observed variable and unobserved variable. The CFA defines the pattern in which each variable loads on a particular factor. The CFA is a method of testing how good the measured variables are in a particular construct. The key features of SEM are the possibility of correlation between the latent variables to find the relations. When a path is drawn from one variable to another, it can be stated that the endogenous variable is a predictor of the other endogenous variable (Stata Corp, 2013)

FIGURE 1: CONFIRMATORY FACTOR ANALYSIS (MEASUREMENT MODEL) TO CHECK VALIDITY OF THE CONSTRUCTS



Structural equation modeling is a statistical modeling technique, is vastly used in behavioural sciences. The SEM at many times is used as a combination of factor analysis and regression. SEM is a structure of the covariances between the observed variables. SEM provides a convenient framework for analysis of the statistics and is visualized with a graphical path diagram (Hox, 2013)

FIGURE 2: STRUCTURAL MODEL HYPOTHEZED RELATIONS BETWEEN EXOGENOUS AND ENDOGENOUS VARIABLES.

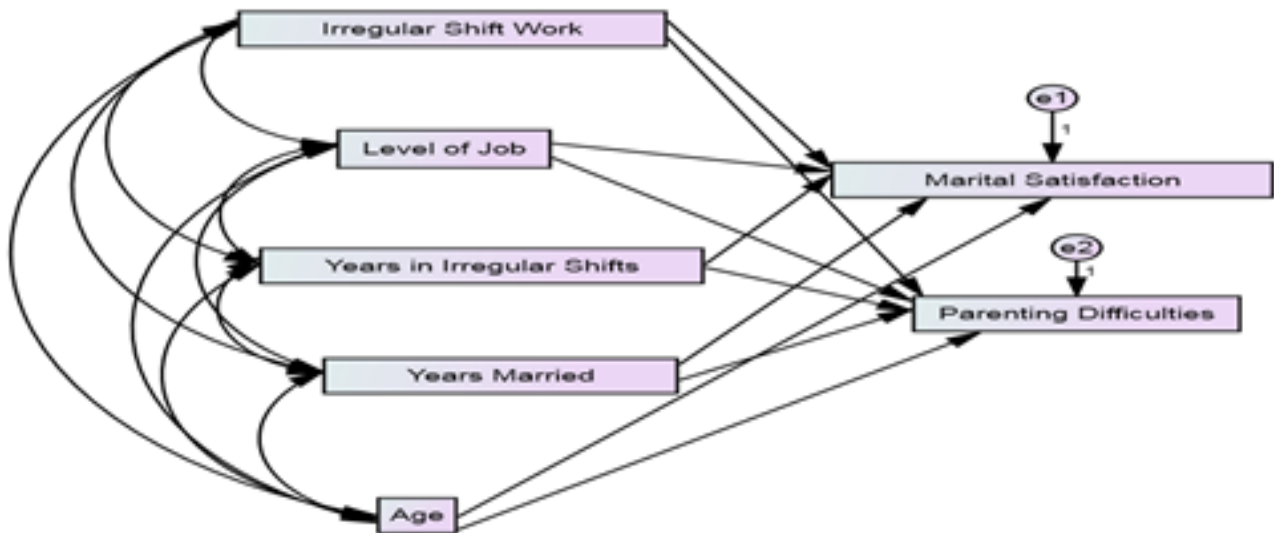


TABLE 10: AMOS OUTPUT SHOWING MODEL FIT

Model	NPAR	CMIN (x sq)	Df	P	x sq/df
Default Model	25	19.544	11	0.52	1.778
Saturated Model	36	.000	0		
Independence Model	8	2944.339	28	0.000	105.155

TABLE 11: MODEL FIT RECOMMENDED AND OBTAINED STATISTICS

Fit Statistic	Recommended	Obtained
x sq	-	0.667
df	-	1
x sq Significance	P > 0.05	0.052
x sq/df	<5.0	1.778
GFI	>0.90	0.984
AGFI	>0.90	0.948
NFI	>0.90	0.993
RFI	>0.90	0.983
CFI	>0.90	0.997
TLI	>0.90	0.993
RMSEA	<0.08	0.051
RMR	<0.10	0.064

7. FINDINGS

The results shown on Table 7 provides an overview of the model fit, this includes the Number of parameters, CMIN and Degrees of freedom values. In SEM a small chi-square value will always support the model that is being tested. The value for Chi square in this model is 19.54 which are relatively small suggesting that the model is fit. The p value is >0.05 and since it exceeds the alpha value it is considered a good fit. The x square divided by the degrees of freedom (11) value is 1.77 which is also within the recommended range of <5.0 showing a good fit. Hence the model here fits the data on an absolute basis. There are other model fit used to measure the goodness of fit mentioned in Table 8 shows the other model fit used to measure the goodness of fit. The Goodness of fit index (GFI) is used to measure the proportion of variance and covariance that the proposed model is able to explain (This is similar to R-square in regression). The values that are greater than 0.90 is considered as good fit. Here the GFI is 0.984 indicating that it's well above the desired value of 0.90 ensuring a good fit. Comparative Fit Index (CFI) evaluates the fit of the model relative with the independence model. The values that are greater than 0.90 is considered to represent a good fit. Here the value is 0.997 which is well above the recommended value of 0.90 ensuring a good fit. Standard root mean squared residual (SRMR) indicates the average difference between the sample variance and covariance. The values that are less than 0.08 are considered good fit. The value here is 0.06 indicating that the value is within 0.08 showing a good fit. The Root mean square error of approximation (RMSEA) is 0.05 which is within the recommended level of 0.08. Similarly, the values of AGFI, NFI and TLI are all greater than the recommended value of 0.90 showing a perfect model fit.

8. CONCLUSIONS & SUGGESTIONS

**NOTE 1:** The study aimed to find the impact of Irregular shift work on the marital life of employees working in the logistics Industry. The study showed that there was a strong relationship between Irregular shift work and work-family conflict such that the employees faced problems concerning their marital relationships and fulfilling the family commitments. The study found a great relationship between Irregular shift work and parenting difficulties as well as Irregular shift work on the marital satisfaction of the employees. The marital dissatisfaction on account of Irregular shift work led to strained parent – child relationship effecting the growth of children as well as poor academic performance. Though the study was not intended to find the effect of Irregular shift work on the children's cognitive ability, there were signs that parents found it difficult to monitor the children's academic performance. The SEM clearly depicted that all the factors such as age, years in Irregular shift work, years married, level etc. Plays are major part in the effect of Irregular shift work on the marital life of the employees.

**NOTE 2:** The study intended to concentrate more on the marital rather than the effect on the child rearing, further studies could be done to find the effect of irregular or shift work on the cognitive ability of the children. It is suggested that an empirical study to find the parents shift schedule on the children in Indian context would be admirable as there are no empirical studies on this. The academic performance of children is a major part in the family role, the future researchers

can make a study only on the effect on academic performance of children through experimental research. A comparative study between day shift workers and night shift worker is also feasible as there is not much literature in Indian context.

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**MEASURING CORRELATION OF SELECTED DISTRICT CENTRAL CO-OPERATIVE BANK OF GUJARAT STATE**

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**ABSTRACT**

*District Central Co-operative Banks have played vital role in making available short and long term financing in both rural and urban India, yet their performance in the last few decades has been questionable in terms of profitability and liquidity. Considering these facts, it becomes crucial to analyze the financial position of these banks as per current phenomenon. Out of total 372 District Central Co-operative Banks in India, 18 District Central Co-operative Banks have been operating under four divisions in Gujarat state. This paper tries to measure correlation between profitability and liquidity of the District Central Co-operative Banks of Gujarat state. Non-Parametric correlation model has been applied, based on Kendall's tau and Spearman's rho. Authors finally found that there is high degree of negative correlation between profitability and liquidity ratio of selected District Central Co-operative Banks. But, on the basis of Non parametric correlations Kendall's tau b found that there are high degrees of positive correlation between profitability and liquidity ratio of selected District Central Co-operative Banks, and Spearman's rho found that there is positive correlation between profitability and liquidity ratio of selected District Central Co-operative Banks.*

**KEYWORDS**

correlation, district central co-operative banks, liquidity, profitability.

**INTRODUCTION**

Co-operative credit institutions have played an important role in providing institutional credit to the agricultural and the rural sectors. The Co-operative banking system in India is federal in structure. The co-operative banking system has a pyramid type of three-tier structure. Co-operative Banks in India have been working at three levels, viz. At State Level (Tier I) District Level (Tier II) and Village Level (Tier III). The main function of DCCBs are to provide finance to the primary credit societies, acceptance of deposits, granting of loans and advances, fixed deposit receipts, collection of bill, safe custody of valuables.

Today's is the world of competition. Competition prevails in each & every sector. Globalization & liberalization have opened the door to any company's business in India. Banking sector is also not untouched. It has to face competition not only with public sector banks and commercial banks but also with foreign banks and private finance institution. The purpose of Co-operative bank is not profiting but to withstand private bank and public sector bank. Co-operative bank should at least earn that much profit by which they can satisfy their customers. Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is derived from two words, Profit + ability, where profit is surplus over expenses & ability means potential. It means profitability the ability of the firm to generate earnings. Most of the information on an income statement is related to operations & can be used to access & understand how the business is performing. Profitability is measured with income and expenses. Income is money generated from the activities of the business. Expenses are the cost of resources used up or consumed by the activities of the business. Profitability of bank is mainly dependent on how efficiently bank utilizes its funds. Thus if a bank fails to utilize or allocate its funds efficiently, it has to suffer losses because each fund has its own procurement cost. Thus the profitability of a bank depends on the efficiency of its funds management. An analysis of profitability reveals how the profit position stands as a result of the total transactions made during the year.

Liquidity for a bank means the ability to meet its financial obligations as they come due. Bank lending finances investments in relatively illiquid assets, but it funds its loans with mostly short-term liabilities. Thus one of the main challenges for a bank is ensuring its own liquidity under all reasonable conditions. In banking, liquidity is the ability to meet obligations when they come due without incurring unacceptable losses. Managing liquidity is a daily process requiring bankers to monitor and project cash flows to ensure adequate liquidity. Maintaining a balance between short-term assets and short-term liabilities is critical. Most of the liabilities of banks are payable on demand or at short notice. Hence liquidity means, having enough money in the form of cash, or near-cash assets, to meet your financial obligations. A bank must have sufficient liquidity in order to meet customer demands or needs. Liquidity is also required to meet with any untoward financial crisis. But excess liquidity may cause loss of earnings while lower liquidity may indicate smooth running of banks.

The DCCBs maintain liquidity keeping these entire factors in mind. They have to maintain legal reserve ratio in the form of CRR and SLR i.e. 4% and 22% of demand and time liabilities respectively as per RBI directives, which is an important consideration for liquidity. The CRR and SLR are to be maintained on fortnightly basis. The RBI is authorized to increase or decrease the CRR and SLR at its discretions.

So, profitability and liquidity correlated to each other. Liquidity should be enough to run smoothly business operation and for more profitability purpose. This paper tries to measure correlation between profitability and liquidity of the District Central Co-operative Banks of Gujarat state. Non-Parametric correlation model has been applied, based on Kendall's tau and Spearman's rho.

**REVIEW OF LITERATURE**

**AnilkumarSoni et al.** (2013) have attempted to assess the overall effectiveness in credit delivery of DCC BankRajnandgaon during the period 2009-2010 to 2011-2012. An analytical research design (Descriptive Statistics and Queue Model) was considered. The study was based on secondary data, which was collected, compiled and calculated from annual reports and records of the DCC Bank Rajnandgaon. Empirical results showed that DCC Bank Rajnandgaon was effective in credit delivery. The service rate of the bank was sound.

To know the lending practices, to measure and compare the efficiency, to study the impact of size on the efficiency and to suggest the appropriate measures to improve the efficiency of Cooperative Banks of India, Soyeliya Usha L. (2013) have studied on some successful co-op banks in Delhi (India). Descriptive research was used in that study in order to identify the lending practices of bank and determining customer's level of satisfaction. He has collected Primary Data by Observation Method, Interview Method and Structured Questionnaire. Secondary Data was collected from the Annual reports of the bank, Manual of instructions on loans and advances, Books, Articles and Research Papers and Internet. He has taken 200 respondents. He has found that the customer has taken more than one type of loan from the banks. Moreover, they suggested that the bank should adopt the latest technology of the banking like ATMs, internet / online banking, credit cards etc. so as to bring the bank at par with the private sector banks.

**Dr. Sudesh et al.** (2013) attempt has been made to study the financial performance of Kurukshetra central co-operative bank for the period 2006-2007 to 2010-2011. The financial performance was analyzed through the ratio analysis. After a detailed study of the financial statements of the bank, it is clear that although

there is increase in deposits an indicator of growth but the profitability of the bank has decreased for the period from 2006-07 to 2010-11. The central cooperative bank should take appropriate steps and means to improve the profitability of the bank.

To examine the growth of DCCBs in India through selective indicators, **ThirupathiKanchu** (2012) have studied on these secondary sources drawn from National Federation of State Cooperative Banks Ltd (NFSCOB) reports, RBI bulletin and other web sites, papers, books and journals relating to Co-operative banking sector. They have collected the data for the period of ten years from 2001-02 to 2011-12. For analysis of the data, they have applied various statistical tools (Mean, S.D, C.V, Trend analysis) has been used to arrive at conclusion in a scientific way. They have concluded that the growth of Number of DCCBs and their branches have negative trend up to certain period later there is negligible positive trend whereas the membership in cooperatives have been increasing. They have also concluded that the capital, reserves, and borrowings increased almost double during the study period, with a nominal percentage of variation.

**Sreekala S. P.** (2011) has studied on an asset and liability management in Salem co-operative bank. The methodology used in the study was analytical and descriptive in nature. The secondary data has been collected from the Annual Reports of the Salem District Central Co-operative Bank. She has used Ratio Analysis, Least Square Analysis and Correlation to analyze the data. She has concluded that the bank should improve their customer service and technology they will come up with the standard level. According to the least square method, the Net Profit is expected to increase next five year. This study revealed that the findings and recommendations which would be useful for the development and improvement to the bank.

## IMPORTANCE OF THE STUDY

The above problem invites greater attentions today especially because of the growth of competitive banking and the liberalized economic policies which are likely to affect the working of DCCBs. The present study is an attempt to bring out the various facets in the working of DCCBs in Gujarat in relation to funds management. The suggestions will be helpful to the management to focus on such problems. It will be also helpful to the investors and members to analyze the financial position of DCCBs.

## STATEMENT OF THE PROBLEM

The DCCBs are nodal Centre of financial institutions in the DCCBs sector in a district. They have to mobilize the available resources and utilize them in the most efficient and profitable manner.

It has been observed in Gujarat DCCBs that credit deposit ratio remains lower in comparison of private and public sector banks. Generally, in these banks, credit deposit ratio remains around 65% whereas in DCCBs it remains around 40 % which indicates that DCCBs do not utilize their funds properly. It has been found that profitability remains lower than that of the private and public sector banks. It may be due to the higher operating cost and lower interest income. Moreover, liquidity problems are also observed in DCCBs in Gujarat. So, there is importance to measure correlation between profitability and liquidity of the District Central Co-operative Banks, on that basis, it is observed that whether there is positive correlation between profitability and liquidity or not.

## OBJECTIVES

1. To measure correlation between profitability and liquidity ratio of District Central Co-operative Banks.
2. To observe result on the basis of inference of profitability and liquidity ratio.

## HYPOTHESIS

**H<sub>0</sub>:** There is positive correlation between profitability and liquidity ratio of selected District Central Co-operative Banks.

**H<sub>1</sub>:** There is negative correlation between profitability and liquidity ratio of selected District Central Co-operative Banks.

## RESEARCH METHODOLOGY

Research methodology is a way to systemically solve the research problem. It may be understood as a science of studying how research is done scientifically. Here the researcher not only talk of research methods but also consider the logic behind the methods.

### SOURCES OF DATA COLLECTION

In this research secondary data have been collected from the annual reports of these selected District Central Co-Operative banks. Various journals of co-operative, RBI Bulletins, Reference Books, Internet and leading daily Newspapers have been also taken into consideration to get the information.

### PERIOD OF STUDY

The Present Study has covered the period of the ten-year starting from 2003-04 to 2012-13. This period is long enough to derive meaningful conclusion. Moreover this period is also selected because the complete data for the present study are available.

### SAMPLE SIZE

The DCCBs in Gujarat constituted the universe of the study. There were 18 DCCBs in Gujarat State from these District Central Co-Operative banks, 17 DCCBs of Gujarat have been taken as a research sample whereas one DCCB from Rajkot has not been considered as the data of this bank has not been provided according to their policy. Profitability ratio comprises of operating profit margin ratio, spread ratio, interest earned to total fund ratio, interest paid to total fund ratio, return on total fund ratio, return on capital employed ratio. Liquidity ratio comprises of current ratio, quick ratio, cash to current assets ratio, short-term financing to total financing ratio, short-term deposit to total deposit ratio, short-term advance to total advance ratio. Six ratios taken from each.

### RESEARCH TOOLS AND TECHNIQUES

The present studies used correlation coefficient method to measure correlation between profitability and liquidity of the District Central Co-operative Banks of Gujarat state. Non-Parametric correlation model has been applied, based on Kendall's tau and Spearman's rho.

## RESULTS & DISCUSSION

The table 1 shows that the mean and standard deviation between profitability and liquidity ratio from the year 2003-04 to 2012-13. The table 2 shows the Karl Pearson's Coefficient of Correlation between profitability and liquidity ratio. On the basis of table 2 it has found that there are high degree of negative (-0.547) correlation between profitability and liquidity ratio of selected District Central Co-operative Banks. But, on the basis of Non parametric correlations from the table 3 Kendall's tau\_b found that there is high degree of positive (0.573) correlation between profitability and liquidity ratio of selected District Central Co-operative Banks, and Spearman's rho found that there are positive (0.468) correlation between profitability and liquidity ratio of selected District Central Co-operative Banks. Table 5 describes proximity matrix; it means difference between two ratios of the co-operative bank. There is small deviation between variable no. 2 (spread ratio) of the profitability ratio and variable no. 1 (current ratio) of the liquidity ratio, and there is vast deviation between variable no. 2 (spread ratio) of the profitability ratio and variable no. 6 (short-term advance to total advance ratio) of the liquidity ratio as one more reason to negative correlation between profitability and liquidity ratio. Table 6 described inter-item correlation between profitability and liquidity ratio, it is negative (-0.547) means interrelationship between two items of the profitability and liquidity ratio indicates negative relationship. Karl Pearson's Coefficient of Correlation between profitability and liquidity ratio found high degree of negative relation as vast differentiate between mean of profitability and liquidity ratio and more deviation described by standard deviation between profitability and liquidity ratio. Liquidity shows good indication in the co-operative bank but profitability described negative indication for the co-operative bank. Co-operative bank should try to increase profitable level in the bank by reducing expenditure and through proper utilization of the money (liquidity) in the bank at right time and at right place it will enhance profitability in the organization. Reason for profitability decrease in the organization as money is not properly utilization.

**RECOMMENDATION**

Karl Pearson’s Coefficient of Correlation between profitability and liquidity ratio found high degree of negative relation as vast differentiate between mean of profitability and liquidity ratio and more deviation described by standard deviation between profitability and liquidity ratio. Liquidity shows good indication in the co-operative bank but profitability described negative indication for the co-operative bank. Co-operative bank should try to increase profitable level in the bank by reducing expenditure and through proper utilization of the money (liquidity) in the bank at right time and at right place it will enhance profitability in the organization. Reason for profitability decrease in the organization as money is not properly utilization.

**CONCLUSION**

From the above all discussion it is concluded that the Karl Pearson’s Coefficient of Correlation between profitability and liquidity ratio found that there is high degree of negative correlation between profitability and liquidity ratio of selected District Central Co-operative Banks. But, on the basis of Non parametric correlations Kendall's tau\_b found that there are high degrees of positive correlation between profitability and liquidity ratio of selected District Central Co-operative Banks, and Spearman's rho found that there is positive correlation between profitability and liquidity ratio of selected District Central Co-operative Banks.

**SCOPE FOR FURTHER RESEARCH**

The future areas of research include:

- a) Measuring correlation between activity ratio, profitability ratio, and liquidity ratio.
- b) Post hoc approach between activity ratio and profitability ratio.
- c) Post hoc approach between profitability and liquidity ratio.

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**APPENDIX**

**TABLE NO. 1: DESCRIPTIVE STATISTICS**

	Mean	Std. Deviation	N
Profitability average from the 2003-04 to 2012-13	4.0400	3.07492	6
Liquidity average from the 2003-04 to 2012-13	28.9550	28.41978	6

**TABLE NO. 2: CORRELATIONS**

		Profitability average from the 2003-04 to 2012-13	Liquidity average from the 2003-04 to 2012-13
Profitability average from the 2003-04 to 2012-13	Pearson Correlation	1	-.547
	Sig. (2-tailed)		.261
	N	6	6
Liquidity average from the 2003-04 to 2012-13	Pearson Correlation	-.547	1
	Sig. (2-tailed)	.261	
	N	6	6

**TABLE NO. 3: NON PARAMETRIC CORRELATIONS**

			Profitability average from the 2003-04 to 2012-13	Liquidity average from the 2003-04 to 2012-13
Kendall's tau_b	Profitability average from the 2003-04 to 2012-13	Correlation Coefficient	1.000	-.200
		Sig. (2-tailed)	.	.573
		N	6	6
	Liquidity average from the 2003-04 to 2012-13	Correlation Coefficient	-.200	1.000
		Sig. (2-tailed)	.573	.
		N	6	6
Spearman's rho	Profitability average from the 2003-04 to 2012-13	Correlation Coefficient	1.000	-.371
		Sig. (2-tailed)	.	.468
		N	6	6
	Liquidity average from the 2003-04 to 2012-13	Correlation Coefficient	-.371	1.000
		Sig. (2-tailed)	.468	.
		N	6	6

**PROXIMITIES**

**TABLE NO. 4: CASE PROCESSING SUMMARY**

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
6	85.7%	1	14.3%	7	100.0%



TABLE NO. 5: PROXIMITY MATRIX

	Euclidean Distance					
	1	2	3	4	5	6
1	.000	5.050	12.510	48.921	40.353	68.498
2	5.050	.000	14.145	49.636	40.514	68.932
3	12.510	14.145	.000	36.434	28.115	56.056
4	48.921	49.636	36.434	.000	10.130	19.727
5	40.353	40.514	28.115	10.130	.000	28.457
6	68.498	68.932	56.056	19.727	28.457	.000
This is a dissimilarity matrix.						

TABLE NO. 6: INTER-ITEM CORRELATION MATRIX

	Profitability average from the 2003-04 to 2012-13	Liquidity average from the 2003-04 to 2012-13
Profitability average from the 2003-04 to 2012-13	1.000	-.547
Liquidity average from the 2003-04 to 2012-13	-.547	1.000

**INDIAN A STUDY ON ADVERTISING RECALLING ABILITY OF CHILDREN**

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**ABSTRACT**

*This paper studies recalling ability of child that motivates children to recall advertisements. A quantitative approach was used to collect data from over 150 respondents. The respondents were selected on the basis of school students under the age of 3-10. The results reveals that advertisements are a very effective tool in motivating in recalling advertisements. This paper also examines slogan recall among elementary school children within the context of memory development. Results indicate that slogan recall is positively related to age and to media exposure. The study aims at focusing on the recall effectiveness of television advertisements of children in Coimbatore city. Over a decade, most of the advertisements are directed towards children and they directly/indirectly influence their buying behavior. Children usually do not make brand choices at the time of advertising exposure rather it is the Memory of the advertising messages that influence children. Recall importance stems from the fact that recall measures some aspect of this memory of the advertising. Advertisements provide more information about a product that can be set into memory if the child is familiar with the attention values used in the advertisement because this allows the child to generate any cue from memory to recall the advertisements. The results of this study reveal that TV advertisements attract the attention of the children and the recall effectiveness is significant.*

**KEYWORDS**

advertisements, recalling ability, child environment, schools, memory.

**INTRODUCTION**

In recent days, due to heavy competition, the manufacturers find it difficult to sell their product. In addition to the competition, the behavior of the consumer towards the products is changing at a rapid speed and also they are changing their interest towards products from one brand to another. The Socio- economic setup also influences the consumer in different angles. Above all, the contents of the product, promotional method adopted by the company, and the cultural base also influence the preference of a customer, adopt various promotional measures. One of such measures is advertising which is the lifeblood of every organization today. The trend has changed such that even temples, hospitals advertise their services and are ready to provide their services at a comparatively cheaper price, so advertising has become the powerful tool of an organization. The advertising message is conveyed through various media. Each of the media has its own merits and demerits. Further the effectiveness among the media differs significantly. Hence, the study attempts to find out how far the people recall the advertisements before buying it and the factors influencing it.

Thus advertising if not well designed and planned carefully may lead to wastage of resources of the contrary if it reached the customers effectively the business will flourish well, hence a great care is needed to design the advertising programmed effectively.

**STATEMENT OF THE PROBLEM**

Advertising is any paid form of non- personal presentation and promotion of ideas, goods (or) services by an identified sponsor. Advertising can be traced back to the very beginning of recorded history. Archaeologists working in the countries around the Mediterranean sea have dug up signs announcing various events and offers. Modern advertising however is a far cry from those early efforts. Advertising is a good way to inform and persuade, whether the purpose is to sell machinery (or) to sell coca-cola (or) to sell toilet soap. The purpose is sole.

The present study has made an attempt to know whether advertising has a real impact on buying of products. Whether the consumer recalls the advertisement before buying a particular? It aims to study whether the recalling ability of consumer effects his/her purchasing decision? To what extent is it true? The factors influencing the recalling ability are to be unearthed in this study.

**OBJECTIVES OF THE STUDY**

1. To find the general buying behavior of respondents.
2. To measure the level of recalling ability of respondents.
3. To identify the factors which are associated with recalling ability of the respondents.

**HYPOTHESES**

1. There is no association between age and recalling ability.
2. Gender does not influence the level of recalling ability of advertisements.
3. Level of education does not influence the recalling ability on advertisements.
4. Medium of education does not influence the recalling ability.
5. Type of family does not influence the recalling ability on advertisements.
6. Place of living does not influence the recalling ability on advertisements
7. Father's occupation is not associated with ability on advertisements.
8. Type of TV does not influence the recalling ability.
9. Forced to go to study or to play does not reflect in recalling ability.
10. Type of channel like does not influence the recalling ability
11. Seeing cinema does not influence the level of recalling ability on advertisement.
12. Type of health drink does not influence the recalling ability on advertisements.
13. Purchasing decision does not influence the recalling ability.

14. Change or jump for other channels does not influence the level of recalling ability on advertisements.  
 15. Type of snacks do not influence the advertisement recalling ability

## METHODOLOGY

The study depends on primary data. The data required for the study have been collected through questionnaires. The questionnaires have been designing after analysing advertising related information after observing advertisements in various media and consulting the various sources. Based on the information gathered through a pilot study, the questionnaire has been redesigned. The questionnaire has been divided in four sections. General profile of respondents, interested fields, buyer behavior, advertising recalling perceptions.

### SAMPLING

The study is conducted with reference to Coimbatore City. It is an agricultural oriented taluk surrounded by villages. Hundred and fifty respondents have been taken for the study and data collected through questionnaires. The respondents chosen are only children pertaining to their extra time watching TV.

### FRAME WORK ANALYSIS

The statistical tools used to analysis the data include

- (i) Chi-square test

### CHI-SQUARE TEST

Chi-square test has been used to examine whether there exist any association between selected variables and recalling ability.

Fifteen variables termed as attributes have been identified in order to test their association with advertisement recalling ability. They are (i) Age (ii) Gender (iii) Education level (iv) Medium of education (v) Type of family (vi) Place of living (vii) Father's occupation (viii) Type of TV (ix) Forced to go to study or play (x) Type of channel like (xi) Seeing cinema (xii) Type of health drink (xiii) purchasing decision (xiv) Change or jump for other channels (xv) Type of snacks like.

### RECALLING ABILITY INDEX

The recalling ability of respondents is measured by constructing an index called "Recalling Ability Index". For this purpose, questions related to recalling of advertisements numbering 17 have been given scores on a three-point scale such as three two and one. Thus maximum score a respondent would get it 44. The index has been ascertained by converting the score of each respondent into percentage, thus

$$\text{Recalling Ability Index} = \frac{\text{Advertisement Recalling Score of the respondent}}{\text{Maximum Score}} \times 100$$

The level of significance chosen for the chi-square test is five percent. The quantity is Type equation here described as the magnitude of discrepancy between theory and observation. In this study null hypothesis was set and tested using chi-square test and inference was drawn from the results. The quantity  $\chi^2$  is defined as

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

Where

O - Observed frequency

E - Expected frequency

## LIMITATIONS OF THE STUDY

The study is based on a data collected from respondents residing Coimbatore City alone pertaining only to child respondents. Hence while generalizing the results caution may have to be exercised. Any limitation that pertains to an opinion survey is bound to be applicable to this dissertation as well.

## CURRENT TREND IN ADVERTISING

Today the word 'Advertising' is a very common term known to us. It figures in each of our lives every day. We see it on television, in the sky, on the match box, in the newspapers, on the trash containers, in the magazines, on our mail, on the vehicles, in the vehicles, on bill – boards; we hear it on radio, in the stores we visit and so on. It is part of our daily life and everyone is conscious of it.

The term 'Advertising' is derived from the original Latin word 'adventure' which means 'to turn' the attention. Each piece of advertising turns the attention of the readers or the listeners or the viewers or the out lookers towards a product or service or an idea. Therefore, it can be said that turn the attention to an article or a service or an idea might be well as advertising.

## THE HISTORY OF THE ADVERTISING

It is almost impossible to trace the actual birth year or century of advertising as seen in its present form. However, one thing is certain that is centuries old. It has a factory of around 5000 years as the Indus valley civilization given solid proofs of advertising in its quest form, between 3,000 and 1,530 BC. The earliest forms of advertising were mostly used for religious purposes, i.e. Advertising was in the form of propaganda. To spread the teachings of Buddha, the king emperor Asoka of kalinga, set up rock and pillar edicts can be called as the forerunners of poster advertising of today.

Till advent of British rule in Indian Advertising was not taken for Business purposes. The reason for that was India was the unique example for household industrial activities. At the time of British entering, Indian was in village economy stage, Where the relationship between the producers and consumers were direct. The local markets were weekly and the producers displayed their wages, shouted and gave samples for promoting their trade. The skills of Indian artisans in the areas of textiles – Silk and cotton, Metal works were all accepted and there was no need of any special efforts of advertising. British settlement and ruling from 1600 onwards brought about certain changes. To popularize British goods, particularly the luxury goods, advertising efforts were needed. It was made possible through print medium. Portuguese brought the first printing press in 1556, which was used exclusively for printing Christian literature. It was only in 1780 the first Indian Newspaper was started, namely "Bengal Gazette" in Calcutta.

The "Bengal Journal" printed all the government advertisements. In 1790 "The Courier" was published in Bombay and the advertisements were in Indian languages namely, Marathi, Gujarati, Konkani, Urdu and kannada. There was no advertising agency was started in 1907 at Bombay and another in 1909, up to the Outbreak of world war (1914 -1918) most of the advertising was planned and placed by the foreign manufacturers. During the first World War, The newspaper circulation increased as people Indian market as flooded with foreign goods that gave a lot of spurt to newspaper advertising so that more and more space was reserved for advertising.

After the First World War. The Indian Agencies failed due to severe competition from foreign agencies, mostly British and American. Meanwhile the business was very badly affected by the great depression of 1929-33. However, the first fully fledged Indian advertising agency sprang up in 1931. The improved competition demanded a through improvement in the quality of advertising work and services. To improve art – work and copy illustration, Indian agencies sent their employees abroad for special training. All Indian radio was started in 1936. In 1939 the Indian and eastern newspapers society was founded to protect and promote the legitimate of the newspapers and to deal collectively with the government, agencies and the advertisers. The 'swadeshi' movement gave special twist to popularize Indian goods against the imported stuff. In fact, 1930s can be considered as the period of consolidation in the history of Indian advertising. During the Second

World War (1939-1945) and before independence there was fine fillip for advertising. Because of political hegemony between the great powers, India becomes the main supplier of industrial goods to the middle and far east. War encouraged good many industries wanted new markets and it was possible through advertising. Foreign advertising declined, as there were substantial cuts in import caused by war conditions. By the end the world war II, the political and economic scene underwent a sweeping change. Scarcity conditions gave much impetus to the growth and flourishing of light and small industries. In 1945 association of Advertising Agencies of India (A.A.A.I) was formed to raise the standard of advertising and regulation of the independence of India in 1947, the immediate tasks were to meet floor shortage followed by the special problems of partition of India.

The newly formed Government took necessary steps to meet the challenges of Indian Agriculture and industry. In 1949 Audit bureau of circulations of India (A.B.C.I) was started on the lines A.B.C of America in 1952, the Indian society of advertisers was formed to promote the interest of advertisers so as to raise the standard of Indian advertising. The TV services were introduced in India on 15<sup>th</sup> September 1959 at Delhi. Similarly, advertisers club of Bombay started and all the metro-politan cities have such clubs.

Thus, during the planned ear from 1951 to date advertising industry came up in big way. Today, the worth of advertising industry is more than 1,650 million rupees as annual turnover. The industry is well bloomed in all its branches, namely, advertisers, advertising media, advertising agencies, consumers and the government too.

According to current update almost Rs. 500 crores worth of advertising is done per annum in India. Advertisers entrust the task of executing their messages through a properly aerated ad campaign to the advertising agencies which charge 5% commission or their services on media billings.

### FACTORS INFLUENCING THE RECALLING ABILITY OF ADVERTISEMENTS

Today's worlds are so mechanized that man is buzzing like a bee and his choice of goods for his ultimate consumption is done hurry. So advertisements serve as a helping hand for a human being to know about the brand, its significance, uses its qualities etc. In regard of this advertisements recalling ability becomes an important tenure for us. So here an attempt has been made to measure the level of advertisement recalling ability of respondents and to find out the factors which are associated with that level of recalling ability.

First, the recalling ability index for each respondent is has been calculated, Secondary, Cross tables showing the relationship between various factors and the recalling ability index has been ability index has been drawn with the help of percentage of the total number of respondent is such factor group. The chi-square test has been applied to find out the association between the factors selected and the level of recalling ability to find out the association between the factors selected and the recalling ability index calculated.

### LEVEL OF RECALLING ABILITY

Respondent's ability of recalling the advertisements have been measured by giving scores to recalling the advertisements related questions. 17 questions in the form of statements are selected on the basis of important from the point of view of the respondents. They are (i) question where name of the serial or programmer given on their sponsors are asked with two choices (ii) questions where the slogan of the product. E.g "taller, sharper. Stronger" slogan denotes the product or comes for which the advertisements? A) Horlicks b) Boost the responses received for these questions have been rated on a two rated in a two-point scale and the scores allotted to answers of each questions are two and one respective would be 44. Thus scores obtained are converted in to recalling ability index. The recalling ability index ranges from up to hundred. The over calling ability index amounts to out of 150 respondents are with recalling ability index above this average and are with ability index below this average.

Based on the recalling ability index, the respondents have been divided into groups as respondent with low, medium and high level of recalling ability in order to analyse the investors under three groups mean and standard deviation method used, Accordingly, those with knowledge index ranging below 69 or termed as respondents with 'low recalling ability'.

Those whose recalling ability index is above 74 are termed as respondents with 'high recalling ability and those whose indexes ranging between 70-73 are termed as medium recalling ability respondents. Out of 150 respondents 48 (33%) are with low level of recalling ability 58 (38%) are with medium level of recalling ability null hypothesis have been frame and tested to ascertain the factors that associate the recalling ability by making use of the chi- square  $\chi^2$  test.

### DETERMINANTS OF RECALLING ABILITY

15 attributes such as age, gender, educational qualification, medium of education, type of family, place of living, father's occupation, types of TV, forced to go to study. Types of channels like habit of seeing cinema, type of health drink, purchasing decision, habit jumping channel during advertisements, type of channels like, have been selected to examine their association with the level of recalling ability. Chi-square test is applied to ascertain it at 5% level of significance.

TABLE 1

S. NO.	TABLE	$\chi^2$ VALUES
1.	AGE	2.816
2.	GENDER	1.067
3.	EDUCATIONAL QUALIFICATION	0.684
4.	MEDIUM OF EDUCATION	1.729
5.	TYPES OF FAMILY	1.689
6.	PLACE OF LIVING	3.455
7.	FATHER'S OCCUPATION	19.908
8.	TYPE OF TV	3.848
9.	FORCED TO GO TO STUDY OR PLAY	2.233
10.	TYPES OF CHANNEL	4.677
11.	TYPE OF HEALTH DRINK	1.201
12.	TYPE OF SEEING CINEME	0.712
13.	PURCHASING DECISION	2.194
14.	HABIT OF JUMPIN CHANNELS	0.571
15.	TYPE OF SNACKS	2.361

From the above table it is cleared that father's occupation associate with the advertisements recalling ability at 5% level of confidence.

### CONCLUSION

The forth chapter details with the determinates of recalling ability and it association with the same. Fifteen at tributes were taken and tested using Chi-square test and result inferred the father's occupation in associates with the advertisements recalling ability and the other attributes do not associate with advertising recalling ability.

### SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSIONS

Nowadays world is transforming in to a new path. Business is the life -blood of every man kind; in turn business depends upon advertisements, which greatly persuades or tries to persuade the minds of people. It turns prospective buyers in to actual buyers. The objectives of the study are to (i) Examine the socio-economic profile and the buyer behavior of the respondents. (ii) To find out the factors associated while purchase decisions by recalling the advertisements. (iii)

To measure the level of recalling ability on advertisements. (iv) To find out the factors associated with the level of recalling ability and, (v) To suggest suitable measures to trading community to improve their advertisement programmed. Data required for the study have been collected through questionnaires. A total of 150 respondents residing in Coimbatore City from the sample of the study.

### ANALYSIS OF DATA

Simple percentage method is used to find out the socio-economic profile of the sample respondents. To find out or to examine association between attributes and the level of recalling ability on advertisements, Chi- square test has been applied by constructing recalling ability index for each respondent. The level of confidence the selected for the study 5%.

### DETERMINANTS OF RECALLING ABILITY ADVERTISEMENTS

- (i) On the basis testing age and recalling ability of advertisements age group 6-10 have significant level of recalling ability (78.67%) such that age does not associate with advertising recalling ability.
- (ii) When gender compared with recalling ability that exists no association between the two and female respondents. i.e. 78 of them (52%) high recalling ability on advertisements. So that gender does not associate with advertisement recalling ability.
- (iii) When the educational qualification compared with recalling ability, there exists no association between the two and II- V std ie 118 (78.67%) have high recalling ability. So that educational does not associate with advertising recalling ability.
- (iv) Medium of education does not influence that advertising recalling ability.
- (v) Type of family does not influence that advertising recalling ability.
- (vi) Place of living does not have any influence on advertising recalling ability.
- (vii) When the advertisements recalling ability and father's occupation were tested there exists association between the two variables.
- (viii) Type of TV and type of channel does not have any influence on advertising recalling ability.
- (ix) Habit of seeing cinema does not influence the advertising recalling ability.
- (x) Type of health drink does not influence the advertising recalling ability.
- (xi) Purchasing decision and types of snacks like does not influence on advertising recalling ability.
- (xii) Habit of jumping channels during advertisements does not influence the advertising recalling ability.

### SUGGESTIONS

- (i) Advertisement should not lengthy and it should be attractable.
- (ii) The advertisements slogans should be well influencing and recallable and products details shown shall be elaborated.
- (iii) A strict regulation is necessary for today's advertisements.
- (iv) Finally, an advertisement should be in such a way that is the understandable, recallable and should reach one's mind and should influence his buying decisions

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**RETAIL CUSTOMER EXPERIENCE: A RESEARCH AGENDA****DR. SHILPA BAGDARE****ASST. PROFESSOR****INTERNATIONAL INSTITUTE OF PROFESSIONAL STUDIES****DEVI AHILYA UNIVERSITY****INDORE****ABSTRACT**

*New format retail stores are designing their retail spaces to provide a better experience to their customers. The purpose of this study is to understand retail customer experience and to propose issues for future research and practice. The paper reviews relevant studies, both empirical and conceptual, dealing with theories, processes, related variables and dimensions of customer experience and retail experience. The review clearly establishes the emergence and relevance of retail customer experience in an era of new age retailing to attract, delight and retain customers. It is primarily determined by the use of cognitive and emotional clues used in the retail environment, moderated by customer and contextual characteristics, resulting into a pleasurable experience leading to desirable retail performance. Review of literature suggests use of appropriate combination of cognitive and emotional clues in the retail for creating positive customer experience to improve retail performance. Based on a critical review of important studies, the present paper proposes important determinants and dimensions to understand and design retail experience. The study presents some relevant propositions, and research issues for retail customer experience.*

**KEYWORDS**

retail customer experience, retail store, emotion, cognition.

**INTRODUCTION**

The focus of retailing has gradually shifted from merely facilitating the exchange process to creating shopping experience. The emergence of organised retailing and new format retail stores has transformed shopping into an eventful journey of joyful experiences. Retail experience is a manifestation of customer's perceived cognitive, emotional, sensorial and behavioural value derived during the entire process of shopping. Retailing has been approached to explain creation of shopping values in terms of utilitarian value and hedonic values (Babin et al, 1994, Jones et al, 2006). Utilitarian shopping value includes the functional or rational benefits, whereas, hedonic shopping value refers to the sensorial, emotional dimension of shopping experience. The total shopping value places greater emphasis on experiential perspective (Holbrook and Hirschman, 1982; Mathwick et al, 2001). Modern shopping has moved out from being a "buying ritual" to an act of cherishing "experiential value". It is not merely a transaction – an exchange of money for preferred goods or services, rather it consists of a series of events happening in the journey of shoppers from Point of Entry to Point of Exit in any retail store. Retail experience is described as involving, entertaining, fulfilling, rewarding, engaging, exciting, relaxing and pleasurable phenomenon in the life of a shopper (Jones, 1999; Mathwick et al 2001, Jin and Sternquist, 2004; Cox et al, 2005; Hart et al, 2007; Soars, 2009; Verhoef et al, 2009). Positive retail experiences have been associated with a wide range of favourable retail performances in terms of customer satisfaction, sales, profits, loyalty, word of mouth communication and much more. In the recent past retail customer experience management has emerged as an important issue of discussion and research. Some studies have been undertaken to describe its nature and structure, yet it is in nascent stage. In the light of issues raised and lack of conceptual framework, the present study aims at understanding retail customer experience and exploring its determinants and dimensions based on existing literature and practices. The study presents bring out important propositions and suggests research issues which need to be addressed.

**RESEARCH METHODOLOGY**

The paper reviews relevant studies, both empirical and conceptual, dealing with theories, processes, related variables and dimensions of customer experience and retail experience.

**EXPERIENTIAL PERSPECTIVE**

For the last few decades, a large number of scholars and practitioners are discussing, debating, exploring and experimenting with the experiential approach to understand and manage the customers. Customer experience has emerged as the new value proposition aimed at creating a unique, superior, pleasurable and memorable experience. In a pioneering work, Holbrook and Hirschman (1982) proposed the concept of experience in the context of consumption of goods and services. Emphasizing the need for experiential perspective, they described customer experience as involving various playful leisure activities, sensory pleasures, daydreams, aesthetic enjoyment, and emotional responses. According to them consumption experience was largely related to feelings, fantasies, and fun. Carbone and Haeckel (1994) opined that the traditional product/service value proposition is inadequate for reaching customers or creating differentiation and suggested that the customers' experience must be given same level of importance as businesses give to products and services for creating a seamless total experience. Pine and Gilmore (1998) have also described the experience consisting of engaging, involving and entertaining dimension based on active or passive participation, and connectivity of the customer in the entire process. They further described that experiences are inherently personal, existing only in the mind of an individual who has been engaged on an emotional, physical, intellectual, or even spiritual level. No two people can have the same experience, because each experience derives from the interaction between the staged event (like a theatrical play) and the individual's state of mind (Pine and Gilmore, 1998). A customer experience is described as the total functional and emotional value of consumed service which is unique to every individual customer and the service consumption situation (Sandstorm et al, 2008). It is suggested that organizations need to develop competencies in creating and managing great customer experiences that leave lasting impressions on customer's mind. Managing each customer's experience is perhaps the most important ingredient in building customer loyalty (Crosby and Johnson, 2007). Palmer (2010) explained that experience involves progression over time, anticipation, emotional involvement, and a "uniqueness that makes an activity stand out from the ordinary". Successful experiences are those that a customer finds unique, memorable and sustainable over time (Pine and Gilmore, 1998). A number of studies have been carried out to define and describe the concept of customer experience and understand its interrelationships with a range of independent variables.

**RETAIL EXPERIENCE**

Retailing is undergoing a major transformation in terms of structure, processes, technology, design, formats, and sizes. It has grown in sophistication, dynamism, vibrancy and interactivity over the years. The use of newer skill sets, redesigned systems and processes, and cutting edge technology has enabled the retailer to create a magical and delightful experience for every shopper. Leading business organizations are even establishing exclusive retail outlets as experience centres. Berry (2002) opined that retailing is about creating a total customer experience by enabling customers to solve important problems, capitalize on the power of respectfulness, connect with customers' emotions, emphasize fair pricing and save customers' time and energy. Bagdare (2010) has reported that retail customer experience is expressed in terms of four dimensions - joy of shopping, leisure, mood setter, and distinctiveness.

Shopping in modern retail stores is essentially a sensory experience which attempts to engage, entertain, involve, and absorb the customers through all five senses. Music, lights, colours, displays, fragrances, ambience and many more elements shape up shoppers' mood and behaviour (Soars, 2009). A retail store experience

involves activities such as browsing, price comparisons, search for merchandise, evaluating product variety and quality, and interaction with store personnel (Terblanche and Boshoff, 2001). The experiential value in retailing can be expressed through customer return on investment, service excellence, aesthetics and playfulness dimensions (Mathwick et al, 2001). Burns and Neisner (2006) also found that cognitive evaluation and emotional reaction explain the level of satisfaction experienced in a retail setting. Pradeep (2010) proposed a shopping experience framework which includes dimensions such as information, environment, entertainment, education, simplicity, self-worth, and community. Customer considers a wide range of cognitive and emotional factors while selecting a particular store. The ability of the retailer to create unique and pleasurable events keep the customers delighted during the entire process of retail experience, and gives the retail store a distinctive image for identification and recognition.

### DETERMINANTS OF RETAIL CUSTOMER EXPERIENCE

Berry et al. (1990) explored strategic issues related to retail marketing and suggested that to remain effective retailer should have marketing orientation, provide structural support, customize marketing mix, and focus on customer service. Baker et al. (2002) proposed a conceptual model describing the effect of store environment dimensions – design, social and ambient, on consumer decision making. The model explains that store environmental dimensions' influence consumer's perception of store choice criteria – namely interpersonal service quality, shopping experience costs and merchandise value (mediated through perceived quality, price and shopping experience costs), and these perceptions, in turn, affect store patronage intentions. They found that design cues have a strong influence on shopping experience costs – time/effort cost and psychic cost. Creating a superior in-store shopping experience is critical, and could provide competitive weapon for brick and mortar retailers in the face of growing competition from online retailers.

Kim (2001) observed that experiential retailing merges the applications of merchandising and hospitality. It is based on five key concepts: experiential consumption (cognitive and sensory), symbolic consumption (hedonic / subjective), entertainment retailing (pleasant environment), themed retailing, and cross shopping (broad merchandise). Kim (2001) further suggested that retailers need to create an environment in which consumers can obtain a satisfactory total consumption experience by providing multiple product categories in a pleasing and enticing consumption atmosphere. Terblanche and Boshoff (2001), in an empirical investigation, identified three dimensions of total retail experience – personal interaction (12 elements such as willingness to help, personal attention, prompt services, courtesy, interest etc.), physical cues (7 elements such as good quality products, good looking materials, good physical facilities etc.) and product variety and assortment (5 elements such as choice, variety, range, sizes of products etc.). Hart et al (2007) found that shopping experience is four dimensional: a) Accessibility dimension referred to location, parking, pedestrianization and travel; b) Atmosphere dimension referred to appearance, atmosphere, food stops, variety, fashion / style; c) Environment dimension referred to cleanliness, opening hours and safety; and d) Personnel dimension referred to customer service and staff attitudes.

Cox et al. (2005) identified that pleasures of shopping experience are governed by six factors namely bargain hunting, browsing, being pampered, sensory experience, kinaesthetic experience, and mingling with other shoppers. They observed that consumers tend to be drawn towards more private pleasures as compared to social pleasures in store shopping. They further classified shoppers as joyless shoppers, bargain hunters, enthusiasts, attention cravers, and explorers. Healy et al. (2007) reported that both static and dynamic design elements play equally important role in creating customer experience in retail stores. Static design elements are represented by the atmospheric/ambient conditions of the store (visual, aural, olfactory and tactile cues), which can be used to increase a consumer's rate of consumption, and influence customer product evaluations and purchase behaviour. Retail store's dynamic design elements are described as the relational context between the customer, the store, the staff and other customers. In a study on Indian shoppers, Jain and Bagdare (2009) have identified ten factors determining customer experience in new format retail stores – ambience, design, customer service, visual appeal, customer delight, merchandise, convenience, audio visual, amenities, and value added service. Puccinelli et al. (2009) have identified specific elements of consumer behaviour such as (1) goals, schema, and information processing, (2) memory, (3) involvement, (4) attitudes, (5) affect, (6) atmospherics, and (7) consumer attributions and choices influencing retail experience. Verhoef et al. (2009) proposed a conceptual model describing that the determinants of retail customer experience included social environment (reference group, reviews, tribes, service personnel); service interface (service person, technology, co-creation / customization); retail atmosphere (design, scents, temperature, music); assortment (variety, uniqueness, quality); price (loyalty programs, promotions); customer experiences in alternative channels; retail brand (retailers own brand – private labels and manufacturer or service brand); and past customer experience.

### EXPERIENTIAL RETAILING AND RETAIL PERFORMANCE

Donovan and Rossiter (1982) found that experienced pleasantness of the in-store environment is a significant predictor of willingness to spend time in the store and intentions to spend more money than originally planned. They introduced eight measures of store relevant approach – avoidance behaviours. These measures are: liking of the store, enjoyment of shopping in the store, willingness to spend time in the store, willingness to explore the environment, feelings of the friendliness to others, willingness to return and likelihood of spending more money than intended. In a study of shoppers using critical incident technique, Lucas (1999) found that shopping experience significantly influence customer loyalty. He reported that negative experiences are a key cause of lost sales 10% to 30%, and future sales lost due to shoppers switching retailers. Arnold et al. (2005) have also observed that customer delight is a way to customer loyalty. Wong and Sohal (2006) analysed the consumer perceptions of their shopping experience in a retail environment. Their study found a relationship between service quality, relationship strength, and relationship quality and customer loyalty. It was reported that service quality, trust and commitment have a significant influence on relationship strength, which directly impacts relationship quality. Managing each customer's experience is perhaps the most important ingredient in building customer loyalty (Crosby and Johnson, 2007). Verhoef et al. (2009) observed that customer experience has a positive influence on retail patronage and store loyalty and thus customer profitability. Puccinelli et al. (2009) also proposed that effective management of customer experience largely depends upon greater understanding of consumer behaviour for enhancing customer satisfaction and retail performance.

### PROPOSITIONS

The evolution and developments in the field of customer experience management in general and retail experience in particular are of significant importance to both researchers and practitioners. There is a growing interest among researchers to establish new theories, relationships and models in the area of retail experience and thereby creating valuable applications for the industry. On the basis of established theories and past studies some important propositions have been developed to serve as guidelines for future research.

#### PROPOSITION 1: RETAILING IS AN EXPERIENTIAL PHENOMENON

Experience occurs as a result of encountering, undergoing or living through things, which provide sensory, emotional, cognitive, behavioural and relational values (Schmitt, 1999). It is formed as an outcome of interactive process involving environmental clues and sensory receptors. Retail experience involves consumer processes (product evaluations, attitude formation) and responses (eg. satisfaction or purchase behaviour) affected by aspects of shopping environment, situation and consumer characteristics (Fiore and Kim, 2007, Verhoef et al, 2009). It is the result of all the moments lived through in the entire journey of shopper in a retail store. Shopping in modern retail stores has been widely reported as a sensory experience which attempts to engage, entertain, involve, and absorb the customers through all five senses. Music, lights, colours, displays, fragrances, pleasant ambience and many more store elements shape up shoppers' mood and behaviour.

#### PROPOSITION 2: RETAIL CUSTOMER EXPERIENCE IS CREATED AS A RESULT OF SHOPPERS' INTERACTION WITH THE RETAIL ENVIRONMENTAL CLUES AT EVERY STAGE IN THE SHOPPING PROCESS

Experiences are formed as an outcome of interactive process involving environmental clues and sensory receptors (Gentile et al, 2007, Meyer and Schwager, 2007, Verhoef et al, 2009). Customers interact with the clues through five senses – sight, sound, smell, taste, and touch. This leads to cognitive and emotional processing inside the brain and result into a wide range of consumer responses. Experiential process can be explained and understood in line with the theory of environmental psychologists which reports that customer interactions with clues or stimulus result into emotional states of pleasure, arousal, and dominance (PAD) which further leads to approach or avoidance behaviour (Mehrabian and Russell, 1974; Donovan and Rossiter, 1982).

Customers interact with a wide range of clues or stimulus present at various stages of the buying process. Every point of interaction is described as a contact point or "Touch Point", in the literature on customer experience. The retailer's primary task is to identify all the touch points available at each stage, from the beginning when a customer recognises a need for a product and starts the search for information about availability and accessibility at different retail outlets, locating and going to the store, entry, browsing, observing, feeling, communicating, comparing, evaluating, using store services, making payments and moving out of the store from the exit point.

**PROPOSITION 3: ENVIRONMENTAL CLUES CAN BE BROADLY CATEGORISED IN TERMS OF COGNITIVE CLUES AND EMOTIONAL CLUES LEADING TO LEFT AND RIGHT BRAIN PROCESSING BY THE CUSTOMERS**

Customers consciously and unconsciously filter experience clues and organize them into a set of impressions, some more rational or calculative and others more emotional. Berry et. al (2002, 2006) proposed that the clues that constitute a customer experience are divided into two categories: **Functional Clues**, which are related to actual functioning or performance of the goods or services and are interpreted primarily by the logical circuitry of the brain (the left brain). **Emotional Clues**, which are related to the smells, sounds, sights, tastes and textures of the goods or service, as well as the environment in which they are offered and primarily address emotions (the right brain) rather than reason in decision making. Clues can be further divided into two categories: **Mechanic Clues** refer to all the clues emitted by things present in the environment which more relates to the sensory dimensions, and **Humanic Clues** refer to all the clues emitted by people through their interactions, appearance, body language, and behaviour etc.

Retail customer experience is holistic in nature, involving customer's cognitive, affective, emotional, social and physical responses to the retailer's marketing efforts. This experience is created not only by those elements which the retailer can control (eg. service interface, retail atmosphere, assortment, price), but also by elements that are outside of the retailer's control (e.g., influence of others, purpose of shopping) (Verhoef et al., 2009). The customer's retailing experience consists of a series of clues (a) related to actual functioning of retail (logical dimension – price, merchandise, service etc.) and (b) emotional dimension involving five senses and the environment (Knee, 2002). Burns and Neisner (2006) also found that cognitive evaluation and emotional reaction explain the level of satisfaction experienced in a retail setting. Customer considers a wide range of cognitive and emotional factors while selecting a particular store.

**PROPOSITION 4: RETAIL CUSTOMER EXPERIENCE IS INFLUENCED BY A LARGE NUMBER OF MODERATORS SUCH AS THE CONTEXT, CUSTOMER CHARACTERISTICS AND OTHER MACRO ENVIRONMENTAL FACTORS**

Retail customer experience is moderated by a large number of variables such as customers – demographic, psychographic, personal, social, and cultural characteristics; macro environment – economic, technology; situational – competition, type of store, product / service category, location, timing of purchase etc. (Bitner, 1992; Verhoef et al, 2009). Changing demographics and psychographics have empowered modern consumer to choose from a variety of value propositions. Growing purchasing power coupled with changing lifestyle of young customers has a major impact on choices of product categories and retail stores. Coley and Burgess (2003) and many other studies have reported a significant difference between the shopping behaviours of men and women. Kaur and Singh (2007) found eight motives governing their shopping behaviour. These motives are described as hedonic shopping motive, market maven, peer group association, utilitarian shopping motives, status conscious personal shoppers, recreational shopping motive, impulse shopping motive, and economic shopper. It has also been observed that shoppers of different age groups tend to respond differently to the retail clues.

**PROPOSITION 5: RETAILERS CAN CREATE AND DELIVER A UNIQUE PLEASURABLE AND MEMORABLE EXPERIENTIAL VALUE PROPOSITION TO THEIR CUSTOMERS BY MANAGING RETAIL CLUES**

Modern retail presents enormous challenges owing to the changing competitive structure, consumer attitudes and lifestyles, technological innovations, and sophisticated marketing practices. Retailers are finding it difficult to attract, develop and retain the customers. Sustaining and improving retail performance in terms of customer satisfaction, sales, profitability and differentiation are presenting major challenges for the modern retailers. Managing the customer experience throughout the stages of pre purchase, purchase and post purchase emerges as the key issue of concern for them. After gaining an understanding of the major determinants of the retail experience, retailers can program and engineer the right proportion of cognitive and emotional clues to evoke the desired response (Berry et al.2002, 2006).

## RESEARCH ISSUES

The above mentioned propositions present important issues for future research and practices related to retail customer experience. It is observed that more researches of both empirical and conceptual nature are required to explore and examine the relationships of experiential variables and their impact in commercial context. Some important areas for future research are presented below:

- The construct, structure and constitution of retail customer experience need to be further discussed, refined and defined.
- Retail customer experience across multiple channels (on-line and off-line) can be compared.
- Relationship between retail experience and various dimensions of retail performance such as store image, purchase intentions, sales, repatronage, loyalty, word of mouth communication can be further explored and validated.
- Environmental clues governing retail experience are to be identified, classified, and prioritised.
- Effect of retail environment clues and its interrelationships with retail customer experience can be explored with a combination of moderating variables relating to customer demographic, psychographic, social and cultural characteristics; store profile; time of the day, and other macro environmental factors.
- Experimental studies can measure the effect of various retail clues, in a controlled manner, on shoppers' behaviours in different retail environment and their relationships with sales, satisfaction, loyalty and other measurable retail performance.
- Metrics for measuring retail experience and its various dimensions need to be clearly defined, developed and validated.

As a part of the second phase of this work, important research issues raised in this paper will be empirically validated.

## MANAGERIAL IMPLICATIONS

Conceptualization of retail customer experience provides a better understanding of this phenomenon and establishes its importance in contemporary retailing. Experiential value in terms of pleasurable moments of truth has been reported as the major driving force influencing choice of retail outlets, spending behaviour, satisfaction and store loyalty. The proposed conceptual framework, describing retail experience creation and retail performance provides a clear understanding of antecedents, moderators and performance dimensions. It can guide retailers in designing effective retail experience management strategies by identifying appropriate retail clues and incorporating them in customer facing retail operations.

## CONCLUSIONS

Modern retail stores are professionally designed, use state of the art - sophisticated and high tech tools and techniques to engage, involve and immerse the customers in the entire buying process. Integration of people, process, technology and environmental clues allows retailers to create both utilitarian and hedonic value for its target customers. A retail store does not remain only a point of sale or transaction, it gets converted into an experience factory where every touch points attracts, interacts and creates a pleasurable experience. Shift in customer lifestyle, expectations and value orientations has led to the emergence of experiential retailing following the retailing revolution. Retailers can design strategies to influence shoppers' behaviour and purchase decision making process in order to obtain desired cognitive, emotional, sensorial, and behavioural responses. The present study has attempted to understand retail customer experience and brought out important propositions which need to be further examined. The research issues raised in the study need to be addressed by the scholars to build a stronger theoretical framework for experiential retailing and draw insights for practitioners.



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**SUPPLY CHAIN MANAGEMENT IN THE GOVERNMENT SECTOR**

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**ABSTRACT**

*The Supply Chain Management (SCM) is now not only a problem of integrated logistics (as a process) but also demands that the supply chain management (SCM) must look into the ramifications of these arrangements on the cost of transportation (including tariffs or duties) of products within a trade zone and outside it, besides, developing logistics strategies. The field has thus developed in the last few years for bridging the gap between demand and supply vis-à-vis efficiency and cost trade-offs. The SCM now not only involves the "management of logistic function", as was done in the past (to achieve internal efficiency of operations) but, includes the management and co-ordination of activities, upstream and downstream linkage(s) in the supply chain. The supply chain management, in particular include: Planning and Managing supply and demand; Warehouse Management; Optimal Inventory control; Transportation and Distribution, Delivery and customer's delight following the basic principles of supply chain management viz. working together; Enhancing revenue; Cost control; Assets utilization besides, customer's satisfaction. The last two decades has seen the rise of a few terms always used in conjunction with production, operational management and control. To name a few JIT (Just-In-Time); TQM (Total-Quality-Management); ZI (Zero-Inventory); ECR (Efficient Consumer Response); VMI (Vendor Managed Inventory). All these have now been integrated within the domain of Supply Chain Management Process. Though, the SCM have found the versatility of applications, more so in the private sector enterprises (business environment) for cost cutting and for having a competitive advantage. In the government set-up though the basic objective, is not maximization of profit, but the social-economic development of people. Even, if the objectives of these two mutually exclusive categories of enterprises are different, they share some features:*


- *Satisfying the end-consumer(s) by providing the right product, in right condition at the right time to fulfill the social obligation towards society.*
- *The optimum allocation of limited resources.*

*Thus, the SCM has many applications in the government environment too. The paper highlights some of the typical applications in the government sector of the SCM paradigm.*

**KEYWORDS**

government sector, supply chain management.

**INTRODUCTION**

 Supply Chain Management (SCM) can be best described as the natural extension of the downsizing (right-sizing) and re-engineering performed by the organization(s) in the past. Downsizing and re-engineering transformed the enterprises into "lean and mean competitive units", by cost cutting and process simplifications. These operations (of downsizing and re-engineering) involved the "optimization" (in terms of the number of persons involved, the time taken, the complexity of the work etc.) of business "units" (functional and/or administrative domains) over which the organizations had full control. These strategies did lead to increased productivity and profitability of the organizations but as the benefits of these leveled off, it was realized that the approach to the way organizations work needed to be changed. The above changes were a by-product of the "isolationist" (closed system) world picture of the enterprises involved in the full value chain; with organizations (the system) trying to survive in a hostile environment; assuming that all other participants in the value chain were adversaries with whom the organization must compete, even though the operations performed by the separate organizations may be supplementary in nature rather than complementary. The realization that this world picture was an impediment to the growth of organizations prompted the enterprises to start seeking "strategic alliances" with other organizations. The formation of these alliances required a basis (a common ground) which would be acceptable to each and every partner in the alliance. This common basis is/was supplied by the participation of the organizations in the value chain (the demand-supply chain). The participants in the chain, suppliers, sub-contract suppliers, in house product processes, transportation, distribution, warehouses, and the end customer, generally, perform mutually exclusive tasks and thus do not compete directly with each other.

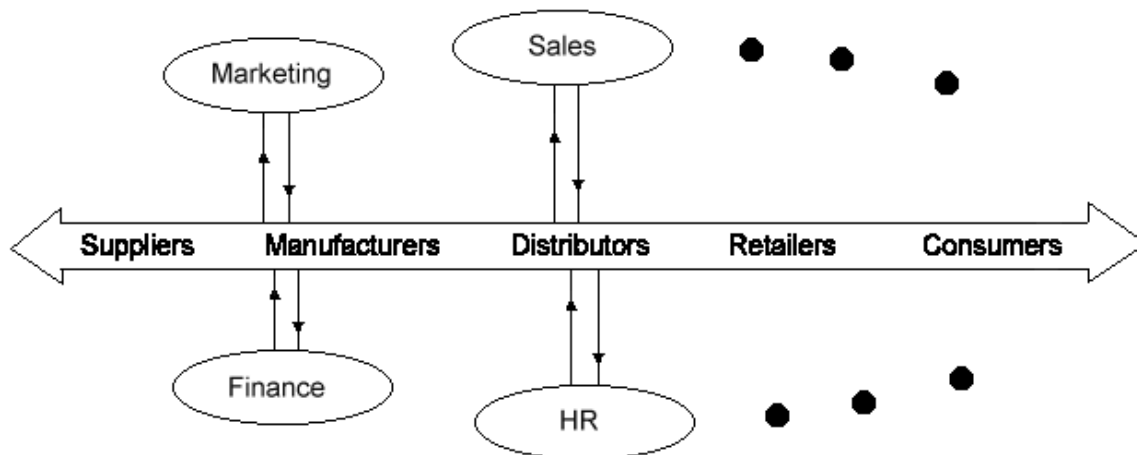
The present paper explores the following issues:

- The need for supply chain management.
- Type of supply chain management model(s)
- Issues in the design of supply chain management framework.
- Demand-Supply array.
- Relevance of the supply chain management paradigm to the government sector / public-sector enterprises.

**ISSUES IN SCM**

A supply chain encompasses all the activities, functions and facilities involved in producing and delivering a product and/or service, from suppliers (and their suppliers) to the customers. The supply chain management (SCM) paradigm is geared towards optimizing each component of what used to be called (Production and) Operations management (production, warehousing, inventory, transportation and distribution etc.) and the inter-links between these components synergistically<sup>[10]</sup>. In the 70's and the 80's, various models for production and operations control and management were developed: Just-In-Time (JIT) Inventory management model, Vendor Managed Inventory (VMI) model, Zero Inventory (ZI) model, Total Quality Management (TQM) etc<sup>[1]</sup>. These models focused on the various components of the supply chain in isolation, this implies that these models were oriented towards the optimization of a sub-part of the system whereas the SCM paradigm aims at the optimization of the full chain. This leads to trade-offs among the different components of the supply chain. For example, JIT would require a factory to keep inventories low and produce and distribute products in a timely manner, however JIT ignores many other aspects which cannot be seen independently, e.g. if the availability of the input materials is uncertain and irregular, the factory may need to insure smooth and continuous production. Similarly, regional stocking may permit reductions in transportation costs through increased shipment consolidation, as well as expanded sales through better delivery performance. These improvements may be accomplished with only moderate increases in inventory and warehousing cost(s). However, in an environment where different functional units manage the various logistics activities independently, an organization is less likely to properly analyze such important trade-offs.

FIG. 1: SUPPLY CHAIN AND OTHER FUNCTIONAL DOMAINS IN AN ORGANIZATION



Moreover, these models also ignore the interdependency of production and operations functions with other domains within an organization, such as marketing and finance. Marketing decisions have serious impact on logistics function and vice-versa. For example, a marketing promotion campaign should be coordinated with production planning, since a higher demand may be expected. On the other hand, when raw materials are cheap, or when the factory temporarily has an over-capacity, the marketing department may decide to cut prices and/or start other promotion campaigns during these periods to increase demands. Also, financial decisions are driven by production and logistics decisions. Production of new products requires the investment in raw materials and consumes other change-over costs. Financial managers have to be aware of the increased demand for capital to finance the production plan. Likewise, the delivery of finished products generates financial income, so the forecast demand can be used to calculate/forecast the accounts payable and receivable in the future. The above description means that production, finance and marketing decisions cannot be made independently (fig.1). All these decisions are driven by the activities in the supply chain of a manufacturing company<sup>[1]</sup>. The linkage between the supply chain components and the other functional domains relies heavily on information sharing to have an effective impact.

Furthermore, organizations now acknowledge that efficient consumer response (ECR) can lead to competitive edge. SCM is equivalent to coordinating all the operations of an organization with the operations of the suppliers and customers. Effective SCM strategies are essential for successful implementation of ECR programs<sup>[11]</sup>. Thus, a production planning and control model that focuses on all the aspects of the operations and distribution activities and links with other functional domains such as finance and marketing is needed. The supply chain management model should also perform the task of managing and coordinating activities upstream and downstream in the supply chain. Of course, such a model in its entirety becomes very complex and cannot be used without a sufficient computational infrastructure.

**DEMAND-SUPPLY ARRAY**

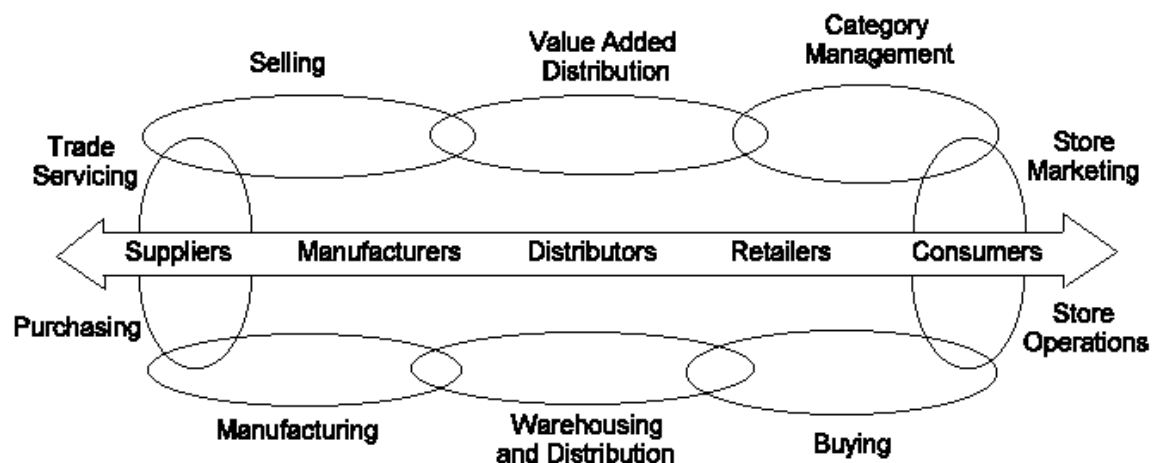
To have an effective supply chain management framework; organizations must have a clear understanding of the supply - demand array and its implications for strategy and implementation. There is an interdependent relationship between supply and demand; organizations need to understand customer demand so that they can manage it, create future demand and, of course, meet the level of desired customer satisfaction. Demand defines the supply chain target, while supply side capabilities support, shape and sustain demand<sup>[1]</sup>.

When one considers how creatively marketing and operations area of an organization typically interact (in practice), it becomes obvious that putting together the supply-demand can only occur in the context of overall perspective. The wide gap between the supply and demand sides of an organization can only be bridged by a comprehensive umbrella strategy. This can be done by developing a holistic strategic framework that leverages the generation and understanding of demand effectiveness with supply efficiency. Such a framework provides a strategic anchor to prevent the supply and demand components of a business from migrant apart.

The basis of such a holistic strategy framework is the integrated supply and demand model (Fig.-2). The model is designed around two key principles. First, in the present scenario where vertically integrated supply chains (VISC) are a shortage, if not non-existent; organizations must bring a multi-enterprise view to their supply chains.

They must be capable of working co-operatively with other organizations in the chain rather than seeking to beat them. Secondly, they must recognize the distinct supply and demand processes that must be integrated in order to gain the greatest value.

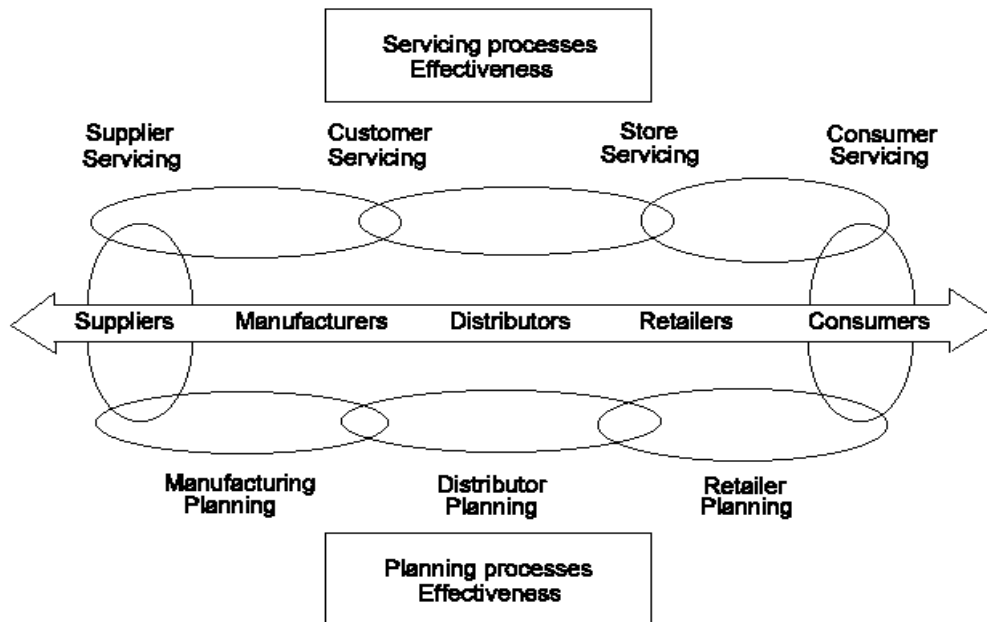
FIG. 2: THE INTEGRATED DEMAND-SUPPLY MODEL



Source: This model is based on the work done by Bill Copacino.<sup>[2]</sup>

To gain the maximum benefits, organizations need to identify the core processes across the demand and supply chain, as well as exploring the impact of each of these processes on the different functions.

FIG. 3: INTEGRATING PROCESSES IN THE SUPPLY AND DEMAND CHAINS



Source: This model is based on the work done by Jeff Beech<sup>[1]</sup>

- The integrating processes that create the links between the supply and demand chains (fig - 3). This implies that the planning processes (which involves development of channel strategies, planning of manufacturing, inventory, distribution and transportation, demand planning and forecasting; and marketing and promotional planning) and service processes (which includes functions such as credit, order management, load planning, billing and collection, etc.) must be integrated.
- The supporting information technology (IT) infrastructure that makes such integration possible. While information technology is needed to handle routine transactions in an efficient manner, it can also play the a critical role in facilitating the timely sharing of planning, production and purchasing information; capturing and analyzing production, distribution and sales data at new levels of detail and complexity. Information technology provides an integrating tools that makes it possible to convert data into meaningful pictures of business processes, markets and consumers that are needed to feed company strategies in order to develop competitive advantage.

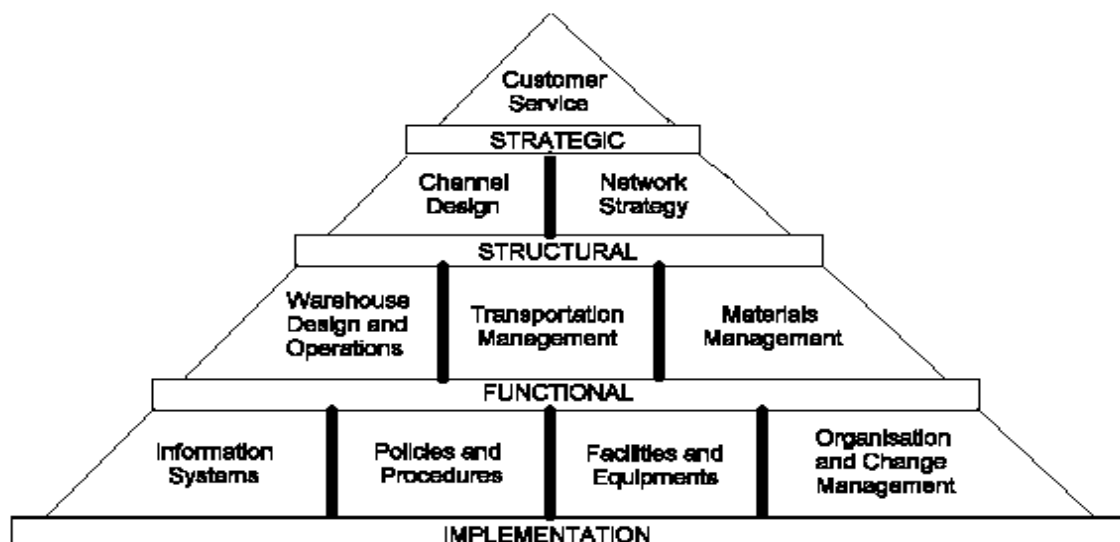
On the administrative side, such elements as flow path economics, which help organizations understand the real drivers of costs, and new performance and measurement standards that align functions in accordance with total process goals that are critical to achieving integration.

**SCM Framework**

A framework to understand the various issues involved in SCM is provided by the pyramid structure for the SCM paradigm (fig. 4) The pyramid allows issues to be analysed on four levels:

- **Strategic:** On the strategic, level it is important to know how SCM can contribute to the organizations' basic "value proposition" to the customers? Important questions that are addressed at this level include: What are the basic and distinctive service needs of the customers? What can SCM do to meet these needs? Can the SCM capabilities be used to provide unique services to the customers? etc.
- **Structural:** After the strategic issues are dealt with, the next level question(s) that should be asked are: Should the organization market directly or should it use distributors or other intermediaries to reach the customers? What should the SCM network look like? What products should be sourced from which manufacturing locations? How many warehouses should the company have and where should they be located? What is the mission of each facility (full stocking, fast moving items only, cross-docking etc.)? etc.
- **Functional:** This is the level where operational details are decided upon. Functional excellence requires that the optimal operating practices for transportation management, warehouse operations, and materials management (which includes forecasting, inventory management, production scheduling, and purchasing) are designed. These strategies should keep in view the trade-offs that may need to be made for the overall efficiency of the system. Achieving functional excellence also entails development of a process-oriented perspective on replenishment and order fulfillment so that all activities involved in these functions can be well integrated.

FIG. 4: SCM FRAMEWORK PYRAMID



Source: Based on work done by William C. Copacino<sup>[2]</sup>

- **Implementation:** Without successful implementation, the development of SCM strategies and plans is meaningless. Of particular importance are the organizational and information systems issues. Organizational issues centers on the overall structure, individual roles and responsibilities, and measurement systems needed to build an integrated operation. Information systems are “enablers” for supply chain management operations and therefore must be carefully designed to support the SCM strategy. Supply chain managers must consider their information needs relative to decision support tools, application software’s, data capture, and the system’s overall structure.

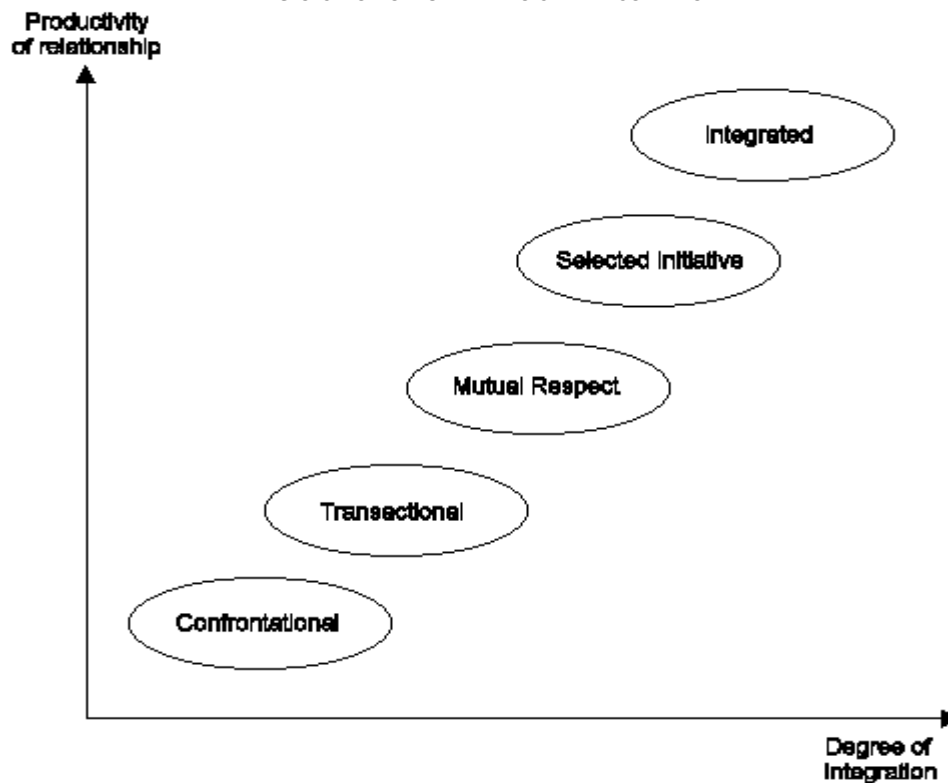
It is important to note that the decisions made within the SCM strategy pyramid are interdependent. That is, it must be understood what capabilities and limitations affect the functional and implementation decisions and consider those factors while developing a supply chain management strategy and structure.

The SCM models used in practice lie in a continuum between two extreme models: on one end of the spectrum lies the vertically integrated supply chain model in which the organization has direct control over each and every component of the supply chain, while on the other end of the spectrum lies the horizontally diversified supply chain model (ideally) in which the number of participant is as large as the number of distinct parts of the supply chain. In a vertically integrated supply chain system, the organization can control every component of the chain and can make various changes to the system to optimize the chain very easily. But in a horizontally diversified supply chain the tendency will be to optimize only the functions that the organization is involved in, thus conscious efforts must be made by the various participants in the supply chain for the integration of their respective components in the supply chain. If an organization can be identified as the major/dominant partner in the supply chain, then this organization has to take an initiative in seeking the co-operation of the other participants in the supply chain.

The type and structure of the supply chain that is established depends on many factors, some of the major factors are:

- **Geographical:** If the supply chain is stretched across the globe then it may not be possible to incorporate some of the principles of lean production like JIT delivery, flexible manufacturing, and co-ordination among suppliers and customers. It can lead to uncertain transportation schedules, unpredictable lead time and may need larger inventory carriage.
- **Cultural:** The difference in the “culture” of the participants in the chain (the difference can be due to geographical factors or corporate practices) can lead to friction and distrust. This may hamper the development of close ties.
- **Government Legislation:** The laws of the country may prohibit the sharing of information about some facet of the supply chain and thus, may lead to a restrictive participation by one or more participant in the supply chain.
- **Time:** Just as among individuals, organizations require time before trust can be built up. The first phase in any relationship is manifest as confrontation, that essentially means that participants in the chain try to win at the cost of other participants. And, the last phase is exemplified by total trust and working together of organizations. The information sharing behaviour in the first phase is almost zero, while in the integrated relationship the information sharing is mutual and free about the common concerns. In between the two phases lie a continuum of phases (see fig. 5).

FIG. 5: SPECTRUM OF ALLIANCES IN THE SUPPLY CHAIN



### SCM IN THE GOVERNMENT SECTOR

To understand the relevance of ‘SCM’ to the government sector, one must understand the difference between the objective of a government/public sector enterprise and that of a private sector enterprise. A government/public sector enterprise objective is not maximization of profit solely, but also economic development of the nation (as a long term goal) and the welfare of the society; whereas a private sector enterprise is oriented towards the sole objective of maximization of profit. But, even if the objectives, of their two exclusive categories of enterprises, are entirely different, they share some features:

- the satisfaction of their respective consumers by providing the consumer with the right product, in the right condition and at the right time, at the least cost.
- the allocation of limited resources (of the nation and/or enterprise) for this purpose.

In the government sector (in India) the SCM paradigm can be used by the public sector organizations involved in:

- Petroleum Products:** the bulk of the major petroleum product(s) required in the country are indigenously produced, but at the same time significant proportion of crude and finished products are being imported to meet the national demand. This requires the construction of a global supply chain that should withstand the vagaries of the “petroleum politics”. Petroleum products are needed throughout the country on a priority basis. This requires a well-designed and feasible transportation and distribution network, integrated with the production plan(s); distribution network; pricing policy; national and regional demand policies etc.
- Fertilizer production industry:** for the procurement of raw materials, manufacturing and transportation and distribution to the demand centers throughout the country, using the predicted demand (as the need for fertilizers by consumers is bound to have a regional and seasonal effect due to the very nature of

- the product and its use). The SCM methodology can be used to decide the location of new warehouse(s), the design of the raw material procurement policy, the design of the optimal distribution plan/channel etc. This industry generally follows a single sourcing policy for raw material procurement,
- (c) **Coal and other minerals:** These are primary sector industries, supplying to other industries in "core manufacturing" (the type of manufacturing that is essential for the development of the nation like steel, electricity etc.) The consumers of the product of these industries can be anywhere in the country, therefore a well-designed SCM strategy is an important activity.
- (d) **Steel industry:** This industry depends on three major categories of supplies for the procurement of raw materials: (1) Coal/coke, (2) Minerals (iron ore, limestone etc) and (3) electricity. This industry needs a well-designed methodology for SCM, wherein it may be controlling the production of the raw materials to an extent, and depending on demand, supplementing with externally supplied raw material. The supply chain in this case needs to be totally integrated, as a shortfall in this case can lead to closing of the furnaces that can lead to their closure, leading to substantial economic and material loss.
- (e) **The Electricity generating industry:** This industry in India faces a situation of demand exceeding the supply. This demands a rationing system. It must be decided, and planning must be done for distribution of the "load shedding" time, so that the basic need of the consumers is satisfied in the region under consideration. SCM, and more specifically optimal scheduling methodologies needs to be applied.
- (f) **Food Grain Procurement and Distributions:** There are public sector enterprises involved in the procurement of food grains and their storage in different parts of the country, as agriculture is an "industry" where the type of product produced depends on the geo-physical characteristic of the region; the grain that is produced in one region of the country may need to be transported to another region to meet the food requirements in other parts of the country. Therefore, a policy for the location of warehouses in different parts of the country, a plan for optimal distribution of the procured foods grains among these warehouses and to the retail shops under the Public Distribution Scheme (PDS) and for open market transaction is required. A failure in any of the links of this procurement - transportation - storage - transportation - retail can lead to large scale famine in the affected part of the country. The organization must also be involved in food grain distribution under exceptional conditions of famine, flood or earthquake. The SCM concept can be used to manage the routine and extra-ordinary situations before this industry.
- (g) **Postal clearance and delivery system:** The Post and Telegraph (P&T) department of the government of India is the organization that handles the major portion of the postal volume generated in the country (a small fraction of the net postal volume is carried through the private courier services). Thus, the transportation and distribution planning is a major requirement of the organizations involved in the system. A well designed 'SCM' strategy will go a long way in improving the services for postal clearance and thus increasing efficiency.
- (h) **Public Health Services:** The public health services through the government run hospitals and dispensaries forms the backbone of the health services offered by the government of India. The functioning of these organizations needs to be strengthened. Unavailability of essential drugs and other medical supplies leads to crisis. As the pharmaceutical industry has major players from the public sector undertakings, the hospitals can have a full-fledged integrated supply chain involving these PSU's. The SCM paradigm can be applied for the procurement and distribution of the lifesaving medical drugs and other medical items.
- (i) **Import and Export:** The government sector is involved in the Import of essential items needed for the development of the nation, be that petroleum products, steel, coal, food grains, essential drugs, defense stores etc, and export of products that the public sector enterprises produce as a surplus, prime examples of these being mineral products like iron ore, mica etc. This involves the negotiation with the other parties'/government organization for avoiding double taxation and charting an optimal delivery system.
- (j) **Banking and financial services:** With the globalization of the world economy and the liberalization policies pursued by the government of India, the banking sector was the first to recognize the need for offering better facilities to the customers. Also, they were the first to realize the benefits of the use of IT for this purpose. But, the use of IT for integration of the different branches of the banks was not offered to the customers as to provide a location independent real-time banking facility. It was primarily used only to automate the routine working of the banks and for internal administrative purposes. EDI can also be used for electronic clearance of inter-bank transactions leading to faster and better transfer of funds. All links in the system needs to be addressed adequately in the design of 'SCM', to meet the end objective of providing efficient services.

The above description is based on the assumption that the government enterprises work in an isolation. But, generally in the supply chain of these enterprises, the main players are the government agencies. Thus, the implementation of SCM paradigm in the case of these enterprises can be effective if one takes care of:

- Trust: as all the organization involved belong to the same umbrella organization, the building of trust among these enterprises can be fast and more easy.
- Sharing of information can be more often among these organization thus leading to better understanding of the supply chain by the participant in the chain.
- The transport sector - the weakest link in the supply chain - is largely under government control (directly and/or indirectly).
- Infrastructure: Reliable communication network and information technology infrastructure needed to deploy the information sharing mechanism do exist to a large extent in the government sector.

For example, in the public health sector this can lead to faster delivery of medicines which can help in prevention of epidemics. In situation like flood, drought or any other calamity the relevant supply chain can be used to provide medical help, food etc. Thus, the application of SCM paradigm is needed not only by private enterprises engaged in the pursuit of profit but also by organizations that are involved in providing services for meeting social objectives and for the welfare of the society at large.

## CONCLUSION

Supply chain management has become not just a question of efficient logistic process, but is related to the growth and survival of organization(s). With customers becoming more demanding in their requirement of services from the suppliers, the construction of a efficient and integrated supply-chain has assumed paramount importance. Information technology plays a major role in the formation of the supply chain. Efficient dissemination of information upstream and downstream is a major requirement for the implementation of the supply chain, IT provides the this with internet, EDI and GroupWare's and other application software's. The decision support provided by IT products (ERPs, Network construction tools etc) can help the decision makers in the development of the supply chain process and in implementation. The dissemination of the demand (forecast) information throughout the chain can lead to avoidance of the "Bullwhip" effect<sup>[7]</sup>. Organizations can gain supply chain related benefits through the use of internet, namely:

- more collaborative, timely product development through enhanced communication between functional departments, suppliers, customers and even regulatory agencies;
- reduction of channel inventory and product obsolescence owing to closer linkage across the supply chain and better insight into the demand signals to drive product schedules and ultimately achieve build-to order capability;
- reduction in communication costs and customer support costs with more interactive, tailored support capability inherent with internet technologies;
- new channel capabilities to reach different customer segments and further exploit current markets; and
- ability to enhance traditional products and customer relationships through customisations driven by internet connectivity and interactivity.

The SCM paradigm can provide the mechanism for the survival of the public sector enterprises in the changing global scenario, where the globalization of the world economy and the liberalization of the Indian economy is no longer a buzzword, but a fact. The failure of these enterprises can be traced to the ad-hocism and the non-application of efficient managerial practices. This is not to say that these enterprises have lost their relevance in the present scenario. These enterprises have to adopt "change management" i.e. to change their style of functioning, and to form strategic alliances with partner public sector enterprises

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**ROLE OF LEADERSHIP STYLE ON ORGANIZATIONAL PERFORMANCE**

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**ABSTRACT**

*Existence and survival of an organization and its progress requires a concept and measurement of performance as a measuring tool for the achievement of organizational performance. Organizational performance is a pointer of the level of accomplishment that can be achieved and emulate the success of the leadership, so that the performance of the organization reflects the dynamics of organizational life cycle. The study examines the role of leadership style on organizational performance in a selected Banks in Pune. Effective leadership behaviors can facilitate the improvement of performance when organizations face new challenges. Leadership refers to the behavior of a leader to collect and direct the individuals towards any objectives. Leadership is a communication process of leader and individuals. So the effectiveness of an organization depends upon the effective leader and effective leader is that person who has an effective leadership style. Leadership is a very important factor for any organization or group. The present study attempts to investigate the most preferred leadership behaviors among the transformational and democratic leadership styles and its impact on Employees' and organizational performance in bank of Pune. Findings show that there is a correlation between leadership style and organizational performance. The study concludes that transformational and democratic leadership style should be employed by the Banks' management in order to grow stronger in a global competitive environment.*

**KEYWORDS**

leadership style, organizational performance, transformational leadership, democratic leadership.

**INTRODUCTION**

The concept and definition of leadership and style may differ from one person, or situation, to the other. The word leadership has been used in various aspects of human endeavour such as politics, businesses, academics, social works, etc. Leadership style in an organization is one of the factors that play significant role in enhancing the interest and commitment of the individuals in the organization.

Leadership style in an organization is one of the factors that play significant role in enhancing the interest and commitment of the individuals in the organization (Obiwuru et al., 2011). Leadership is a critical management skill, involving the ability to encourage a group of people towards common goal. Leadership focuses on the development of followers and their needs.

A leader is person who influences, directs, and motivates others to perform specific tasks and also inspire his subordinates for efficient performance towards the accomplishment of the stated objectives. Leadership style is the manner and approach of providing direction, implementing plans, and motivating people.

According to Ngambi et al. (2010) and Ngambi (2011), cited in Jeremy et al. (2011), leadership is a process of influencing others' commitment towards realizing their full potential in achieving a value added, shared vision, with passion and integrity. The nature of this influence is such that the members of the team cooperate voluntarily with each other in order to achieve the objectives which the leader has set for each member, as well as for the group.

A leader helps followers to achieve their goals as they work in the organizational setting; it encourages followers to be expressive and adaptive to new practices and changes in the environment. According to Michael (2011) leadership has a direct cause and effect relationship upon organizations and their success. Leaders determine values, culture, change tolerance and employee motivation. They shape institutional strategies including their execution and effectiveness. They influence those around them in order to reap maximum benefit from the organization's resources, including its most vital and expensive.

The prime motive of many organizations is to achieve its stated objectives, hence the need to effectively coordinate and motivate the workers by an effective leader. Unfortunately, some organizations do not take cognizance of the leadership style adopted by their managers.

**THE OBJECTIVE OF THIS STUDY**

To identify the styles of leadership adopted by the managers, and examine its effect on employees' performance.

**THE FOLLOWING HYPOTHESIS WAS FORMULATED FOR THE STUDY**

Hypothesis (Ho): There is no significant relationship between Leadership styles on organizational performance.

**REVIEW OF LITERATURE**

Leadership is life blood of any organization and its importance cannot be underestimated. Many authors have studied this phenomenon, but there is no conscious definition of what leadership is, no dominant paradigm for studying it, and little agreement regarding the best strategies for developing and exercising it (Bennis, 2007; Hackman & Wageman, 2007; Vroom & Jago, 2007).

Omolayole (2006) views leadership as that kind of direction, which a person can give to a group of people under him in such a way that these will influence the behavior of another individual, or group. Ngodo (2008) perceives leadership to be a reciprocal process of social influence, in which leaders and subordinates influence each other in order to achieve organisational goals.

Leadership style is viewed as the combination of traits, characteristics, skills and behaviours that leaders use when interacting with their subordinates (Marturano & Gosling, 2008, Jeremy et al., 2011).

Flippo & Musinger (1999) see leadership as a pattern of managerial behavior designed to integrate personal or organizational interest and effect, in pursuit of some objectives.

Fiedler (1969) postulates that leadership style refers to a kind of relationship whereby someone uses his ways and methods to make many people work together for a common task.

In modern leadership theories, five leadership styles have been presented, including (i) charismatic leadership, (ii) transactional leadership, (iii) transformational leadership, (iv) visionary leadership, and (v) culture-based leadership (Yukl, 1994; Bass, 1990; Sashkin, 1996; Sergiovanni, 1987).

Tannenbanum and Schmidt (1958) also identify four different types of leaders which have been most widely accepted and used.



There are some common leadership styles, which are discussed below:

**Charismatic leaders:** have a vision, as well as a personality that motivates followers to execute that vision. As a result, this leadership type has traditionally been one of the most valued. Charismatic leadership provides fertile ground for creativity and innovation, and is often highly motivational. With charismatic leaders at the helm, the organization's members simply want to follow. It sounds like a best case scenario.

There is however, one significant problem that potentially undercuts the value of charismatic leaders: they can leave. Once gone, an organization can appear rudderless and without direction. The floundering can last for years, because charismatic leaders rarely develop replacements. Their leadership is based upon strength of personality. As a result, charismatic leadership usually eliminates other competing, strong personalities. The result of weeding out the competition is a legion of happy followers, but few future leaders (Michael, 2010).

**Transactional leadership:** The wheeler-dealers of leadership styles, transactional leaders are always willing to give you something in return for following them. It can be any number of things including a good performance review, a raise, a promotion, new responsibilities or a desired change in duties. The problem with transactional leaders is expectations.

The style is defined as the exchange of rewards and targets between employees and management American Journal of Business and Management 204 (Howell & Avolio, 1993). Transactional leaders fulfill employee needs of rewards when targets are met (Bass, 1990; Howell & Avolio, 1993; Humphreys, 2002).

Pounder (2002) defines this style as the transaction of needs fulfillment from both sides of the organization and employees. Transformational leadership style focuses on the development of followers and their needs.

**Transformational leadership:** acts as a bridge between leaders and followers to develop clear understanding of follower's interests, values and motivational level. It basically helps follower's to achieve their goals working in the organizational setting; it encourages followers to be expressive and adaptive to new and improved practices and changes in the environment (Bass, 1994).

**Autocratic leadership:** Autocratic leaders are classic "do as I say" types. Typically, these leaders are inexperienced with leadership thrust upon them in the form of a new position or assignment that involves people management. Autocratic leaders retain for themselves the decision-making rights. They can damage an organization irreparably as they force their 'followers' to execute strategies and services in a very narrow way, based upon a subjective idea of what success looks like.

**Bureaucratic leadership** Bureaucratic leaders create, and rely on, policy to meet organizational goals. Policies drive execution, strategy, objectives and outcomes. Bureaucratic leaders are most comfortable relying on a stated policy in order to convince followers to get on board. In doing so they send a very direct message that policy dictates direction. Bureaucratic leaders are usually strongly committed to procedures and processes instead of people, and as a result they may appear aloof and highly change adverse.

**Democratic leadership:** Tannenbaum and Schmidt, (1958) describe democratic leadership as one where decision-making is decentralized and shared by subordinates. The potential for poor decision-making and weak execution is, however, significant here.

The biggest problem with democratic leadership is its underlying assumption that everyone has an equal stake in an outcome as well as shared levels of expertise with regard to decisions. That is rarely the case.

While democratic leadership sounds good in theory, it often is bogged down in its own slow process, and workable results usually require an enormous amount of effort. Leadership style and organizational performance Relationship between leadership style and organizational performance has been discussed often.

Most research showed that leadership style has a significant relation with organizational performance, and different leadership styles may have a positive correlation or negative correlation with the organizational performance, depending on the variables used by researchers (Fu-Jin et al., 2010).

**McGrath and MacMillan** (2000) report that there is significant relationship between leadership styles and organizational performance. Effective leadership style is seen as a potent source of management development and sustained competitive advantage, leadership style helps organization to achieve their current objectives more efficiently by linking job performance to valued rewards and by ensuring that employees have the resources needed to get the job done.

**Sun** (2002) compares leadership style with the leadership performance in schools and enterprises, and found that leadership style had a significantly positive correlation with the organizational performance in both schools and enterprises.

**FuJin et al.** (2010) opine that when executives use their leadership style to demonstrate concern, care and respect for employees, it would increase interest of employees in their work and enable them to put up better performance, thereby affecting their job satisfaction positively.

## SAMPLE AND PROCEDURE

The study covers one randomly selected bank in Pune. A structured questionnaire was used in gathering relevant data from the branch manager and accountants face to face respectively. Forty questionnaires were filled and returned by the respondents. Leadership scale adopted by **Zhu (2002) and Li (2002)** was used in this paper.

Leadership behavior was divided by its frequency performance into 5 levels, including "never", "little", "occasionally", "often" and "always" as scored by Likert's five-point scoring.

Sample of questions were: "My supervisor rewards performance when his/her expectations are fulfilled", "My supervisor will provide a new thinking approach for my difficult problem", "My supervisor is not present when he/she is needed",

"My supervisor will inspire me with new ways to think about old problems", "My supervisor speaks enthusiastically about our goals as a team", "Unless the problem gets worse, my supervisor interferes", "My supervisor makes me feel proud of being a member of the department", "I am confident in my supervisor."

In respect to measuring the reliability of the scale, the reliability coefficients (Cronbach's) of the charismatic leadership, the transactional leadership, the transformational leadership, the autocratic leadership, the bureaucratic leadership and the democratic leadership were 0.823, 0.791, 0.807, 0.644, 0.790 and 0.754 respectively.

## TESTING OF HYPOTHESIS

The result shows that leadership style dimensions (charismas, transactional, bureaucratic, transformational, autocratic and democratic style of leadership) were joint predictors of organizational. This implies that both have negative significant effect on followers and performance. This means that leadership's greatest benefits, motivating and developing people are ignored and this will not induce employees to perform as expected. Furthermore, transactional leadership style ( $\beta = -0.61$ ;  $t = -0.296$ ;  $P > 0.05$ ) has negative effect but not significant on followers and performance. However, transformational style of leadership ( $\beta = 0.44$ ;  $t = 0.298$ ;  $P < 0.05$ ) and democratic style of leadership ( $\beta = 0.001$ ;  $t = 0.010$ ;  $P < 0.05$ ) were significantly independent performance ( $F(6, 53) = 2.635$ ;  $R^2 = 0.23$ ;  $P < 0.05$ ).

The predictor variables jointly explained 13% of the variance of organizational performance, while the remaining 77% could be due to the effect of extraneous variables. Charismas leadership style ( $\beta = -0.395$ ;  $t = -2.511$ ;  $P < 0.05$ ); bureaucratic leadership style ( $\beta = -0.562$ ;  $t = -2.208$ ;  $P < 0.05$ ) were significantly independent predictors of organizational performance.

This indicate that transformational and democratic styles of leadership focus on the development of value system of employees, their motivational level and moralities with the development of their skills and this induce employees to perform as expected.

Also bureaucratic style of leadership ( $\beta = 0.072$ ;  $t = 0.581$ ;  $P > 0.05$ ) has positive effect but insignificant on followers and performance.

## CONCLUSION

This study has investigated the effect of leadership style on organizational performance in a bank. The results of this study revealed that there is strong relationship between leadership style and organizational performance. On the basis of the findings of this study, it can be concluded that leadership style has both positive and negative effect on organizational performance.

The study found that transformational and democratic leadership style, in which employees are allowed to have sense of belonging, carry out higher responsibility with little supervision, and followers are helped to achieve their visions and needs enhance organizational efficiency. Surprisingly autocratic leadership style also

has positive effect on banks' performance although is insignificant. It is concluded that transformational and democratic leadership styles are the best for better management of bank.

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**A STUDY ON EMPLOYEE RETENTION MEASURES AND ITS IMPACT ON EMPLOYEE MOTIVATION**

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**ABSTRACT**

**Purpose-** The purpose of this paper is to identify the factors that effects worker motivation and investigate the affiliation between organizational efficiency and employee drive. **Approach-** A model was designed based on the literature, linking factors of member motivation with employee motivation and organizational efficiency. **Findings-** The literature and various studies concluded that factors: enablement and acknowledgment have optimistic effect on employee motivation. More the enablement and recognition of employees in an organization is improved, more will their motivation to work will enhance. Also there exists a positive relationship between employee motivation and organizational effectiveness. The more the employees are motive to tasks achievement higher will the organizational performance and success. **Future Effects-** The work focuses on the repetition and compliance of the two central factors, Motivation and employee retention for improving employee inspiration which leads to organizational effectiveness. The organizations should design their rules, policies and organizational structures that give space to the employee to work well and gain them on their tasks self-actualization and achievements.

**KEYWORDS**

enablement, acknowledgment, inspiration, structural efficiency.

**1. INTRODUCTION**

Employee retention can be defined as the organizations procedures and policies that are used to prevent the highly talented and skillful employees quit their jobs in the organization. It is pretty much necessary for the organizations or the employers to take into consideration as many options as possible in order to retain their valuable employees and thereby be successful in nature. It is also equally important for the organizations to secure the loyalty and trust of the employees so that they will have a less desire to quit the organization in future. The employees of an organization will love their jobs due to large number of reasons. These reasons may be like regarding the working atmosphere, like towards their co-workers or their boss etc. A well designed job with good opportunities for growth and learning is desirable for the employees. When the employees are not satisfied with any of the above factors or more they will tend to leave the organization. The commonly preferred way for the organizations to retain its employees is to offer them with exciting salary and bonus packages. The major objective of this project is to determine the opinion of the employees regarding the organizations existing retention policies, to know their opinion regarding the organization environment, to study the attrition rate and to analyze the motivating factors that will be helpful in retention of the employees. Thus, the employees of Archidply Industries were taken into consideration for data collection.

**2. REVIEW OF LITERATURE**

There are six key factors to be considered to retain the employees. These are job satisfaction, communications, pay and benefits, empowerment, training, recruitment etc.

**COMMUNICATIONS**

**Carney (1998)** believed that the key factor or element to retain the employees is quite simple, just communicate and communicate. communication with the employees will be more effective when it begins at the earlier stages in order to maintain good relationships. Employers should effectively communicate and engage the employees in early stages itself so that the employees will be aware on how important their job is.

**Lynn (1997)** states that early work atmosphere of openness and fairness should be created by clearly stating the company policies and procedures.

**Taylor and Consenza (1997)** specified that it is highly important for the organization to communicate the policies, procedures and beliefs of the organization to its valuable employees with a view to increase their participation and motivation.

**JOB SATISFACTION.**

**Mendonsa (1998)** it is not only required for the organizations to have best compensation and benefits and salary packages but it is also equally important for the organization to have a cordial relationship with the peers and superiors, as it is considered as one of the important factor in determining whether a employee stays with the organization or not.

**Taylor (1997)** stated that the employees will expect more self-satisfaction on the job, more interactions with the management of the organization, higher level responsibility, much control over the decisions affecting them. They expect to be a part of organizations decision making and they also expect to be a part of something that matters.

**Lyn (1997)** in order to retain the employees it is necessary to recognize the employee's achievements with the memos, announcements made in staff meetings, articles put up in newspapers etc. while dealing with employee retention it is required for recognition, importance off work, career advancement opportunities etc to be taken into consideration.

**PAY AND BENEFITS**

**Mendosa (1998)**, usually everyone feels that when the money and the benefits are lacking in the organization, the employees tend to leave the company, but this is not the actual fact. Though the compensation and benefits may be a key factor in the minds of employees, a shortage of money is always not the key factor that causes the employees to quit their jobs.

**Branch (1998)**, he stated that money may just be the reason what the employees give during the resignation, but it is like "white noise". The employees will be worried about the money for only some time but once they are bored of the job, money is not the only factor that will keep them there.

**EMPOWERMENT**

The term "Empowerment" is been rapidly used in multiple areas of management. The areas will include political and social movements. According to author potterfield (1999, P38) empowerment is a process in which a manager will share his power and authority with the subordinates. Under this process the manager will empower his subordinates by sharing the organization resources with them, by permitting them with the access to certain information and by allowing them

to be a part of decision making. When employees are provided a part in decision making process they will enjoy the factor of authority and this will be helpful for the organization to retain them.

#### TRAINING

**Marx**, stated that it is very much important for the organization to make its employees feel like the valued member of the company. Training the personnel is one of the way to show how the organization respects them and wants them to grow. The organizations make investments by offering various training programs to its employees and there by attempt to retain them.

**Mendonsa**, Training can help in retention of the personnel. The organizations must offer good training programs for the increasing number of personnel and enable them to learn new skills and acquire knowledge and there by leads to their personal and professional growth. Training emphasizes that the employees are respected and valued. This in turn will be helpful in retention.

#### RECRUITING

Organizations effort to retain its best human resource always begins with recruiting. The most difficult tasks for the organizations are over to attracting and retaining its best employees. These two tasks require creation and maintenance of positive reputation of the organization both externally and internally.

**Denton (1992)** states it as "when there is a better match between the organization and the recruits, the organization will be more likely able to retain its personnel." **Lynn (1997)** states and believes that time has to be taken during the process of hiring in order to make wise decisions. In order to reduce the chances of mistakes from hiring it is required for the employer to be candid about the responsibilities, working conditions, opportunities etc.

**Taylor and Cosenza (1997)** they stated that it is necessary that the organizations present their employees with the true picture of the organization, if at all they hope to match the culture and the climate of the organization with their personality type. The literature clearly pointed out that if the departments wanted to increase the retention, it is required for them to have a strong recruiting process.

### 3. RESEARCH METHODOLOGY

This study will examine to what extent the financial and non-financial incentives such as achievement, job security, recognition, advancement, job enrichment or the job itself, responsibility, decisional participation and management style employed to raise the morale of the worker for high productivity. The study identifies elements that promote human dignity and thus raise the morale of the worker for higher productivity. The study further investigates the effect of non-financial incentive packages here referred to as 'non-economic motivators' on the workers and the consequent output of organisation.

For the purpose of this study then, non-economic motivators are used to refer to those factors which are not necessarily computable in monetary terms but which drive' the human mind from within to behave in a desired way and to the maximum realization of the organizational objectives while adequate motivation is simply defined as contentment, fulfillment or job satisfaction.

#### STATEMENT OF THE PROBLEM

The organizations ability to retain its valuable human resource can be referred to as Employee Retention. In order to achieve this the organizations will go for implementation of number of policies, measures and practices and there by prevent its employees from leaving their job.

The topic selected for research is to make an in-depth study about how to retain the employees in the organization (Archidply Industries Limited) and increase their efficiency at work.

#### OBJECTIVES OF STUDY

1. To understand and develop a knowledge on the employee opinion regarding the working environment of the organization.
2. To study the perception of the employees regarding the organizations existing retention policies.
3. To determine the impact of employee motivation, to retain them in the organization.
4. To study the attrition rate in Archidply industries Limited.

#### TYPE OF RESEARCH STUDY

##### Descriptive Research

Descriptive study is a statistical research design, which describes the data and the characteristics about the population being studied.

Descriptive research methods describe the situations. It answers the questions on who, what, when, where and how which facilitates my study regarding Employee Retention Measures in Archidply Industries Limited and thereby I have opted for descriptive research.

##### PRIMARY DATA

This is generated by the original research design to answer specific questions as required. It covers the facts which was not previously known or not previously published.

Primary data is important for all the areas of my research because it provides unvarnished information about the results of my study. For primary data the workers in the Archidply were supplied with the structural questionnaire and collected after directly filled in by the respondent. Apart from direct distribution of the questionnaire, mail questionnaire was also sent to the employees and direct interaction was also done with a view to collect the required data.

##### SECONDARY DATA

The secondary data is generated through the company brochures, company website, annual reports, magazines and also through internet.

For my study regarding Employee Retention Measures the secondary data will be collected from books, manuals, reports of the company as well as internet.

#### NEED FOR THE STUDY

Retention of employees refers to the Organizational policies and practices designed to meet the diverse needs of employees and create an environment that encourages employees to remain employed. Key retention of human capital is critical to the long-term sustenance and success of an organization. Failing to retain a key employee can prove to be costly to the organization.

Thus in order to analyze this, the study covers the employees of Archidply Industries located in Bangalore.

#### SAMPLING DESIGN

The technique used for selecting a subset of individuals from a large population in order to determine the characteristics of the entire population is referred to as Sampling.

For my study Simple Random Sampling technique is preferred to select the respondents in order to collect the data.

If 'N' is the size of the population and 'n' units are to be drawn in the sample then the sample should be taken in such a way that each of the  $\frac{N}{n}C$  samples has an equal chance of being selected and the mean of simple random sampling is  $\bar{X} = \frac{\sum Xi}{N}$ .

#### SAMPLING AREA

For my study the area selected for sampling is Archidply industries Limited, Bangalore.

#### SAMPLING DURATION

The study on Employee Retention Measures will be conducted for a period of 10 weeks.

#### SAMPLING SIZE

The sample being selected will consist of the employees of all the departments of the organization and the actual size of 100 respondents will be taken into consideration.

#### TOOLS USED FOR DATA COLLECTION

The primary data will be collected from the respondents by distributing a questionnaire.

1. Structured questionnaire.
2. Mailed questionnaire.
3. Direct interaction.

After completion of the question filled by the workers, each questionnaire will be analyzed separately and the responses will be consolidated. The responses obtained will be reflected through various Bar Graphs. The important statistical tools used in the analysis are **chi-square test** and **Karl Pearson's Coefficient of Correlation**.

Secondary data needed for the study will be collected through the company manuals, magazines etc in order to get the overview of the concept.

#### SCOPE OF THE STUDY

The present study is an attempt to know how employee retention results in greater efforts in the work and thus enhances the overall productivity of the organization and helps the employees in achieving both personal and organizational goals.

In this study we are concerned with Employee Retention Measures in Archidply Industries Limited located in Bangalore. This may be analyzed by taking into consideration the policies and procedures of the organization, the motivating factors for the employees to retain their relationship with the organization, the opinion of employees regarding the organization environment, compensation, benefits etc.

#### LIMITATIONS OF THE STUDY

- The given time period may not be sufficient enough to conduct the study.
- Errors may be present due to the bias of the respondents.
- The study and findings may not be applicable to other organizations.
- Few workers hesitated to provide the accurate information.
- Only sampling size of 100 employees were taken into consideration to arrive at the possible conclusion.

## 4. ANALYSIS AND INTERPRETATION

### FORMULA FOR CALCULATION OF ATTRITION RATE

Different organizations will follow different formulae to calculate the attrition rate and this depends on the organization size, the kind of services rendered by the organization etc. some of the commonly used formula is

1. Attrition rate = (no of employees resigned/average manpower)\*100.

Source: Business Dictionary

**TABLE 1: EMPLOYEES RESIGNED IN EACH DEPARTMENT IN THE YEAR 2013-2014**

Departments	No of employees	Headcount	Percentage
Accounts	6	26	23%
Administration	10	30	33%
HR	3	12	25%
Maintenance	18	36	50%
marketing	137	220	62%
Project	7	45	16%

Source: Secondary data

**Note:** all departments are not considered in the representation, only those departments are represented which have more number of employees resigned.

**Observation and Inference:** From the above graph it is known that the Marketing department will face more turn over and it is followed by maintenance than compared to other departments.

**TABLE 2: DATA ON SEPARATED EMPLOYEES IN THE YEAR 2013-2014 (MONTH WISE)**

Months	2013	2014
January	6	8
February	11	1
March	22	9
April	19	37
May	10	17
June	11	15
July	4	5
August	6	8
September	16	6
October	18	9
November	16	15
December	15	14

Source: secondary data

**Observation and Inference:** The above analysis clearly tells that there is more turnover in the month of April in the year 2014. And in the month of March we can find more turnovers in the year 2013.

**TABLE 3: THE REASON FOR TURNOVER IN THE COMPANY**

Particulars	No of respondents	Percentage
Better salary	40	40%
Back to home town	11	11%
Better opportunity	56	56%
Further studies	3	3%
Personal reason	19	19%
Medical reason	5	5%

Source: Secondary data

**Observation and Inference:** From the above graph it is clear that there is more turn over in the organization because the employees are finding better opportunities.

**TABLE 4: TURNOVER IN DIFFERENT DESIGNATION IN THE YEAR 2013-2014**

Designation	No of separated employees
Zonal head	2
Project sales manager	5
Branch manager	8
Territory manager	34
Sales executive	59
Accounts assistants	4

Source: Secondary data

**Observation and Inference:** It is known from the above graph that there is a turnover of 59% in the designation of sales executive and next there is 34% of turnover in the designation of territory manager.

**EMPLOYEE PERCEPTION ON RETENTION**

Many consider employee retention as relating to the efforts by which employers attempt to retain employees in their workforce. In this sense, retention becomes the strategies rather than the outcome. Employee Retention refers to the ability of the organization to retain the employees. Employee retention can be presented by simple statistic

**ANALYSIS OF CHI-SQUARE**

Ho: organization policies and procedures does not have much impact in retaining its employees. Ha: organization policies and procedures has much impact in retaining its employees.

N: Total frequency = 26+61+9+3+1= 100

$N_p = 100/5 = 20$

**TABLE 5: CHI-SQUARE ANALYSIS FOR IMPACT OF POLICIES AND PROCEDURES OF ORGANIZATION.**

Parameters	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> / E
1	26	20	6	36	1.8
2	61	20	41	1681	84.05
3	09	20	-11	121	6.05
4	03	20	-17	289	14.45
5	01	20	-19	361	18.05
<b>Total</b>	<b>100</b>				<b>124.4</b>

Where, O = Observed frequency and E = Expected frequency

$\chi^2(0.05)(\text{Tabulated value}) = 9.488 < \chi^2(\text{Calculated value}) = 124.4$

**Inference**

Since calculated value of  $\chi^2$  is greater than the tabulated value, it is considered to be significant. There is significant difference and hence Ho is rejected at 5% level of significance and thus can be concluded that policies and procedures has greater impact on retaining the employees of the organization.

**TABLE 6: EMPLOYEES RELATIONSHIP WITH THEIR PEERS AND SUPERIORS**

Particulars	No of respondents	Percentage
Excellent	32	32%
Good	56	56%
Satisfactory	4	4%
Poor	8	8%
<b>Total</b>	<b>100</b>	<b>100%</b>

Source: primary data

**Observation:** Above table confesses that 56% of employees enjoy the good relationship with the peers and 32% of employees say that they have excellent relationship with peers. Based on the response given by the employees it can be said that maximum number of employees have good collegial relation.

**Inference:** Employees job performance will usually depend on his relationship with his superiors and fellow workers. Some of the most common responsibilities of supervisors are to delegate work, and to give information or advice to subordinates. There by it is known that by maintaining good relations with the fellow workers and the superiors, employees would love to be a part of the company and they will enjoy their working environment.

**TABLE 7: EMPLOYEES OPINION ON THEIR JOB**

Particulars	No of Respondents	Percentage
Challenging and interesting work	48	48%
Security	4	4%
Opportunity for career development	28	28%
Recognition of work	20	20%
<b>Total</b>	<b>100</b>	<b>100%</b>

Source: primary data

**Observation:** The opinion of 48% respondents tells that their work is more challenging and interesting and 28% think that their opportunity for career development is more, 20% opt for recognition of work and 4% opt for security.

**Inference:** If the employees are given with challenging work and tasks this will lead them to creative thinking and increase their potential in doing their jobs and there by employees will enjoy performing their job. Through this it is also possible for the organization to provide career development opportunities to its employees and there by retain the most efficient and effective employees.

**TABLE 8: EMPLOYEE PERCEPTION ABOUT THE SALARY THEY RECEIVE**

Particulars	No of respondents	Percentage
Fully satisfied	4	4%
Satisfied	16	16%
Partially satisfied	22	22%
Dissatisfied	33	33%
Neither satisfied Nor Dissatisfied	25	25%
<b>Total</b>	<b>100</b>	<b>100%</b>

Source: Primary data

**Observation:** From the above table it is clear that 46% of respondents partially agree that their salary is better than other company people and about 34% employees disagree with it.

An employee's lifestyle, standard of living etc will be influenced by the salary he receives. If the employees will be provided with good job opportunities along with the deserving salary, this motivates them to be involved in the job and work even more progressively. Therefore, in order to retain its man power, it is also important for an organization to provide good salary package.

**ANALYSIS OF CHI-SQUARE**

Ho: satisfied with the salary received.

Ha: Dissatisfied with the salary received.

N: Total frequency = 4+16+22+33+25

$N_p = 100/5 = 20$ .

TABLE 9: CHI-SQUARE ANALYSIS REGARDING THE OPINION ON SALARY RECEIVED

Parameters	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> / E
1	04	20	-16	256	12.8
2	16	20	-04	16	0.8
3	22	20	02	04	0.2
4	33	20	13	169	8.45
5	25	20	05	25	1.25
<b>Total</b>	<b>100</b>				<b>23.5</b>

Where, O = Observed frequency and E = Expected frequency

$\chi^2(0.05)(\text{Tabulated value}) = 9.488 < \chi^2(\text{Calculated value}) = 23.5$

**Inference:** Since calculated value of  $\chi^2$  is greater than the tabulated value, it is considered to be significant. There is significant difference and hence  $H_0$  is rejected at 5% level of significance and thus can be concluded the employees are dissatisfied with the salary received by them.

TABLE 10: ELEMENTS THAT KEEP EMPLOYEES SATISFIED WITH THEIR JOB

Particulars	No of Respondents	Percentage
Training and development	6	6%
Motivation	18	18%
Job performance	6	6%
Growth & learning in the role	38	38%
All the above	32	32%
Total	100	100%

Source: Primary data

**Observation:** From the table it is clear that 38% of respondents are expecting to grow and learn from their role, 18% say that motivation keeps them satisfied and 32% of respondents say that all the above mentioned options are necessary.

**Inference:** The employees when provided with the opportunities of performing variety of tasks will have an advantage of learning in their job which will lead to the growth of the employees. When the employees feel that they are learning through their job, they will involve much in the work and thus it would be easier for the organization to retain them.

## SUMMARY OF FINDINGS

- Marketing department is facing a drastic turnover compared to all other departments in Archidply Industries Limited with a attrition rate of 62% followed by maintenance department.
- According to the survey conducted there is more turnover in the month of April in the year 2014 and in the month of March we can find more turn over in the year 2013 with the attrition rate of 37% and 22% respectively.
- 56% of the respondents were of the opinion that the main reason for turnover is that they were finding better opportunities.
- The turnover is mainly seen in the designation of sales executive and territory manager with the level of 59% and 37% respectively.
- 48% of the respondents found their work as more challenging and interesting so they intended to stick on to their work.
- It is found that 38% of the employees are satisfied with the job because of the growth and learning opportunity being provided.
- 46% of the respondents say that they are partially satisfied with the salary being paid to them by the organization and also they are expecting to have a hike in their salary.

## SUMMARY OF RECOMMENDATIONS

From the study in "Archidply Industries Limited" it was noticed that the employees at the organization were quite satisfied with the environment they are working in. But it was found that

- As all the employees were not satisfied with the salary they were paid, so it is recommended to revise their salary and provide them with better opportunity in building their career.
- The communication has to be improved from the top level to bottom level, this will help in boosting employee morale.
- It is recommended to improve in the prevailing training and development programs to increase the intellectual skills and capabilities of the workforce.
- According to the findings, employees are looking for recognition, promotion and increase in their salary. Suggestion is that these aspects should be given more attention.

## CONCLUSION

From the study conducted in Archidply Industries limited it was witnessed that it is wide-range developing organization which is stretched out all over India and concentrate further on youth.

The study conducted on Employee Retention in Archidply Industries Limited with the objectives of studying the attrition rate, to examine the perception of the employees towards the existing organization retention policies, to determine the impact of employee motivation in order to retain them in the organization and to know and develop a knowledge on the opinion of the employees towards the work environment. This helps us to understand how to retain employees in the organization and the factors which motivates employees to work further and stick to the organization.

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## A STUDY ON JOB SATISFACTION AMONG UNDERGRADUATE FACULTIES WITH SPECIAL REFERENCE TO SELF FINANCED INSTITUTIONS, BANGALORE

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### ABSTRACT

*This research work has been done to measure the job satisfaction level of employees with special reference to Self-financed institutions, Bangalore. Today to sustain in such a competitive market it's very important to retain good employees, who contribute towards the attainment of Organizational goal and customer satisfaction as well. Job satisfaction implies doing a job one enjoys, doing it well and being rewarded for their efforts. Job satisfaction further implies enthusiasm and happiness with work. This study focused on three factors namely Behavioral, organizational and environmental factors. The report focused on all of these factors and attempted to find the relation between these factors and employee job satisfaction. It was found that all the three factors have a positive impact on job satisfaction. The study concluded that organizational factors are the most important aspect for job satisfaction of the employees in a company i.e. if the employees are treated equally, fairly and properly supervised, their level of satisfaction can be increased towards their job. It was also found that a few important factors such as welfare measures, role clarity, freedom of decision making and recognition at work that normally contributes to the job satisfaction, didn't have much influence. The innovativeness and creativeness of employees also took a back seat as far as satisfaction level was concerned.*

### KEYWORDS

job satisfaction, faculties, private institutes

### INTRODUCTION

Job satisfaction is, quite simply, how content or satisfied employees are with their jobs. Job satisfaction implies doing a job one enjoys, doing it well and being rewarded for one's efforts. It further implies enthusiasm and happiness with one's work.

Job satisfaction is typically measured using an employee satisfaction survey. These surveys address topics such as compensation, workload, perceptions of management, flexibility, teamwork, resources, etc. These things are all important to organizations who want to keep their employees happy and reduce turnover, but employee satisfaction is only a part of the overall solution.

### IMPROVING JOB SATISFACTION

Job satisfaction plays significant role in the organization. Therefore, management should take concrete steps to improve the level of job satisfaction.

1. Re-designing the job.
2. Improving the quality of work life.
3. Linking rewards with performance.
4. Improving overall organizational climate.

Measuring levels of job satisfaction can be difficult because of the subjectivity of the concept. Different people think of job satisfaction in different ways and give more or less weight to different factors in describing themselves as being satisfied or dissatisfied at work. Researchers who measure job satisfaction cannot always be sure they are even measuring the same thing as other researchers in the same field.

**What managers need to do?** Job satisfaction and its relationship to dispositional factors supports the notion that managers must concentrate on employing the right people for the organization in order to maximize on the possibility that employees will be satisfied. Satisfied employees will stay with the company for a relatively long period.

Thus, they must concentrate on removing dissatisfies from the workplace to enable employees to get on with their own satisfaction in an environment that is conducive to achieving both their own needs and those of the organization.

### REVIEW OF LITERATURE

**Definition:** "Job satisfaction is a general attitude towards one's job: the difference between the amount of reward workers receive and the amount they believe they should receive." - **P. Robbins**

Human life has become very complex now-a-days. In Modern society the needs and requirements of the people are ever increasing and ever changing. When the people's needs are not fulfilled they become dissatisfied. Dissatisfied people are likely to contribute very little for any purpose. Job satisfaction amongst faculties is very important for the educational industry to function successfully.

This study used the academic literature to establish a satisfaction model for higher education employees. The model is divided into six dimensions: organization vision, respect, result feedback and motivation, management system, pay and benefits, and work environment. Using a questionnaire based on the model, 100 faculties were surveyed to investigate and analyze their satisfaction level. The Herzberg's motivation-hygiene theory was then applied to place each quality attribute and thus determine the improvement strategy.

### OBJECTIVES OF THE STUDY

- To determine the level of satisfaction of the faculties regarding their job.
- To study the various factors influencing job satisfaction among the UG faculties
- To study the relationship between the personal factors of the employee (Income, Designation, Gender, etc) with job satisfaction in educational sector.
- To study the relationship between the behavioral, organizational and environmental factors (Work environment, Job security, Benefits etc) with job satisfaction of the employees in the educational sector.
- The main purpose of the study is to establish the critical factors of job satisfaction and find the impact of job satisfaction on the employee loyalty in the educational sector in Bangalore.

### LIMITATIONS OF THE STUDY

- The research exercise was conducted within a limited duration. So a detailed study could not be made.
- The number of respondents is limited to 100.
- The information collected by the observation method is very limited.
- The result would be varying according to the individuals as well as time.
- Some respondents hesitated to give the actual situation; they feared that management would take any action against them.
- The findings and conclusions are based on knowledge and experience of the respondents sometime may subject to bias.



**METHODOLOGY FOR SAMPLE SELECTION AND DATA COLLECTION****SOURCES OF DATA**

The study is based on primary data collected from 100 faculties from various departments of different colleges, by the way of questionnaire for the research purpose. To cater the need of the research, have used primary (self-constructed structured Questionnaire) as well as secondary sources of data (web sites, journals etc).

**DESIGN/METHODOLOGY/APPROACH**

The research design used in the research was descriptive. This research was used because it is a good structured instrument for collection of data. The research technique used was Questionnaire and interview. Sources of data, includes primary data with a sample size of 100 and also secondary data. Random Sampling Technique was applied and Statistical tools like Percentage Analysis and Graphs were carried out.

**HERZBERG'S MOTIVATION-HYGIENE THEORY**

The **two-factor theory** (also known as **Herzberg's motivation-hygiene theory** and **dual-factor theory**) states that there are certain factors in the workplace that cause job satisfaction, while a separate set of factors cause dissatisfaction.

It was developed by psychologist Frederick Herzberg, who theorized that job satisfaction and job dissatisfaction act independently of each other. Herzberg developed one of the earliest theories relating to job satisfaction in the 1950s.

His "two-factor" theory emphasizes that there are factors in the workplace that create satisfaction (motivators) and those which lead to dissatisfaction if they are not present (hygiene factors). There are four motivators in the theory: achievement, recognition, responsibility, and advancement; and five hygiene factors: monetary rewards, competent supervision, policy and administration, working conditions, and security. The implication of the theory is that satisfaction and dissatisfaction are not opposite ends of the same scale and that job satisfaction may merely be an absence of job dissatisfaction.

Herzberg argues that it is necessary to have hygiene factors at an acceptable level simply to reach a neutral feeling about the job. The theory has not been without its critics from the perspective of both the methodology of the studies and the underlying assumption that all individuals behave in a similar way in the workplace. However, the theory is simple and has a common sense appeal and it supports the argument that today's managers should concentrate on improving the satisfiers in the workplace and concentrate on employing and developing the right people on the jobs.



Two-factor theory distinguishes between:

- **Motivators** (e.g. challenging work, recognition for one's achievement, responsibility, opportunity to do something meaningful, involvement in decision making, sense of importance to an organization) that give positive satisfaction, arising from intrinsic conditions of the job itself, such as recognition, achievement, or personal growth, *and*
- **Hygiene factors** (e.g. status, job security, salary, fringe benefits, work conditions, good pay, paid insurance, vacations) that do not give positive satisfaction or lead to higher motivation, though dissatisfaction results from their absence. The term "hygiene" is used in the sense that these are maintenance factors. These are extrinsic to the work itself, and include aspects such as company policies, supervisory practices, or wages/salary. Herzberg often referred to hygiene factors as "KITA" factors, the process of providing incentives or threat of punishment to make someone do something.

According to Herzberg, hygiene factors are which causes dissatisfaction among employees in a workplace. In order to remove dissatisfaction in a work environment, these hygiene factors must be eliminated. There are several ways that this can be done but some of the most important ways to decrease dissatisfaction would be to pay reasonable wages, ensure employees job security, and to create a positive culture in the workplace. Herzberg considered the following hygiene factors from highest to lowest importance: company policy, supervision, employee's relationship with their boss, work conditions, salary, and relationships with peers.

Eliminating dissatisfaction is only one half of the task of the two factor theory. The other half would be to increase satisfaction in the workplace. This can be done by improving on motivating factors. Motivation factors are needed to motivate an employee to higher performance. Herzberg also further classified our actions and how and why we do them, for example, if you perform a work related action because you *have* to then that is classed as "movement", but if you perform a work related action because you *want* to then that is classed as "motivation". Herzberg thought it was important to eliminate job dissatisfaction before going onto creating conditions for job satisfaction because it would work against each other.

According to the Two-Factor Theory there are four possible combinations:

1. High Hygiene + High Motivation: The ideal situation where employees are highly motivated and have few complaints.
2. High Hygiene + Low Motivation: Employees have few complaints but are not highly motivated. The job is viewed as a paycheck.
3. Low Hygiene + High Motivation: Employees are motivated but have a lot of complaints. A situation where the job is exciting and challenging but salaries and work conditions are not up to par.
4. Low Hygiene + Low Motivation: This is the worst situation where employees are not motivated and have many complaints.

**FINDINGS**

The analytical results showed that higher education employees focus on high salaries and fair promotion systems. The findings are given in the following paragraphs.

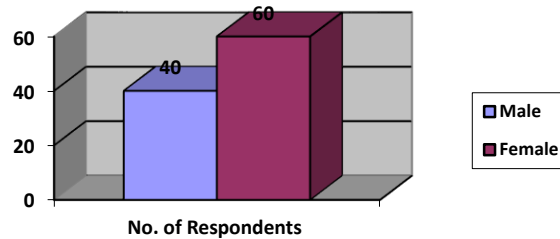
**DATA ANALYSIS AND INTERPRETATION**

**TABLE 1: CLASSIFICATION OF RESPONDENTS ACCORDING TO GENDER**

Serial. No.	Gender	No. of Respondents	% of Respondents
1.	Male	40	40
2.	Female	60	60
<b>Total</b>		<b>100</b>	<b>100</b>

Source: Primary Data

**GRAPH 1: CLASSIFICATION OF RESPONDENTS ACCORDING TO GENDER**



**INTERPRETATION**

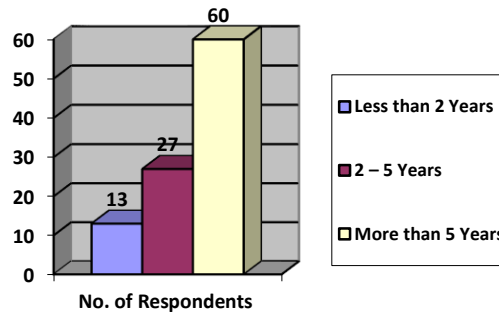
The table shows that around 60% of the respondents are female faculties and 40% of the respondents are male. The question asked was regarding the gender of respondents. From the graph it can be inferred that majority of the respondents who are working in the educational sector are particularly female.

**TABLE 2: CLASSIFICATION OF RESPONDENTS ACCORDING TO WORK EXPERIENCE**

Sl No.	Educational Qualification	No. of Respondents	% of Respondents
1.	Less than 2 Years	13	13
2.	2 – 5 Years	27	27
3.	More than 5 Years	60	60
<b>Total</b>		<b>100</b>	<b>100</b>

Source: Primary Data

**GRAPH 2: CLASSIFICATION OF RESPONDENTS ACCORDING TO WORK EXPERIENCE**



**INTERPRETATION**

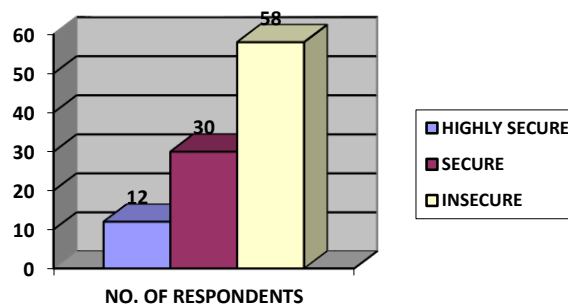
The question asked was regarding the total work experience. The above table shows that 60% of the faculties are with the work experience of above 5 years, 27% of the faculties are with the work experience of 2-5 years and only 13% of them are with the experience of less than 2 years. From the graph, it can be inferred that majority of the respondents are faculties with work experience of more than 5 years.

**TABLE 3: THE LEVEL OF JOB SECURITY.**

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
HIGHLY SECURE	12	12
SECURE	30	30
INSECURE	58	58
TOTAL	100	100

Source: Primary Data

**GRAPH 3: THE LEVEL OF JOB SECURITY**



**INTERPRETATION**

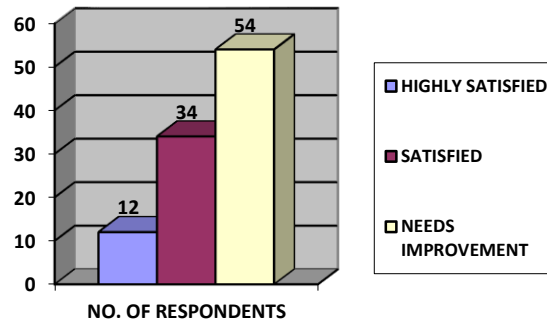
The above table shows that 58% of the faculties feel insecure in their jobs, where 12% are highly secured and around 30% of respondents also feel the same about their job. From the above graph, the job security of the faculties is analyzed. It clearly shows that majority of the faculties working in the private institutions are highly insecure regarding the job.

**TABLE 4: THE LEVEL OF SATISFACTION WITH THE OVERALL COMPENSATION PACKAGE**

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
HIGHLY SATISFIED	12	12
SATISFIED	34	34
NEEDS IMPROVEMENT	54	54
TOTAL	100	100

Source: Primary Data

**GRAPH 4: THE LEVEL OF SATISFACTION WITH THE OVERALL COMPENSATION PACKAGE**



**INTERPRETATION**

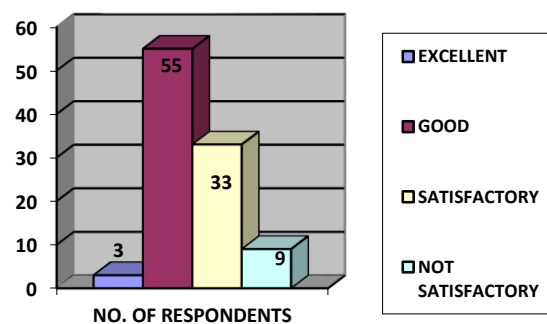
The above table shows that around 54% of the faculties are not really happy with the compensation offered. Only around 34% of the respondents are satisfied and 12% of respondents are highly satisfied. Only a few were happy with the compensation package offered. And hence the private institutions need to improve the pay scale offered as it has a direct impact on the satisfaction of the faculties at work. As per the Herzberg's theory, improving the hygiene factors can remove the dissatisfaction of the employees to a large extent.

**TABLE 5: OPINION ABOUT WORK ENVIRONMENT**

PARTICULARS	NO OF RESPONDENTS	% OF RESPONDENTS
EXCELLENT	3	3
GOOD	55	55
SATISFACTORY	33	33
NOT SATISFACTORY	9	9
TOTAL	100	100

Source: Primary Data

**GRAPH 5: OPINION ABOUT WORK ENVIRONMENT**



**INTERPRETATION**

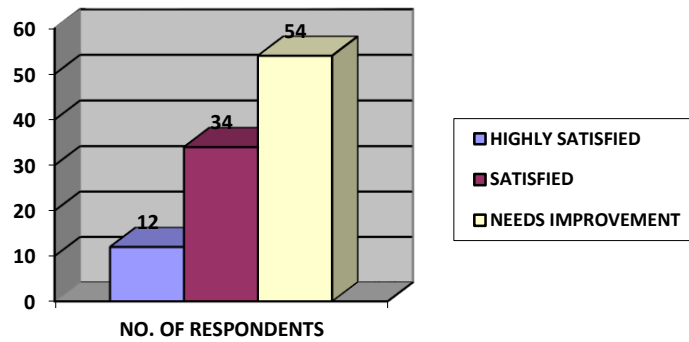
The above table shows that nearly 55% of the respondents were happy with the work environment and 3% felt that the work environment was excellent. Nearly 33% were just satisfied and 9% were highly dissatisfied and only 3% felt the work environment was excellent. From the graph, it can be inferred that majority of the faculties were really happy with the working environment and only a few were highly dissatisfied.

**TABLE 6: LEVEL OF SATISFACTION WITH THE REWARD SYSTEM**

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
HIGHLY SATISFIED	12	12
SATISFIED	34	34
NEEDS IMPROVEMENT	54	54
TOTAL	100	100

Source: Primary Data

GRAPH 6: LEVEL OF SATISFACTION WITH THE REWARD SYSTEM



**INTERPRETATION**

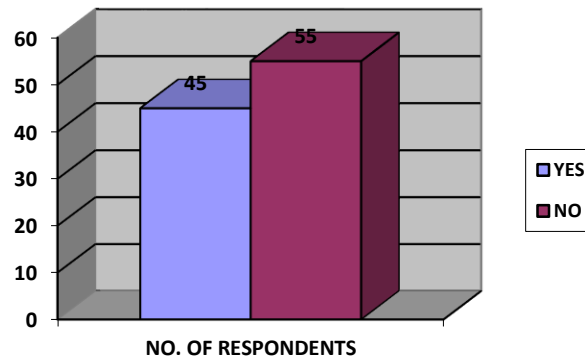
The table clearly shows that 12% of the respondents are highly satisfied with the reward system and 34% also felt satisfied. However, around 54% of the faculties feel that they there should be improvement in the reward system. From the graph it can be inferred that majority of the respondents feel that, there needs to be lots of improvement in the reward system.

TABLE 7: LEVEL OF SATISFACTION OF RELAXATION DURING BREAK TIME

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
YES	45	45
NO	55	55
TOTAL	100	100

Source: Primary Data

GRAPH 7: LEVEL OF SATISFACTION OF RELAXATION DURING BREAK TIME



**INTERPRETATION**

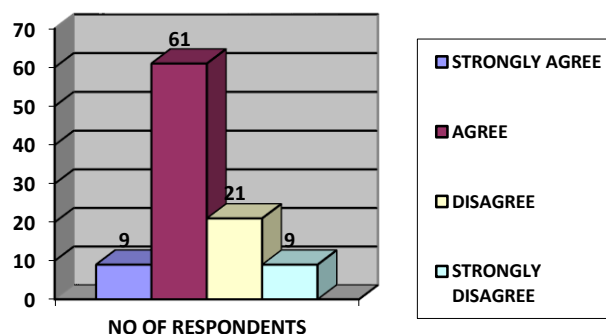
The question was related to the level of satisfaction of relaxation during break time. The table clearly shows that 55% of the respondents strongly did not agree on this fact. However, only 45% agree on this. From the graph it can be inferred that the respondents were neutral regarding the relaxation factor. Most of them felt stressed out as they really did not have time to relax during the break times.

TABLE 8: OPPORTUNITIES TO UTILIZE THE SKILLS

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
STRONGLY AGREE	9	9
AGREE	61	61
DISAGREE	21	21
STRONGLY DISAGREE	9	9
TOTAL	100	100

Source: Primary Data

GRAPH 8: OPPORTUNITIES TO UTILIZE THE SKILLS



**INTERPRETATION**

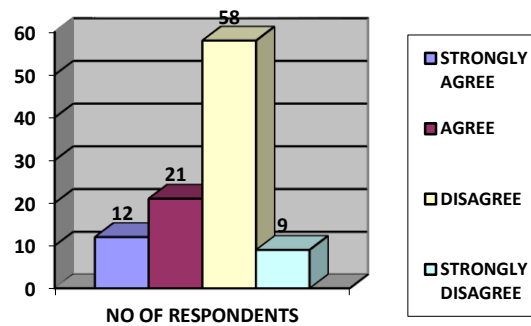
The table clearly shows that 61% of the respondents agree on the fact that they find adequate opportunities for utilizing skills and 9% also strongly agreed on this. However, around 21% of the faculties disagreed on this and 9% strongly disagreed. From the graph it can be inferred that majority of the respondents felt that their institutes had given adequate opportunities to utilize their skills.

**TABLE 9: SUPPORT FROM MANAGEMENT TO PURSUE HIGHER EDUCATION**

PARTICULARS	NO OF RESPONDENTS	% OF RESPONDENTS
STRONGLY AGREE	12	12
AGREE	21	21
DISAGREE	58	58
STRONGLY DISAGREE	9	9
TOTAL	100	100

Source: Primary Data

**GRAPH 9: SUPPORT FROM MANAGEMENT TO PURSUE HIGHER EDUCATION**



**INTERPRETATION**

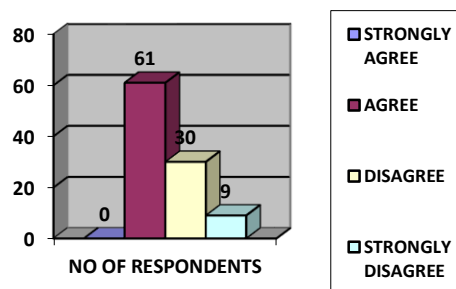
The table clearly shows that only 12% of the respondents strongly felt that they receive the support from the institute to pursue higher education and 21% felt the same. However, 58% do not agree on this and another 9% of them strongly disagreed on this fact. From the above graph, it can be inferred that majority of the faculties feel that they do not receive any kind of support from their institute for pursuing higher education.

**TABLE 10: TECHNIQUES USED FOR PROMOTIONS IS APPROPRIATE**

PARTICULARS	NO OF RESPONDENTS	% OF RESPONDENTS
STRONGLY AGREE	0	0
AGREE	61	61
DISAGREE	30	30
STRONGLY DISAGREE	9	9
TOTAL	100	100

Source: Primary Data

**GRAPH 10: TECHNIQUES USED FOR PROMOTIONS IS APPROPRIATE**



**INTERPRETATION**

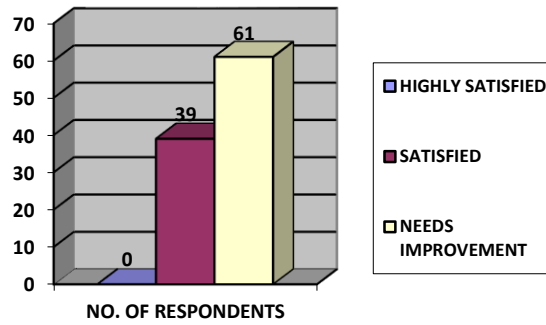
The table clearly shows that 61% of the respondents strongly felt that the promotion techniques used was appropriate in almost all institutes. However, only 30% really did not agree on this. It is also found that another 9% of them also strongly disagreed on this fact. From the graph it can be clearly inferred that almost all the respondents felt that the promotional techniques used was appropriate.

**TABLE 11: LEVEL OF SATISFACTION WITH THE FRINGE BENEFITS**

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
HIGHLY SATISFIED	0	0
SATISFIED	39	39
NEEDS IMPROVEMENT	61	61
TOTAL	100	100

Source: Primary Data

GRAPH 11: LEVEL OF SATISFACTION WITH THE FRINGE BENEFITS



**INTERPRETATION**

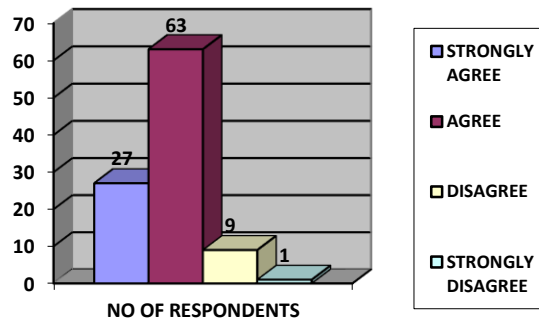
The table clearly shows that only 39% of the faculties were satisfied with the fringe benefits provided by their institutes and 61% of the faculties felt that, the fringe benefits provided needs improvement. From the graph, it clearly infers that majority of the faculties were not happy with the fringe benefits provided by their respective institutes and hence needs improvement in this area. The faculties were highly dissatisfied.

TABLE 12: SATISFACTION LEVEL OF CO-ORDIAL RELATIONSHIP WITH CO-WORKERS AND SUPERIORS

PARTICULARS	NO OF RESPONDENTS	% OF RESPONDENTS
STRONGLY AGREE	27	27
AGREE	63	63
DISAGREE	9	9
STRONGLY DISAGREE	1	1
TOTAL	100	63

Source: Primary Data

GRAPH 12: SATISFACTION LEVEL OF CORDIAL RELATIONSHIP WITH CO-WORKERS AND SUPERIORS



**INTERPRETATION**

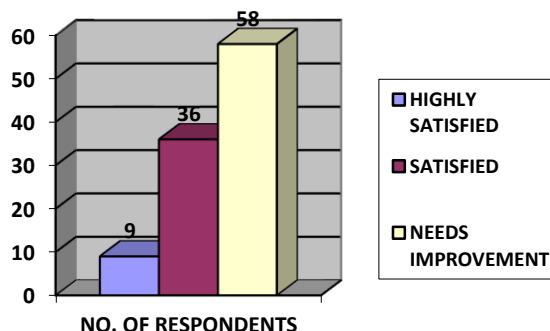
The table clearly shows that 27% of the respondents strongly agreed on having cordial relationship with co-workers and superiors and around 63% respondents also felt the same. However, only 9% disagreed on this fact and 1% strongly disagreed on this fact. From the graph, it clearly shows that majority of the respondents, maintained cordial relationship with their co-workers and superiors.

TABLE 13: LEVEL OF SATISFACTION WITH LEAVES OFFERED

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
HIGHLY SATISFIED	9	9
SATISFIED	36	36
NEEDS IMPROVEMENT	58	58
TOTAL	100	100

Source: Primary Data

GRAPH 13: LEVEL OF SATISFACTION WITH LEAVES OFFERED



**INTERPRETATION**

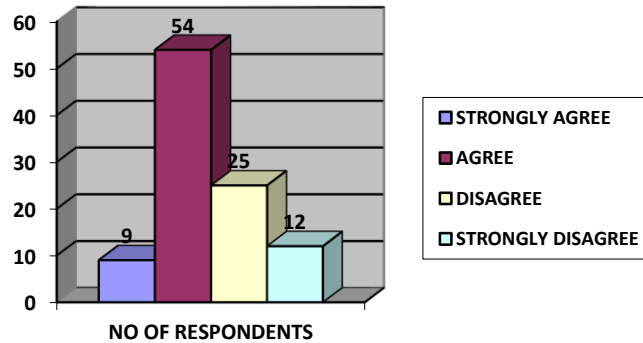
The table clearly shows that 9% of the respondents were highly satisfied with the leaves offered by their management and around 36% also felt the same. However 58% of the respondents felt that the policy regarding the leave needs improvement. From the graph, it can be inferred that majority of the respondents were not happy regarding the leaves offered. Hence the management has to improve the leave policies in the private educational institutes.

**TABLE 14: DEGREE OF INDEPENDENCE ASSOCIATED WITH YOUR WORK ROLE**

PARTICULARS	NO OF RESPONDENTS	% OF RESPONDENTS
STRONGLY AGREE	9	9
AGREE	54	54
DISAGREE	25	25
STRONGLY DISAGREE	12	12
TOTAL	100	100

Source: Primary Data

**GRAPH 14: DEGREE OF INDEPENDENCE ASSOCIATED WITH YOUR WORK ROLE**



**INTERPRETATION**

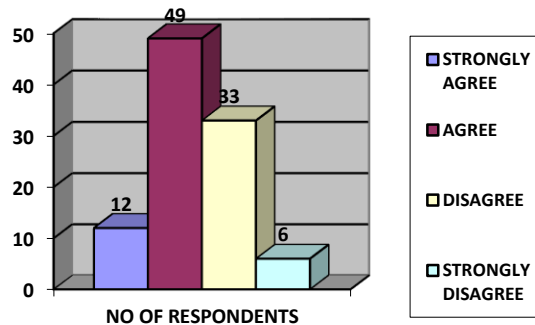
The table clearly shows that 9% of the respondents strongly felt that, the degree of independence enjoyed with their work was the maximum and 54% also felt the same. However, 25% really did not agree on this. It is also found that another 12% of them strongly disagreed on this fact. From the graph, it can be inferred that majority of the respondents enjoy the degree of independence with their work role. Only a few are not satisfied.

**TABLE 15: OVERLOADED WITH JOB RESPONSIBILITIES**

PARTICULARS	NO OF RESPONDENTS	% OF RESPONDENTS
STRONGLY AGREE	12	12
AGREE	49	49
DISAGREE	33	33
STRONGLY DISAGREE	6	6
TOTAL	100	100

Source: Primary Data

**GRAPH 15: OVERLOADED WITH JOB RESPONSIBILITIES**



**INTERPRETATION**

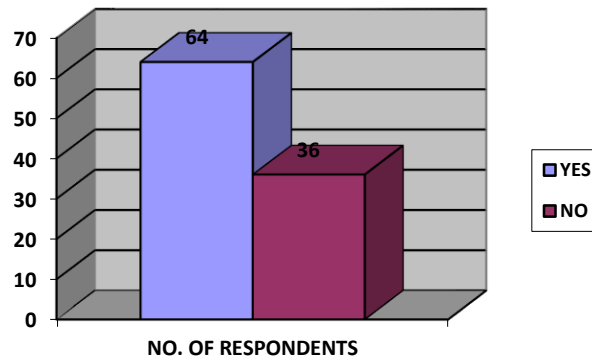
The table clearly shows that 49% of the respondents felt that, they were overloaded with responsibilities. However, 33% felt that they were really not overloaded with work. It is also found that another 12% of them strongly agreed on this fact and 6% felt otherwise. The above graph clearly shows that majority of the faculties feel that they are really overloaded with responsibilities. Only a few feel that, they are not overloaded and are quite happy regarding their responsibilities at work.

**TABLE 16: WORK LIFE BALANCE**

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
YES	64	64
NO	36	36
TOTAL	100	100

Source: Primary Data

GRAPH 16: WORK LIFE BALANCE



**INTERPRETATION**

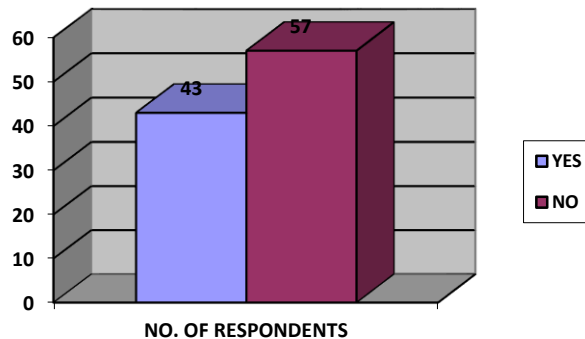
The table clearly shows that 64% of the respondents were able to balance the work life. But however, 36% were really not able to balance work life balance. It is also found that among the 36% were all female respondents. From the graph, it can be inferred that majority of the respondents were able to balance the work life. However, few were really not able to balance work life balance. It is also found that among those, were all female respondents.

TABLE 17: STRESS AT WORK

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
YES	43	43
NO	57	57
TOTAL	100	100

Source: Primary Data

GRAPH 17: STRESS AT WORK



**INTERPRETATION**

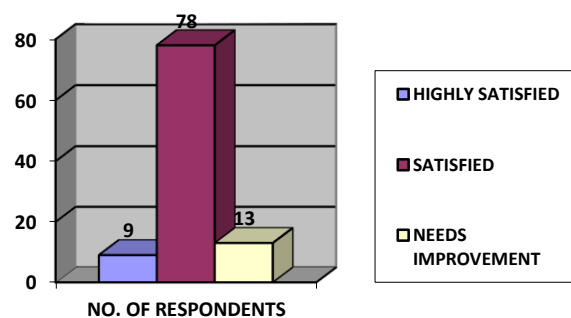
From the table it can be found that, nearly 57% of the respondents are not stressed at work. However, 43% of the respondents face the issue of stress at work. From the graph, it can be inferred that few of the respondents experienced high level of work stress whereas few of them did not experience stress at work. And so, it can be inferred that stress is a factor which varies from one individual to another. It is basically how well one balances work life and multitasks.

TABLE 18: OVERALL SATISFACTION LEVEL WITH THE CURRENT JOB

PARTICULARS	NO. OF RESPONDENTS	% OF RESPONDENTS
HIGHLY SATISFIED	9	9
SATISFIED	78	78
NEEDS IMPROVEMENT	13	13
TOTAL	100	100

Source: Primary Data

GRAPH 18: OVERALL SATISFACTION LEVEL WITH THE CURRENT JOB





**INTERPRETATION**

The table clearly shows that 78% of the respondents were satisfied with their current job and 9% respondents were highly satisfied. Only 13% of the respondents were dissatisfied and hence felt improvement has to be made in various areas. From the graph, it can be inferred that majority of the respondents were satisfied with their current job. The management pays reasonable salary, ensures employees job security and has created a positive culture in the workplace among the faculties. Only a few of the respondents were dissatisfied and hence improvement in various areas has to be made by the management.

**FINDINGS**

From the data collected, it may be concluded that:

- The analysis of the survey revealed that there is no significant relationship between Age and level of satisfaction. Highly satisfied employees are more among the age group of 31-45.
- The analysis of the survey revealed that there is no significant relationship between marital status and level of satisfaction. Highly satisfied employees are more among the unmarried persons than the married persons.
- The analysis of the survey revealed that there is significant relationship between monthly income and level of satisfaction. Highly satisfied employees are above Rs. 30, 000/- income group.
- The analysis of the survey revealed that there is significant relationship between experience and level of satisfaction. Highly satisfied employees are with 10 years' experience.
- The analysis of the survey revealed that there is significant relationship between gender and level of satisfaction.
- The analysis of the survey revealed that there is significant relationship between nature of job and level of satisfaction.
- The analysis of the survey revealed that there is significant relationship between educational qualification and level of satisfaction.

**SUGGESTIONS**

- Since few of the respondents experienced high level of work stress, the institutes should conduct frequent training programs or workshops on managing the stress.
- The private institutes need to improve the pay scale offered as it has a direct impact on the satisfaction of the faculties at work. As per the Herzberg's theory, improving the hygiene factors can remove the dissatisfaction of the employees to a large extent.
- There needs to be lot of improvement in the reward system.
- Mostly female respondents found very difficult to balance work life. Hence the institutes need to provide some flexibility in their timings or work.
- One of the main reasons for the dissatisfaction among faculties was due to lack of support from their institutes for pursuing higher education. The institutes need to encourage and provide required help to their faculties for personal growth.
- The private educational institutes should make improvements in the leave policies.
- The private institutes lack in providing fringe benefits to the faculties. This is one of the ways to increase the satisfaction level and loyalty amongst faculties towards their institutes.
- The management pays reasonable salary, ensures employees job security and has created a positive culture in the workplace among the faculties. Only a few of the respondents were dissatisfied and hence improvement in the above mentioned areas has to be made by the private institutes.

**CONCLUSION**

It is found that, for the growth of any organization job satisfaction of employees is very important. Eliminating dissatisfaction is only one half of the task of the management. They need to increase satisfaction in the workplace by improving on motivating factors. Motivation factors are needed to motivate an employee to achieve higher performance.

A few factors that were prominent to the employee for job satisfaction in the researches were income, promotion, feeling of fulfillment, work environment, relations with superior etc. It was also found that a few important factors such as welfare measures, role clarity, freedom of decision making and recognition at work that normally contributes to the job satisfaction, didn't have much influence.

The management has also taken the best efforts to maintain cordial relationship with the employees. Most of the employees were not satisfied with the fringe benefits provided by the institutions. Due to good working conditions prevailing in the educational institutions, job satisfaction of each respondent seems to be the maximum. The innovativeness and creativeness of employees also took a back seat as far as satisfaction level was concerned. From the study, it is also found that most of the respondents have job satisfaction and were very contented.

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4. <http://work.chron.com/models-measuring-job-satisfaction-critique-25026.html>

**AN EMPIRICAL ANALYSIS ON DEMOGRAPHIC TRANSITION AND SAVINGS IN INDONESIA**

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**ABSTRACT**

*The influence of demographic variables to the economic variable shows positive, negative, or neutral results. This study aims to demonstrate empirically the influence of demographic variables which were measured by the demographic transition as measured by the crude birth rate and the ratio of productivity and life expectancy to the economic variables measured by savings. Using the data for the period 1985-2014 and the technique of ordinary least squares analysis, this study supports the theory that demographic variables do not affect either positively or negatively or neutral to the economic variables.*

**KEYWORDS**

demographic transition, savings.

**INTRODUCTION**

Demographic variables have various impacts to the development of economic variables within a country, it can be a positive (Kuznets, 1967), negative (Malthus, 1798), and neutral impacts (Kelley, 1988). The concept explains the various possibilities of demographic variables influences on the growth of economic variables. Another concept which also explains the relationship of demography and the economic growth is the theory of demographic bonus that supports the previous theory which stated that there is a positive relationship between demography and the economic growth.

Based on the conception of demographic bonus, the demographic transition (decreasing of birth rate and mortality), accompanied by the appropriate government policies, contributes positively on the economic growth through the mechanism of labor supply, human capital (including health can be measured by life expectancy) and savings.

Savings can be influenced positively or negatively by the demographic transition. Positively, the demographic transition will cause a change in the age structure that makes the condition increase the life expectancy. The increase of life expectancy allows a period of time to work longer so that it makes more savings. Negatively, the increase of life expectancy results in an aging population that causes the condition to decrease the amount of labor. This condition can be a burden on public financing, because the number of seniors is charged to the country/state through a state financing for the seniors causing the increase of state expenditures.

Indonesia is one of few countries in Asia experiencing the demographic transition, which can be measured by declining the crude birth rate during the period of the last thirty years. The crude birth rate in Indonesia in a row in 1975, 1980, 1990, 2000, 2010 were 42.9, 26.9, 20, 9, 17, 4, 17.9, and this numbers continue to decline until today. An inversely proportional trend occurs in the amount of domestic savings in Indonesia.

Starting from the thought of the possibility of positive, negative and neutral effects that can be caused by the demographic transition (as the demographic variable) on the domestic savings (as the economic variable), the study tried to evaluate the relationship of the two main variables in Indonesia.

**REVIEW OF LITERATURE**

Various theories explain the concept of savings with diverse approaches. Savings can be explained by using various approaches, for example: the consumption approach, using the development capital approach, and using the demographic approach. This research was conducted using a demographic approach. Therefore, the paper will present several theories that discuss the concept of savings based on the approaches.

**THE SAVINGS CONCEPT WITH THE DEMOGRAPHIC APPROACH**

As explained previously, there are three opinions expressing about the relationship between the growths of demographic variables with the economic variables (Kuznets, 1967; Malthus, 1798; Kelley, 1988). Another theory also states the relationship between the demographic variables (demographic transition) and economic variables (one of them is saving) that is, the demographic bonus theory proposed by Bloom and Williamson (1997).

According to Ananta, Pendit and Wongkaren (1994), the demographic transition consists of three aspects, namely the fertility transition, mortality transition, and transition mobility. The fertility and mortality transitions are vital transitions. The fertility transition can be seen from the declining the birth rate, such as the Crude

Birth Rate and Total Fertility Rate, while the mortality transition can be seen from the decline in death rates, such as the crude death rate and the infant mortality rate.

The demographic transition leads to changes in the age structure, adding the age of the labor force and reducing the age of not workforce. Besides, the demographic transition also enables the achievement of life expectancy to become longer, so the period of work will be much longer, and it is expected to keep more savings. Another theory explains that the age structure, specifically the productive ratio, has a positive effect on savings. (Modigliani,1966).

**IMPORTANCE OF THE STUDY**

There are quite many researches on the demographic variables and other variables that influence the performance of saving. One of them was carried by Lindh (1999), which states that the age structure will affect savings. The research conducted by Lindh found that the distribution of the age structure of the population has an impact on economic growth, and economic growth is also affected by the age structure which in turn affects the aggregate savings again.

In addition, previous studies conducted by Kokila, (1994) & Nasir and Tahir (2011) states that income (wage) has an effect on savings, since savings are part of revenue. Other research conducted by Daulay (2011) & Huigins (2011) reported that a positive effect on the savings rate, as well as the research by McDonald (2001) and Berry and Kim (2002) which states a factor which influence savings is life expectancy.

This study differs from previous studies because it was done on the empirical condition that occurs in Indonesia in a long time period, ie: for thirty years, and was dominated by the influence of the demographic variables (number of births, the productive and life expectancy ratio) on economic variables (savings).

**RESEARCH METHODOLOGY**

**TYPES, SOURCES OF DATA AND METHODS OF DATA COLLECTION**

The main analysis units used in this study were the birth rate, the ratio of productive age, wages, investments, interest rates, educations and savings in Indonesia. This study used secondary data in the form of time series data (i.e. data were arranged chronologically based on time or collected from time to time on a particular variable in Indonesia), obtained from the various competent institutions and had authority to publish the data to the interests of various parties, including the Central Bureau of Statistics. Data collection methods used in this study was the documentation method, in which, the data used were the birth rate, the ratio of productive age, wages, investments, interest rates, education and savings in Indonesia in 1985-2014.

**VARIABLES AND MEASUREMENTS**

In this study, the researchers measured savings by using the data of domestic savings in Indonesia, as a dependent variable. While as the independent variable, the researcher observed the data variables of birth rate (as measured by the crude birth rate), the ratio of productive age (as measured by the ratio of the working population and the total population), and life expectancy, wages (as measured by minimum wage), and variables affecting savings, in the form of investment (as measured by domestic investment, PMDN), interest rates (as measured by the interest rate of Bank Indonesia, the BI rate), and domestic savings in Indonesia in the previous period.

To analyze the data, the researcher conducted two approaches, namely the qualitative and quantitative analysis techniques. The qualitative analysis technique was performed by analyzing and describing the discussion in this study based on theories on the literature. While, the quantitative analysis used was to analyze the data in the form of numbers on data collection. The quantitative analysis technique applied in this study was the multiple regression analysis with Ordinary Least Square technique to identify the effects of the crude birth rate, the ratio of productive age, wages, domestic investments, interest rates, life expectancy on domestic savings in Indonesia.

**TEST INSTRUMENTS**

The data collection was done by using secondary data, the validity and authenticity of the social research results were largely determined by measuring the instruments used. If measurement of instrument used was not valid or cannot be trusted, then the results of research conducted would not describe the actual reality. In accordance with the standards-making instrument, that was, before the test instrument was used as a research instrument, it had to be performed a classical assumption first. Therefore, the test was done by using four kinds of testing, ie test for normality, multicollinearity, and heteroskedasitas, and autocorrelation.

**MODEL**

The model used in this study was as following:

$$SAVS_t = d_0 + d_1 CBR_t + d_2 SR_t + d_3 MW_t + d_4 DINV_t + d_5 IR_t + d_6 LE_t + d_7 SAVS_{t-1} + e_{4,t} \tag{1}$$

**RESULT AND DISCUSSION**

**STATISTICAL ANALYSIS OF MULTIPLE LINEAR REGRESSION EQUATION**

Since the data used were time series data, there would be an autocorrelation so that the researcher needed to anticipate with the addition of the Autoregressive model of order  $p = 1$  or AR (1). Mathematically, the formulation of a simultaneous equation model (4) to:

$$\log(SAVS_t) = d_0 + CBR_t + d_2 SR_t + d_3 MW_t + d_4 DINV_t + d_5 IR_t + d_6 LE_t + d_7 \log(SAVS_{t-1}) + e_{4,t} \tag{2}$$

**THE CLASSICAL ASSUMPTION TEST**

There are some classical assumptions that must be fulfilled. Terms in the classical assumption can be expressed: (1) the random variables and the normal distribution; (2) non multicollinearity; (3) non autocorrelation and homoskedasticity. The OLS assumption test was done in order to get the best model and appropriateness with the OLS assumptions, that was; the Best Linear Unbiased Estimation (BLUE). In this study, the test results on the classical assumption of OLS estimation concluded that the model has a residual Normal distribution, no multicollinearity, no heteroskedasticity, and no autocorrelation.

**MODEL ESTIMATION**

TABLE 1: TEST OF REGRESSION COEFFICIENT SIGNIFICANCE AND P-VALUE OF EQUATION WITH RESPONSE VARIABLE OF LOG(SAVS) (LOG SAVINGS)

Predictor Variable	Regression Coefficient	P-value
Constant	-2,248758	0,2011
CBR (Crude Birth Rate)	-0,009715	0,3164
SR (Support Ratio)	0,074109	0,1330
MW (Minimum Wage)	-1,91E-08	0,8766
DINV (Domestic Investment)	-6,46E-07	0,3941
IR (Central Bank Interest Rate)	0,009980	0,0189*
LE (Life Expectancy)	0,034840	0,4047
log(SAVS(-1))	0,774230	0,0000*
AR(1)	0,169637	0,5203

Source: data analyzed, 2016

\*Significant for significant level ( $\alpha$ ) = 5%.

Model of simultaneous equation by using all variables as portrayed:

$$\log(SAVS_t) = -2,248758 + (-0,009715) CBR_t + 0,074109 SR_t + (-1,91 \times 10^{-8}) MW_t + (-6,46 \times 10^{-7}) DINV_t + 0,009980 IR_t + 0,034840 LE_t + 0,774230 \log(SAVS_{t-1}) + e_{4,t} \tag{3}$$

For the validation process, the researcher used the coefficient of determination ( $R^2$ ) and Root Mean Square Error (RMSE). The determination coefficient ( $R^2$ ) (at the output of R-Squared) was obtained 0.997340, which means that the diversity of SAVS variables which enabled to explain were CBR, SR, MW, DINV, IR, and LE

simultaneously/together 99.71% and 0.29% were explained by error or other variables not included in the regression model. In other words, the goodness of regression model formed was 99.71%.

In order to assess the goodness of the model, the researcher also used RMSE size, SSE value was obtained from the output value of **Sum squared resid**, and the value of  $n$  was the number of data observations and the  $p$ -value was the number of model coefficients. This model produced a good MSE value of 0.08465 (small). From the Table 1 output results, the test gave results and analysis that:

1. It was obtained that the regression coefficient for **IR** variable was 0.009980 (positive effect); meaning that, if there is an increase of 1 unit of **IR (Central Bank Interest Rate)**, it will be obtained the increase of the **log (SAVS)** value 0.009980 (or the increase of **SAVS (SAVINGS)** as  $\exp(0.009980) = 1.009747197$ ); and vice versa, in case of a decrease of 1 unit of **IR (Central Bank Interest Rate)**, it will be obtained an impairment of **SAVS (SAVINGS)** 1.009747197, thus, it can be concluded that there is a significant influence of **IR (Central Bank Interest Rate)** on **SAVS (SAVINGS)**.
2. Based on the results of data processing, it was also found that, if an increase/decrease of 1 unit of each individual **CBR (Crude Birth Rate)**, **MW (Minimum Wage)**, **DINV (Domestic Investment)**, and **Communities (First Secondary School Enrollment)** to **SAVS (SAVINGS)**, then the value of **SAVINGS** will not be affected, in other words, there is no partial/individual effect of **CBR (Crude Birth Rate)**, **MW (Minimum Wage)**, **DINV (Domestic Investment)**, and **Life Expectancy (LE)** on **SAVS (SAVINGS)**.

## FINDINGS

There is a positive and significant effect of the interest rate on the savings to support previous research carried out by Daulay (2011) & Huigins (2011). But it was not found a significant effect between crude birth rate on savings. Thus, it does not support the theory stated by Bloom and Williamson (1997). Likewise, when there is no influential minimum wage, domestic investment and life expectancy, it also does not support theories or studies proposed previously conducted by Kokila (1994) and Nasir and Tahir (2011), McDonald (2001), as well as research from Berry and Kim (2002).

Some reasons why these variables do not affect the domestic savings in Indonesia are even though Indonesia is experiencing a demographic transition, which can be measured by the declining of the crude birth rate, accompanied by the increasing of productive ratio and life expectancy, the increase was only the increase in terms of the number of people working compared to the total population in Indonesia.

If it is measured in terms of quality, the real productivity of labor in Indonesia is still low, since over 50% of the working population has the highest educational level of primary school, with a low minimum wage rates though there an increase in the minimum wage since the 1980s to the present. Obviously the low productivity of labor and a low minimum wage leads to low levels of savings that may be excluded from the income earned. Besides, the increase in the working population has not been followed by the improvements needed with the increasing of life expectancy, as there is a large number of unemployed in Indonesia, even there is an increasing number of the open unemployment. Based on the data from the Indonesian Central Bureau of statistics, during last year the number of unemployed increased 320 thousand inhabitants, in the period of August 2015 the open unemployment rate reached 7.56 million was higher than the number of unemployed in the period August 2014 7.24 million.

## RECOMMENDATIONS

Based on the finding of this research, public need to raise awareness and start from themselves to achieve the state of planned population in both quantity and quality, so the decline in birth rates and rising life expectancy as demographic variables can contribute positively to the economic variables. Because both the government as an institution and the public in groups and individually need to realize that the poor condition of the population (number of births) and government policies that go with it, will have a long-term impact on the economy in Indonesia.

## CONCLUSIONS

Results from this study support the theory previously proposed by Kelley (1988) which states that there is no positive or negative effect of demographic variables on economic variables. Therefore, there is a recommendation for the government to be more serious to create the conditions that can support the development of the birth rate and health (life expectancy) as a part of efforts to improve the performance of savings in order to use the window of opportunity to obtain a demographic bonus, so that Indonesia can reach an economic sustainability condition.

## LIMITATIONS

This research has some limitations, for instance it has not included education as one of variable, since it is predicted the higher ones education, more likely he has more savings. This research also excluded the working population variabel, since there is a tendency that the working population has more savings than the unworking one.

## SCOPE FOR FURTHER RESEARCH

Considering the limitation of this study, it is recommend to do further research using this type of research, theoretical basis, diverse variables and different methods, so you can find a number of new research that are useful in widening horizons and developing theories and knowledge that can be used as tools in solving the existing problems.

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**METHODOLOGY OF AUDITING PROCESS: THE ALARM TO MALPRACTICES**

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**ABSTRACT**

*The present study finds that the real process of audit is to warn, alarm the concerned sectors and further to strengthen financial morality, social accountability, honesty and legitimate profit making economic activity and relevant financial transactions and thereby to safeguard the interest of the owners as well as the customers. Now it is high time to have this sort of audit commission to run the academic and training institutes of national level in different parts of India to train up the talented and qualified youth to be the genuine auditor in the true sense of the term. This is what my humble suggestion to herald a financial revolution in this country which can make this country once again true cultured, true 'Aryavard' and true 'Jagat Guru' to lead the entire world and humanity. Only the institute of Chartered Accountants and its modus operandi with which it is working and provide so called Chartered Accountants is nothing but an impotent activity and academic hallucination. This is very urgently needed to be close down and replaced by the competent commission which can only vacant the entire systems of auditing process and the class of auditors. If multifaceted corruption from our country is to be rooted out merciless and major operation as such is to be constitutionally conducted, executed and effectively operated without wasting anytime in visionless indecisiveness.*

**KEYWORDS**

auditing, governance, auditor.

**1. INTRODUCTION**

Almost all the countries of the world at present in the first decade of 21<sup>st</sup> century are facing certain universal problems and crisis generated by them by one-way or the another way varies from country to country. The problem of malpractice in any field of life is the result of immorality, lack of integrity, dishonesty and unbridled force of greed. In the name of advancement and scientific development the human society all over the world is enjoying the better fruits of scientific development, growth and the network of evolution of different systems providing safeguard to human life, human rights and properties. This evolution of different systems has been a scenario right from the beginning of history and the moment of dawn of the civilisation. If we can review the ancient civilisation the Greek, Roman, Chinese, Babylonian and Indian we can definitely come across the systems well set in operation for the betterments of the people. More efficient the working of the systems, more powerful the country becomes (Coase, 1937).

**2. HISTORY OF GOOD GOVERNANCE**

In almost all the countries, the period of efficient and effective implementation of such systems was acknowledged as the golden period of their history. The history before two three centuries was the history of monarchy, where monarch or the ruler on the strength of army under him or the treasure of gold jewellery or pet animals like cows, horses, camels, elephants at his disposal and command was considered to be the emperor or sovereign king equivalent to God for the people. Elizabeth the first in England, Catherine-The Great in Russia, King Vikram, Chandragupta and Ashoka in India were such monarch who could successfully envision social, economic, political and defensive systems and further they got them successfully implemented in their countries powerfully during the period of their terms of rules in their respective countries (Rajagopalan and Zhang, 2013).

**3. IMPLEMENTATION APPROACH**

Amongst all different systems, the system of defence of the territories and the system of organising economy were in those days as well as are at present very effective and were the causes for the all-round growth of the country's concerned. This is what the scenario of the monarchy prevalent all over the world in one form or another. Now, the time has changed and monarchy has been completely replaced by either democracy or dictatorship. There are still certain countries all over planet we can witness the old system of monarchy in a different form as in the countries of Middle East at present. The effectiveness of such systems depend upon the effective implementation with command and power of the political authorities behind it. In the 21<sup>st</sup> century itself, we can clearly mark the distinction in the implementation of such systems in the countries ruled by the monarchs or dictators and the countries ruled by the democratically elected leaders. We cannot help admitting that the implementation of such systems in democratic set up is not so effective, decisive and result oriented as it is in a few countries still ruled by monarchs. Any system including financial organisation or defence is strengthened by political will of the political authorities (Bhasin, 2012).

**4. ESTABLISHMENT OF GOOD AUDIT SYSTEM**

The economic or the financial management of country depends upon the evolution of full proof systems even in democratic setup similar to that of monarchy before centuries back. The full proof financial system can be generated and implemented in democratic set up by independent and autonomous organisations, companies, industrial units, government, administrative agencies and private business units as such. It is an inevitable need and especially in the country like India in the democratic set up to evolve the full proof audit system based on common, practicable and easily implementable values without leaving a slightest scope to any lacuna lapse or deliberate malpractices. In our country, there is not a full proof audit system sponsored, governed and virtually backed up by political will and because of this lacuna, the country is entangled by the dragon of corruption more and more (Jatinder and Doliya, 2015).

**5. PURPOSE OF AUDIT SYSTEM**

The basic value of audit system is to trace out malpractices deliberately committed or the lacunas and irregularities unknowingly and unknowingly committed by the agencies concerned. The process of auditing is an alarm to such short comings, drawbacks, understand dealings and deliberate malpractices. At present, so far as the theme of this article is concerned, we are not supposed to review other systems mentioned above for good governance but we are to focus on the issue of financial management with special reference to our democratic setup decentralized at all different levels in our country. The process of auditing with a special reference to this value is not the fault finding process nor even a process of criminal investigation but is a creative process to provide a shelter to untainted and utmost honest financial transactions in tune with the magnitude of the organisation.

**6. FUNCTIONING OF AUDIT SYSTEM**

Beside this, audit system should be so complete, sound and vigilant that should not allow a minute lacuna for any agency to grab undue advantage through any hidden malpractice at the cost of the financial interest of the organisation. This is not simple ideological rosy picture and painting and offering to the intellectual class of our society for handling and safeguarding the financial transactions in the name of auditing but is inevitable and urgent need of our nation to captivate malpractices, misappropriation, manipulation, falsification and financial scandals. India being a democratic should overcome its poverty and should provide coverage of sound financial umbrella to the last and downtrodden citizen of this country. Our country at present is burning with all such financial vices related to corruption against whom the political will of the political set up and authorities fall short off the effective hold of their rectification in the interest of our country.

Our audit system should be so effective and transparent that it can provide honesty earned amount of profit to the owners but side by side it should provide untainted and total financial benefit to its claimers, customers, consumers and citizen of this country. Our audit system at present has turned out to be a simple ritual. Thousands of miles away from its original values and has become simple red tapism, paper work and mocary. The accountability of an auditor should be constitutionally so legalized that he or she can refer to such organisation to the government with clear cut decree of penalty. There are certain hard and effective reforms are required to be constitutionally legislated and should be effectively implemented parallel to the judiciary (Cutler, 2015).

## 7. ROLE OF AUDITOR

The concept of lokpal to be implemented in the avenue of auditing and auditors concerned should be like wife beyond doubt. The designation of auditors should be evaluated as professionals but are personnel of judiciary and should be authorized equally as high court judges. The present concept of Chartered Accountants needs to be constitutionally and revolutionarily changed then we can hope arrest the component corruption prevalent in our country. The special courses should be designed for auditing special degrees to such auditors and the talented class as such should be brought to the forefront for the specific purpose of eradication of corruption and malpractices from all different systems in our country. This seems to be bit radical to the class of financial managers, professional auditors and professional firms working at present. But it is so inevitable in present circumstances that a bitter reform as such is to be constitutionally offered as mini lokpal to our present financial scenario. Undoubtedly, it is a bitter truth and bitter measure but for betterment of our economy and social upliftment (Ghosh, 2014).

## 8. DIGNITY OF THE ROLE OF AUDITOR

In our ancient setup as diwan to the king, the present auditor to the owner of the financial organization, company or the administrative sector of the government. There should be innumerable lokpals in true senses of the term, if we can have trained up and provide such value based education to our youngsters to be the untainted transparent genius as auditors in the field of our economy ranking from grassroots level to the highest level of prime ministers, presidents and secretariats. This is the true image of an auditor who is supposed to be genius, talented, transparent, personality with integrity and honesty and commitment to one's own accountability similar to the justice of higher courts and should not be the pleader or a middleman or a legal advisor and should never to be a broker and an agent for the settlement of accounts in the name of tax planning, tax exemptions which is virtually tax evasion tantamount to be a corruption though hidden but anti-social, anti-national and criminal one (Hosban and Hamdan, 2015).

## 9. EXISTENCE OF MALPRACTICES

Among all other malpractices in one mode or another prevalent in our country are either motivated by public agencies, private agencies or government agencies working in the name of development and public interest at national or state level. Since last so many decades this sort of corruption has turned out to be a prime activity.

## 10. AUDIT TRANSFORMATION

The effective audit agency, competent, independent, judicious, transparent and fully authorized during the period of its specific turn is extremely inevitable now. The modus operandi to be launched either an individual auditor or of the team of auditors should be formulated by the central authority meant for this uniformly throughout this nation. The omnipresent corruption can only be arrested from grass root level to the highest national level provided, the central commission absolutely powerful and totally independent comprising of the top ranking technocrats (Tiwari, 2015).

## 11. APPOINTMENT OF GENIUS

The genius personalities of this country may be appointed for the line of union public service commission, the original college established for the purpose of appointing judges of the supreme court or highly upgraded level of our CBI in our country or on the basis of renowned spying agency actively and timely working in the countries like USA, Israel, UK and Russia. Unless and until the corruption in cash or in any kind is rooted out from this country the planning, development programmes and constitutional dreams of our nation would never be realized. I am not talking of the present auditors and audit companies working and executing mere formalities to exhibit fault findings. The honesty and transparency of companies, government agencies and private agencies as a process of self-deception (Tongren, 2015).

## 12. VISION FOR THE FUTURE

Audit as a process, moral and scientific, human and justifiable to re-establish the financial strength of morality, sanctity and absolute pretty of financial transactions as 'Mahalaxmi'-Godess of Wealth. My vision seems to be extremely difficult and hard nut to crack but is not impossible in our Indian culture. If we as a society commit to give U-turn to the economy of our country and to remould our country once again shinning with the glory and glamour of the ancient height i.e. 'Sujalam Sufalam Malayaj Shitalam' which are not environmental faces of energy are the divine faces of divinity whose true face is streaming out as our financial flow in terms of money, rupees and coins.

## 13. CONCLUSION

The real process of audit is to warn, alarm the concerned sectors and further to strengthen financial morality, social accountability, honesty and legitimate profit making economic activity and relevant financial transactions and thereby to safeguard the interest of the owners as well as the customers. Now it is high time to have this sort of audit commission to run the academic and training institutes of national level in different parts of India to train up the talented and qualified youth to be the genuine auditor in the true sense of the term. This is what my humble suggestion to herald a financial revolution in this country which can make this country once again true cultured, true 'Aryavad' and true 'Jagat Guru' to lead the entire world and humanity. Only the institute of Chartered Accountants and its modus operandi with which it is working and provide so called Chartered Accountants is nothing but an impotent activity and academic hallucination. This is very urgently needed to be close down and replaced by the competent commission which can only vacant the entire systems of auditing process and the class of auditors. If multifaceted corruption from our country is to be rooted out merciless and major operation as such is to be constitutionally conducted, executed and effectively operated without wasting anytime in visionless indecisiveness. It is thought that with this article, I would like to invite the committed intellectual class to focus on my humble but radical vision and to offer their well pondered and well thoughtful formulas and formats to serve the central purpose and objective of this article.

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**GUEST SATISFACTION IN HOTELS OF KASHMIR: THE PERCEPTION OF FOREIGN TOURISTS**

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**ABSTRACT**

*Customer satisfaction is an important measurement that has to be taken on a regularly basis in every tourism facility in the country. Customer satisfaction is exceedingly personal estimation that is deeply influenced by the customer expectations regarding the services. The most dynamic verb in the lexis of customer satisfaction is 'to improve'. Hence the hotel industry like other industries is realizing the significance of customer centered philosophies with the overall goal in terms of customer satisfaction is to stay as close to their customers as possible. 10 point likert scales was worn to gauge the responses. Based on data gathered, with the help of a self-developed and statistically-tested research instrument, from one hundred forty-eight (148) respondents representing seventy-six hotels (76) showed that an improvement in empathy and reliability dimension are needed to augment the over-all guest satisfaction in hotels.*

**KEYWORDS**

customer satisfaction, service quality, hotel amenities, Kashmir valley.

**INTRODUCTION**

The tourism and hospitality industry has evolved to become one of the largest and most dynamic industries of the global economy. Since 1950, the phenomenon of tourism has been remarkable in terms of growth, spread and diversification. The international tourist arrivals since then have grown from mere 25 million to reach 940 million in 2010. The fast growth and spread not only resulted the globalization of people's movements as never before but also contributed in creating a vibrant industry and opportunities for millions of people.

Tourism and hospitality industry is high on international agenda. The 7<sup>th</sup> session of the Commission on Sustainable Development focused on tourism and hospitality industry and subsequently work programmes on sustainable tourism and hospitality are being developed. The year 2020 will see the penetration of technology into all aspects of life. It will become possible to live one's day without exposure to other people, according to World Trade Organizations (WTO's) latest look into the future. But this bleak prognosis has a silver lining for the hospitality sector. People in the high-tech future will crave the human touch and hospitality industry will be the principal means to achieve this. Hotel industry that manages to provide 'high touch' products will prosper. Upscale, luxury services that pamper and spoil their customers have a bright future in the upcoming century. But WTO's report also predicts good prospects for low-budget accommodations and packages. Self-catering holiday facilities, for example, which offer plenty of opportunities for socializing among families and friends. Opportunities abound at both ends of the spectrum and there will be plenty of them. Tourism and hospitality industry in the 21<sup>st</sup> century will not only be the world's biggest industry; it will be the largest by far that the world has ever seen. Along with its phenomenal growth and size, the tourism and hospitality industry will also have to take on more responsibility for its extensive impacts. Not only its economic impacts, but also its impact on the environment, on societies and on cultural sites, all of which will be increasingly scrutinized by governments, consumer groups and the travelling public. With hope that "Tourism and Hospitality 2020 vision" will be more than a useful marketing tool, that it will act a warning signal for destinations – helping them recognize the need to prepare for the pressure of growth. WTO is advising destinations and accommodations to implement long term, strategic planning and to strengthen the partnerships, both strategically and at the operational level, between the public and private sectors.

With growth in hospitality industry competition among hotels will also become increasingly fierce. 'The study Tourism and Hospitality 2020 Vision' outlines a series of 12 megatrends that will shape the sector and offers advice on how to better compete. No tourism and hospitality operators can afford to sit back and wait for more tourists and guests respectively to arrive. They have to be won-and there will be winners and losers. To be a winner, there are a number of imperatives:

- Development focused on quality and sustainability;
- Value-for-money;
- Full utilization of information technology to identify and communicate effectively with market segments and niches.

As 2020 vision points out, the next century will mark the emergence tourism destinations and accommodation places as a 'fashion accessory'. The choice of holiday destinations and accommodation places will help define the identity of the travelers and, in an increasingly homogenous world, set him apart from the hordes of other tourists/guests.

**OBJECTIVES OF THE STUDY**

1. To measure satisfaction of foreign guests in selected hotels of Kashmir valley.
2. To suggest ways and means for improving hotel services among foreign guests in Kashmir valley with a view to make overall accommodation service more effective and efficient.

**REVIEW OF LITERATURE****CUSTOMER SATISFACTION**

Customer satisfaction is considered to be one of the most important outcomes of all marketing activities in a market-oriented firm. The obvious need for satisfying the firms' customer is to expand the business, to gain the higher market share, and to acquire repeat and referral business, all of which lead to improved profitability. Customer satisfaction is a complex construct. Recently, researchers have argued that there is a distinction between customer satisfaction as related to tangible products and as related to service experiences. This distinction is due to the inherent intangibility and perishability of services, as well as the inability to separate production and consumption. Hence, customer satisfaction with services and with goods may derive from, and may be influenced by, different factors and therefore should be treated as separate and distinct (Veloutsou et al., 2005).

According to the previous literature, research for this model supports the conceptualization of perceived quality as a separate construct, distinct from satisfaction (Bitner and Hubbert, 1994). Moreover, many authors make it a point to highlight that service quality and satisfaction are distinct constructs (Parasuraman et al., 1988; Bitner, 1990; Boulding, et al., 1993; Bitner and Hubbert, 1994; Taylor and Baker, 1994). Oliver (1980) identified satisfaction and dissatisfaction in terms of the disconfirmation of consumers' expectation. A positive disconfirmation leads to customer satisfaction and a negative disconfirmation leads to customer dissatisfaction. Oliver (1980) argued that the amount of dissatisfaction is dependent on the extent of disconfirmation and the consumer's level of involvement with the service and the problem solving process. The Expectations Disconfirmation Model has been dominant model in satisfaction research. The model uses pre-consumption expectations in a comparison with post-consumption experiences of a product/service to form an attitude of satisfaction or dissatisfaction toward the product/service (Oliver, 1980; Churchill and Surprenant, 1982; Oliver and DeSarbo, 1988; Tse and Wilton, 1988). The expectancy disconfirmation paradigm in process theory provides the grounding for the vast majority of satisfaction studies and encompasses four constructs: (1) Expectations (2) Performance (3) Disconfirmation and (4) Satisfaction.

Disconfirmation arises from discrepancies between prior expectations and actual performance. There are three possibilities: zero disconfirmation can result when a product performs as expected; positive disconfirmation can occur when the product performs better than expected; and negative disconfirmation when the product performs below expectations and dissatisfaction sets.

A comparison of the satisfaction model with the Gaps model indicates that the most salient feature is that the latter leaves out the issue of disconfirmation and seeks to represent an entire psychological process by an operationalisation that involves the simple subtraction of expectations from perceptions. A number of other distinctions are often made between satisfaction and quality. First, while the original five dimensions of SERVQUAL are fairly specific, those for satisfaction are broader and can result from a wider set of factors. Second, satisfaction assessments require customer experience, while quality does not (Oliver, 1980; Bolton and Drew, 1991b; Cronin and Taylor, 1992; Boulding, et. al., 1993). Operationally, satisfaction is similar to an attitude, as it can be assessed as the sum of the satisfactions with the various attributes of the product or service (Churchill and Surprenant, 1982). However, while attitude is a pre-decision construct, satisfaction is a post decision experience construct (Latour and Peat, 1979). Furthermore, it highlights the construct of a "global" level of satisfaction (the overall service satisfaction) in contrast to the construct of a component level of satisfaction (the encounter service satisfaction). Boulding, et. al., 1993, mentioned that customer's satisfaction is influenced by two factors which is experiences and expectations with service performance. Two additional issues that need to be clarified when researching customer satisfaction in services is whether satisfaction is conceptualized as facet (attribute specific) or as overall (aggregate); and whether it is viewed as transaction-specific (encounter satisfaction) or as cumulative (satisfaction over time) (Hoest and et. al., 2004). However, according to Levesque and McDougall (1996) satisfaction is conceptualized as an overall customer attitude towards a service provider. Similarly, Andreassen and Lindestad (1998) claimed that customer satisfaction is the accumulated experience of a customer's purchase and consumption experiences. Jones and Sessar (1995) have identified the following methods for measuring customer satisfaction:

- customer satisfaction indices;
- feedback;
- market research; and
- frontline personnel.

The research study conducted by Kotler (1995) has found that companies can counter competition effectively by changing their strategy of product-selling philosophy to consumer-oriented marketing philosophy and the "Customer centered approach" help the service providers to deliver superior value to target customer and yield rich sights. Paterson (1997), through their study found that delighting customers, as opposed to satisfying them, is a better way to engage guests and ensure loyalty. The study further concluded that customer delight involves going beyond satisfaction and involves a pleasurable experience for the guest.

The purpose of measuring customer satisfaction is to assess the quality of the existing management practices and identify directions for improvement. The aim of managing satisfaction is to obtain a high rate of customer retention and improve a company market share and profit. Many researchers propose that customer satisfaction influences customer loyalty, which in turn affects profitability.

**SAMPLE DESIGN**

Keeping in the view the paucity of time, the present study was limited to District Srinagar of Kashmir valley. The size of the sample was limited to one hundred forty-eight (148) respondents selected from (76) hotels of different types. Stratified random sampling was, however, followed for the present study. All important demographic characteristics like age, gender, level of education, length of stay, nationality, purpose of visit, number of visits to valley and category of hotel was taken into consideration while seeking the response from the customers regarding their level of satisfaction in hotels. All these aspects have an important bearing on the user's evaluation of hotel services. The effort was made to give a balanced representation to above demographic characteristics to make the sample representative. The data on the table 1.1 clearly shoes that majority of respondents (43.2%) belonged to the age group of 31-40 years followed by the age group of 41-50 years (25.7%) whereas the respondents belonging to the age group of above 51 years of age were the least participants followed by the age group of 20-30 years (22.3%). The sample includes (64.9 %) male respondents. Highest numbers of the respondents (63.5%) were graduates followed by post graduates (18.9%) and the remaining was under graduates. (48.6%) respondents had their stay in between 1-6 days, (40.5%) in between 7-12 days, (7.4%) had stayed in between 13-18 days and the remaining (3.4%) had stayed more than 19 days. All respondents were foreigners. Leisure/Holiday seekers were heavy participants (89.9%) followed by business tourists (8.1%) and the pilgrimage tourist were the least (2.0%). (64.9%) respondents had come to the valley for the 1<sup>st</sup> time followed by (28.4%) 2<sup>nd</sup> time, and (5.4%) for 3<sup>rd</sup> time and remaining for the 4<sup>th</sup> time.

TABLE 1.1: DEMOGRAPHIC DATA

Demographic Data	No. of respondents	Percentage	
Age	20-30years	33	22.3
	31-40years	64	43.2
	41-50years	38	25.7
	Above51years	13	8.8
	Total	148	100.0
Gender	Male	96	64.9
	Female	52	35.1
	Total	148	100.0
Level of education	Up to secondary level	26	17.6
	Graduation	94	63.5
	Post graduation	28	18.9
	Total	148	100.0
Length of stay	1-6 days	72	48.6
	7-12 days	60	40.5
	13-18 days	11	7.4
	More than 19 days	5	3.4
	Total	148	100.0
Nationality	Foreign	148	100.0
	Total	148	100.0
Purpose of visit	Business	12	8.1
	Pilgrimage	3	2.0
	Leisure/Holiday	133	89.9
	Total	148	100.0
Your visit to valley	1 <sup>st</sup>	59	39.9
	2 <sup>nd</sup>	33	22.3
	3 <sup>rd</sup>	53	35.8
	4 <sup>th</sup>	3	2.0
	Total	148	100.0
Category of Hotel	A	96	64.9
	B	42	28.4
	C	10	6.75
	Total	148	100



**METHODOLOGY**

This study used a self-administered questionnaire, which is an adapted version of SERVQUAL scale to measure the level of customer satisfaction of the foreign guests' staying in hotel of Kashmir Valley. There are various models used by researchers to measure customer satisfaction, i.e., SERVQUAL Parasuraman, et.al. (1991), SERVPERF Cronin, et.al. (1992) etc. However, Cronin and Taylor (1992) objected on measurement of quality of services in terms of expectation and perception. Several other authors were in line with Cronin and Taylor about the use of SERVQUAL instrument like Quester (1995), Robinson (1999). As such service performance SERVPERF has been used in present study.

Some modifications were made to SERVQUAL instrument in order to suit the context of hotels. The questionnaire was divided into two parts. The first part was designed to measure the guests' perceptions regarding customer satisfaction in hotels. The second part of the questionnaire contained questions relating to socio-demographic data about the respondents. The researchers introduced the tool of measurement in such a way that it briefly illustrated the topic of the study and procedures of response. The measurement grades were placed according to the 10-point Likert scale (Malhotra, Y 2003). The scale was ordered regressively as follows: Highly Satisfied (10), to Highly Dissatisfied (1).

The study was conducted in the hotels of Srinagar of Kashmir valley for four months during the summer of 2012. The target population selected for this study during the data collection period comprised tourists who stayed in hotels of Srinagar. A stratified sampling approach (Getz, et.al., 2006) was employed, in which 148 questionnaires were distributed to the guests who agreed to participate in the survey. The guests completed the questionnaire in the presence of the researchers. The completed questionnaires were then collected by the researchers immediately.

The statistical package for the social sciences (SPSS) was used to analyze the data. Descriptive statistics analyses were used to measure customers' perception scores. To explore dimensionality of the (42) item scale, a factor analysis was performed. The exploratory factor analysis extracted five factors, which accounted for 68.619 percent of variance in the data. The results are present in table 1.2. Most of the factor loadings were greater than 0.50, implying a reasonably high correlation between extracted factors and their individual items. The communalities of 26 items ranged from .580 to .828 indicating that a large amount of variance has been extracted by the factor solution. Fourteen items (v1, v2, v3, v6, v12, v13,

**TABLE 1.2: MEASURING PERCEIVED GUEST SATISFACTION USING SERVPERF**  
Factor analysis and reliability analysis results of hotel guest's perception (n=148)

Item (n=26)	Factors					Communalities
	F1	F2	F3	F4	F5	
V5	.774					.675
V11	.503					.737
V20	.556					.667
V32	.606					.769
V33	.609					.741
V37	.674					.778
V14		.549				.773
V18		.518				.782
V19		.641				.707
V30		.565				.580
V21			.632			.733
V9			.508			.727
V24			.636			.714
V38			.742			.775
V7			.617			.740
V22				.715		.777
V23				.754		.828
V25				.637		.750
V34				.608		.713
V4					.795	.690
V8					.596	.695
V10					.512	.734
V16					.506	.775
V26					.569	.718
V31					.699	.697
V39					.613	.761
<b>Eigen value</b>	<b>8.890</b>	<b>7.360</b>	<b>5.216</b>	<b>4.856</b>	<b>1.124</b>	<b>19.036</b>
<b>% of Variance</b>	<b>22.226</b>	<b>18.401</b>	<b>13.040</b>	<b>12.141</b>	<b>2.811</b>	<b>68.619</b>
<b>Cronbach's alpha</b>	<b>.836</b>	<b>.861</b>	<b>.891</b>	<b>.887</b>	<b>.873</b>	<b>.970</b>
<b>Number of items</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>7</b>	<b>26</b>

**TABLE 1.3: KMO AND BARTLETT'S TEST**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.934
Bartlett's Test of Sphericity (Approx. Chi-Square)	4203.308*
Cronbach's Alpha	.970

\* Significance at 1% level/

v15, v17, v27, v28, v29, v35, v36, v40) were below the suggested value of .50 (Haier et al., 2006) and were not been considered in factor analysis. The remaining factors are labeled as F1- 'assurance' (knowledge and accuracy of employees and their ability to convey trust and confidence), F2- 'tangibility' (appearance of the facilities, equipment and communication material), F3 'empathy' (staff knowledge and ability to provide individual attention), F4 'responsiveness' (willingness to help customers and to provide prompt service), F5 'reliability' (solving guests' problems and performing error-free service at promised time). The first factor contains most of the items and explains most of the variance (22.22%). Thus, hotel service assurance is an important determinant of perceived customer satisfaction.

The results of the reliability analysis showed that cronbach's alpha coefficient of the extracted factors ranged from 0.836 to 0.891. That is well above the minimum value of 0.70, which is considered acceptable as an indication of scale reliability. Thus, these values suggest good internal consistency of the factors. Finally, Cronbach's alpha value for the overall perception scale is 0.970 and indicates its high reliability.

The adequacy of the sample size was confirmed using both the Kaiser-Meyer Olkin (KMO) test sampling adequacy and Barlett's Test of Sphericity (Table 1.3). In fact, KMO for customer satisfaction (0.934) exceeded satisfactory value and revealed a Chi-square at 4203.308, (p<0.000) which verified that the correlation matrix

was not an identity matrix, thus validating the suitability of factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy was performed which showed KMO= 0.934 is higher than the suggested 0.6 value (Tabachnik and Fidell, 2001).

**RESULTS OF THE STUDY**

In line with the objectives, the present study seeks to find out the level of customer satisfaction among foreign guests in hotels of Kashmir valley. As mentioned earlier, customer satisfaction was measured on a ten point Likert type (highly dissatisfied/highly satisfied) scale. Mean scores and standard deviation were calculated and ranks were assigned accordingly (on the basis of mean) on each element/ dimension. The result of all this is shown in tables 1.4 -1.9

**OVERALL CUSTOMER SATISFACTION**

In order to assess the overall customer satisfaction among foreign guests in hotels of Kashmir, mean scores were calculated on each element. The element-wise mean scores were then averaged on all dimensions to get overall tourist satisfaction score. It is obvious from the data that customers are satisfied with the hotel services (8.03). The analysis clearly reveals that customers are satisfied with hotel services as is reflected by the respective mean scores on all dimensions of hotel service - Tangibility (8.06), Reliability (7.98), Responsiveness (8.04), Assurance (8.15), and Empathy (7.95) respectively. However, higher degree of satisfaction is reported on Assurance (8.15) followed by Tangibility (8.06) while as Empathy (7.95) followed by reliability (7.98) are reported relatively low.

**TABLE 1.4: OVERALL CUSTOMER SATISFACTION IN HOTELS**

S. No.	ELEMENTS	HOTELS	RANK
1	Tangibility	8.06	2
2	Reliability	7.98	4
3	Responsiveness	8.04	3
4	Assurance	8.15	1
5	Empathy	7.95	5
<b>Total</b>		<b>8.03</b>	

**DIMENSION-WISE ANALYSIS**

**TANGIBILITY**

Data on tangibility dimension shows comparatively high satisfaction score of 8.06, The element wise analysis of the said dimension clearly shows relatively higher mean score on neat and cleanliness' (8.31) followed by 'appropriate location' (8.20) whereas lowest score (7.83) is reported on 'brochures and pamphlets are visually presented' followed by 'high quality meals' (8.02), 'employees neat appearance' (8.03) and 'interior and exterior decoration (8.04).

**TABLE 1.5: AVERAGE SCORES OF GUEST SATISFACTION PERCEPTIONS IN HOTEL SETTINGS ON TANGIBILITY**

Elements of Tangibility	Mean	St. Deviation	Rank
Brochures and pamphlets are visually presented.	7.83	1.45	6
Employee's neat appearance.	8.03	1.17	4
Interior and exterior decoration is quite appealing.	8.04	1.26	3
Appropriate location.	8.20	1.07	2
Neat and clean hotel.	8.31	1.07	1
High quality meals.	8.02	1.46	5
<b>Total</b>	<b>8.06</b>		

**RELIABILITY**

Table 1.6 shows comparatively low satisfaction score (7.98) on reliability dimension which implies that hotels of Kashmir valley needs to improve service dependably and accurately. It's item-wise analysis reveals lowest score on 'providing accurate information' (7.90) followed by 'check in or check out time' (7.92) However, the said dimension shows relatively highest score on 'promised services' (8.07), followed by 'front desk employees verify reservation requests' (8.05).

**TABLE 1.6 AVERAGE SCORES OF GUEST SATISFACTION PERCEPTIONS IN HOTEL SETTINGS ON RELIABILITY**

Elements of Reliability	Mean	St. Deviation	Rank
Promised services.	8.07	0.96	1
Front-desk employee verifies the reservation requests.	8.05	1.37	2
Providing accurate information.	7.90	1.42	4
Check in or check out time is not too long.	7.92	1.40	3
<b>Total</b>	<b>7.98</b>		

**RESPONSIVENESS**

The mean score on responsiveness dimension (8.04) in Table 1.7 brings to light that hotels of valley are providing prompt services to customers. Its element-wise analysis reveals higher levels of customer satisfaction on 'reservation systems' (8.17) followed by 'credible and courteous employees' (8.14). Though, said dimension is relatively low on 'services without any delay' (7.87) followed by 'individual attention to guests' (8.01) and 'willingness to help guests' (8.02).

**TABLE 1.7: AVERAGE SCORES OF GUEST SATISFACTION PERCEPTIONS IN HOTEL SETTINGS ON RESPONSIVENESS**

Elements of Responsiveness	Mean	St. Deviation	Rank
Reservation is easy to use.	8.17	1.06	1
Giving individual attention.	8.01	1.13	4
Willing to help guests.	8.02	1.34	3
Services without any delay.	7.87	1.62	5
Credible and courteous employees.	8.14	1.31	2
<b>Total</b>	<b>8.04</b>		

**ASSURANCE**

Data on table 1.8 shows relatively highest guest satisfaction score on Assurance Dimension (8.15) which indicates that the service personnel of hotels in Kashmir valley are competent and well mannered. It's element-wise analysis reveals higher satisfactory score on 'having time and knowledge to answer guests' questions' (8.29) followed by 'safety and security (8.25). However, least satisfaction score is reported on 'imparting confidence to guests' (8.00) followed by friendly staff (8.06).

**TABLE 1.8: AVERAGE SCORES OF GUEST SATISFACTION PERCEPTIONS IN HOTEL SETTINGS ON ASSURANCE**

Elements of Assurance	Mean	St. Deviation	Rank
Safe and secure hotel	8.25	1.21	2
Imparts confidence to the guests.	8.00	1.32	4
Friendly staff.	8.06	1.17	3
Having time and knowledge to answer guests 'questions.	8.29	1.09	1
<b>Total</b>	<b>8.15</b>		

**EMPATHY**

The mean score on empathy dimension (7.95) reveals satisfaction score on said dimension. It's element-wise analysis reveals higher satisfactory score on 'understanding guests' requirements' (8.17) followed by 'providing services with smile' (8.10). 'However least satisfactory score is associated with 'operating hours' (7.53). The items that fall in between their extremes include 'good communication capability' (7.95) and 'calling guests by name (7.99).

**TABLE 1.9: AVERAGE SCORES OF GUEST SATISFACTION PERCEPTIONS IN HOTEL SETTINGS ON EMPATHY**

Elements of Empathy	Mean	St. Deviation	Rank
Calling by name.	7.99	1.37	3
Understanding guests' requirements.	8.17	1.36	1
Good communication capability.	7.95	1.35	5
Polite staff and providing services with smile.	8.10	1.10	2
Convenient operating hours	7.53	2.09	6
Guests' best interest at heart.	7.97	1.28	4
<b>Total</b>	<b>7.95</b>		

**CONCLUSION AND SUGGESTIONS**

A review of literature suggests that quality continues to be an issue to debate and research. Hotels worldwide give importance to service quality as it reflects their standard and create a positive image of their product and service and increases customer satisfaction, which in turn can have a strong effect on sales and competitive position. Our qualitative analysis of the hotels of Kashmir valley shows that the level of customer satisfaction is good both considering the overall service and dimension-wise analysis.

The result of the study brings to light that guest satisfaction in hotels is quite satisfactory (8.03). Dimension-wise analysis reveals that guest satisfaction is relatively high on assurance (8.15). Relatively least guest satisfaction is reported on empathy (7.95) and reliability (7.98) which suggest that management in hotels need to improve said dimensions, in particular, convenient operating hours, good communication capability, providing accurate information, check in or check out time not too long to enhance over-all guest satisfaction. The findings of this study brought to light that the most important factor in predicting hotel quality evaluation was, tangibility, followed by reliability, responsiveness, assurance and empathy. Along with the important findings obtained in this study, the modified questionnaire itself is an important contribution. The questionnaire developed through this study is suitable for measuring satisfaction among foreign guests in hotels of Kashmir valley, allowing them to confidently identify the service areas which require action. At the same time, the modified questionnaire could also provide indicators through which managers and planners can plan service policies that would result in satisfied customers. Further, this study was conducted in hotels of district Srinagar of Kashmir valley. To be able to generalize the findings for this specific hospitality segment, a study that would include more hotels in a variety of regional settings would be appropriate.

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**ADVERTISING ETHICS AND SURROGATE ADVERTISING PRACTICES: AN EMPIRICAL STUDY**

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**ABSTRACT**

Advertising increases awareness about products as well as also enhances the choices for taking rational decisions for consumers. It leads to all sorts of healthy and unhealthy practices by distributors and marketers. Marketers use surrogate advertisements and brand extensions for propagating the banned products like alcohol and tobacco. Ethics in advertising means a set of well-defined principles which govern the ways of communication taking place between the seller and the buyer. The survey was conducted to gauge the extent of damage done through surrogate advertising. The study helps in exploring the minds of consumers, their attitudes about this kind of advertising and their response to it. Hence with this inspection the required data was collected from 82 respondents using a questionnaire method undergoing a judgmental sampling. To test the objectivity of the data collected Karl Pearson's Chi Squared test was used to arrive at possible suggestions required for the study. The collected data were analyzed using Statistical Package for Social Sciences Research (SPSS). It has been observed that the consumers those are highly educated are aware with the concept and pros and cons of surrogate advertisements. Hence there is a strong association between the education and awareness of the impact of surrogate ads. Almost the respondents think that the surrogate ads are unethical.

**KEYWORDS**

surrogate advertisements, banned products, awareness, unethical, advertising ethics.

**INTRODUCTION**

 surrogate advertising is one of the emerging ethical issues in advertising now days. Advertising is the mirror to the society in which it works; it reflects the ethics and values of that society. Advertising improves our standard of living. Advertising protects the consumers by provide them information about the products and forcing the manufacturers to maintain the quality. Ethics means a set of moral principles which govern a person's behavior or how the activity is conducted. And advertising means a mode of communication between a seller and a buyer.

**Thus ethics in advertising means a set of well-defined principles which govern the ways of communication taking place between the seller and the buyer.** Ethics is the most important feature of the advertising industry. Though there are many benefits of advertising but then there are some points which don't match the ethical norms of advertising.

**An ethical ad is the one which doesn't lie, doesn't make fake or false claims and is in the limit of decency.**

Now days, ads are more exaggerated and a lot of puffing is used. It seems like the advertisers lack knowledge of ethical norms and principles. They just don't understand and are unable to decide what is correct and what is wrong.

The main area of interest for advertisers is to increase their sales, gain more and more customers, and increase the demand for the product by presenting a well decorated, puffed and colorful ad. They claim that their product is the best, having unique qualities than the competitors, more cost effective, and more beneficial. But most of these ads are found to be false, misleading customers and unethical.

The advertisements of alcohol, tobacco products, cigarettes are opposed by majority of the people in the society. Hence the Government had imposed a ban on advertisements of these products in the media in the year 2002. As a reaction to the directive of Government, the liquor & tobacco majors sought other ways of endorsing their products. They have found an alternative path of advertising through which they can keep on reminding their liquor brands to their customers. They have introduced various other products with the same brand name. In order to promote alcohol drinks, tobacco products, cigarettes etc. duplicating of brand image is done to promote another product. It is done by complementary products such as soda, fruit juice, music cd's, mouth fresheners etc. The advertisements like this comes under **SURROGATE ADVERTISING**.

**SURROGATE ADVERTISEMENT**

Surrogate advertisement resembles the original product or could be different product altogether but using the established brand of the original product. The sponsoring of sports and cultural events and other activities are also coming under surrogate advertising. Such advertisements and sponsorships helps in brand recall.

The opinion of consumer is very important for all kinds of research associated with surrogate advertising. It's the consumer who ultimately decides whether to act upon being exposed to a particular type of advertising or not. Thus, I have undertaken this study in the field of surrogate advertising by exploring the minds of consumers, their attitudes about this kind of advertising and their response to it.

**LITERATURE REVIEW**

Dr. Abhijeet Agashe, Ms. Harleen Vij in his article—Ethical Issues in Surrogate Advertisement & its Impact on Brand Building indicated that—Direct marketing of surrogate products are totally unethical and hence been prohibited by the government. But it's the companies are now following the newest trend called the 'surrogate advertisements' i.e., marketing unethical products ethically'.

Varalakshmi.T in her article A Empirical Study On Surrogate Advertisements: A Pioneering Trend indicated that Surrogate advertisements are boon to the marketers and surrogate ads emerging itself as a loophole challenge to the Government's action.

Dr. S. G. Khawas Patil, Laxmikant S. Hurme in the article Surrogate Advertising: A Successful marketing strategy for liquor and whisky products indicated that intention behind this ad is to popularize the main products that are banned to shown directly.

Dr.M.Nagamani, Mrs.S.Asha in their research paper Advertising Ethics-An Indian Perspective reveals that the ethical aspect of Indian advertisement is extremely important for restoration of our culture, ethics, norms and heritage. The lack of implementation of the laws are pouring in more and more unethical and obscene advertisements. Hence proper implementation of laws is highly required in our country.

ASCI (Advertising Standard Council of India) has clarified "that as per the State Governments code, the mere use of the brand name or co-name that may also be applied to a product for which advertising is restricted or prohibited is not reason to find the advertisement objectionable provided the ad is not objectionable and the product is produced and distributed in reasonable quantities and the objectionable advertisement does not contain direct or indirect sale or consumption for the product which is not allowed to be advertised"

Pheraphol Kherathithanakann in the article IS ADVERTISING ETHICAL? Studies the impact of advertising in the society and suggest that if the accountable people as advertisers and the governors work cooperatively and think about the con-sequences of what they are doing, these problems will be diminished in the future. Sanabatappa says opening of retail (MSIL) outlets and campaign against brewing of country liquor have led to the hike in sales. But de-addiction experts beg to differ. "Going by the sheer number of cases we are getting, alcohol consumption has increased over the years and is no longer considered taboo. Most people, especially youth, like to hang out and celebrate with a drink," said N Ramamurthy, a de-addiction counselor.

The Delhi government has collected excise revenue of over Rs 3,150 crore from sale of Indian Made Foreign Liquor (IMFL) in the year 2013-14, which is an increase of 10 per cent compared to the previous fiscal. "We have collected a total of Rs 3,151.63 crore in the year 2013-14 from sale of IMFL," Excise Commissioner J B Singh said.

LJ Andes, S Asma, PC Gupta, K Oswal, KM Palipudi, DN Sinha in the research paper Influence of tobacco industry advertisements and promotions on tobacco use in India: Findings from the Global Adult Tobacco Survey said that in India, evidence strongly suggests that exposure to marketing for tobacco leads to the initiation and progression of tobacco use among children and adolescents. Exposure to the marketing of tobacco products, which may take the form of advertising at the point of sale, sales or a discounted price, free coupons, free samples, surrogate advertisements, or any of several other modalities, increased prevalence of tobacco use among adults. An increasing level of exposure to direct and indirect advertisement and promotion is associated with an increased likelihood of tobacco use.

**Laboni Bhakta, in the article Surrogate advertisement of Liquor in India: How Indian liquor companies game the rules** reveals that this will remain to be a never ending debate when it comes to surrogate advertisement and its control. On one hand where there is inducement of having liquor, on the other hand it's all about the certain upcoming international brands which can't be stopped at all. What we need is proper regulation and not just mere regulations but also the 'fine system' must be introduced and proper licensing must be brought into the phase to regulate the ad agencies and in case if there is any portrayal of "surrogate products" one can always go to consumer forum and later the matter can be taken up by any Board and decide it accordingly.

## OBJECTIVES

1. To study the consumers attitude towards surrogate ads and products.
2. To know the consumers awareness towards surrogate ads.
3. To study the consumers perception towards surrogate ads as ethical or unethical.

## RESEARCH METHODOLOGY

### SAMPLING PLAN

**SAMPLING TECHNIQUE:** Judgmental sampling.

**SAMPLING TYPE:** Target audience comprises those respondents who are literate & who are above the age group of 18 years.

**SAMPLING SIZE:** 82 Respondents.

**SAMPLING AREA:** Dehradun City.

## RESEARCH METHODOLOGY

The research study focuses upon the advertising ethics and attitude of respondents towards surrogate advertising, and their perception towards the surrogate ads. Hence quantitative data is collected and analyzed to meet the objectives and justify the hypothesis. Percentage analysis was done to analyze the demographic characteristics of the respondents and Karl Pearson's Chi Square Test was used to test the objectivity of the framed hypothesis.

## DATA ANALYSIS AND INTERPRETATION

**TABLE 1: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS**

	Categories	Count	Percentage
Gender	Male	82	100
Age	18 To 25 Years	13	15.9
	26 To 35 Years	52	63.4
	36 To 45 Years	12	14.6
	46 To 55 Years	5	6.1
Marital Status	Married	53	64.6
	Unmarried	29	35.4
Education Level	Graduate	15	18.3
	Post-Graduate	56	68.3
	Professional	11	13.4
Income Level	Below Rs 15000	4	4.9
	15000-25000	29	35.4
	25000-40000	32	39.0
	40000-60000	12	14.6
	60000 and Above	5	6.1

Demography studies the population based on factors such as age, gender, economic status, level of education, income level. The analysis presented in the above table is done carefully because the demographic characteristics helps to understand the attitude of the respondents towards surrogate advertisements. The analysis presented in the above table reveals that sample is dominated by the young category respondent ranging in the age group of 26-35 years as it contributes 63.4% in the sample. All the respondents are male and majority of them belongs to married category as it comprises of 64.4%. The sample is composed of post-graduated person earning monthly income of Rs. 25,000 to 40,000.

**TABLE 2: RESPONDENTS SEEN TOBACCO AND ALCOHOL ADS**

	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
YES	80	97.6	97.6	97.6
NO	2	2.4	2.4	100.0
TOTAL	82	100.0	100.0	

Advertising denotes a specific attempt to popularize a specific product or service at a certain cost. It is a method of publicity. It always intentional openly sponsored by the sponsor and involves certain cost and hence is paid for. It is a common form of non- personal communication about an organization and is transmitted to a target audience through a mass medium. Survey reveals that almost all the respondents in the sample have seen the tobacco and alcohol ads.

**TABLE 3: ADVERTISEMENTS OF ALCOHOL AND TOBACCO PRODUCTS ARE REQUIRED**

	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
YES	41	50.0	50.0	50.0
NO	41	50.0	50.0	100.0
TOTAL	82	100.0	100.0	

**Alcohol advertising** is the promotion of alcoholic beverages by alcohol producers through a variety of media. Along with tobacco advertising, it is one of the most highly regulated forms of marketing. Survey reveals that half of the respondents agree with the requirement of the advertisements of tobacco and alcohol half of them are disagree.

**TABLE 4: EVALUATION OF SURROGATE ADVERTISEMENTS**

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>BORING</b>	1	1.2	1.2	1.2
<b>MISLEADING</b>	60	73.2	73.2	74.4
<b>DISTURBING</b>	15	18.3	18.3	92.7
<b>PROVOKES TO RESULTING IN HIGH CONSUMPTION</b>	6	7.3	7.3	100.0
<b>Total</b>	82	100.0	100.0	

From the above table it is clear that most of the respondents are evaluating surrogate advertisements are misleading in nature. False advertisements have engulfed all the sectors and the customers are getting trapped and becoming a prey to such advertisements. Though surrogate advertising are misleading it affects the consumer decision.

**TABLE 5: IMPACT OF SURROGATE ADS ON CONSUMER'S CONSUMPTION**

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>INCREASES THE CONSUMPTION</b>	67	81.7	81.7	81.7
<b>NO EFFECT ON CONSUMPTION</b>	15	18.3	18.3	100.0
<b>Total</b>	82	100.0	100.0	

Surrogate advertisements resemble the original product or could be a different product altogether, but using the established brand of the original product. Hence the surrogate ads always remind the core products therefore with the help of the survey we find out that surrogate ads increase the consumption of the original products.

**TABLE 6: APPROPRIATE MEDIA FOR SURROGATE ADS**

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>TV</b>	17	20.7	20.7	20.7
<b>RADIO</b>	1	1.2	1.2	22.0
<b>BANNERS AND HOARDINGS</b>	40	48.8	48.8	70.7
<b>MOVIES</b>	9	11.0	11.0	81.7
<b>MAGAZINES</b>	15	18.3	18.3	100.0
<b>Total</b>	82	100.0	100.0	

Advertisements have a strong influence in our life. We like them because they provide information and create awareness about the market. Our decisions whether to buy a product or not, is often completely influenced by the promotional activities of the companies concerned. Therefore, selection of appropriate media is one of the most important task here the Survey reveals that the appropriate media for surrogate ads are banners and hoardings.

**TABLE 7: PERCEPTION TOWARDS SURROGATE ADS**

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>UNETHICAL</b>	79	96.3	96.3	96.3
<b>SHOULD BE BANNED</b>	3	3.7	3.7	100.0
<b>Total</b>	82	100.0	100.0	

Majority of the respondents are familiar with the concept of surrogate advertisements & hence show high level of awareness towards such ads. This surveys clears that almost all the respondents perceived that the surrogate ads are unethical and somehow harms the society.

**TABLE 8: SHOULD THE AD BE BANNED**

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>IS A RIGHT STEP BE BANNED</b>	67	81.7	81.7	81.7
<b>NO NEED OF BANNING SUCH ADS</b>	2	2.4	2.4	84.1
<b>NO COMMENTS</b>	5	6.1	6.1	90.2
<b>PRODUCTS SHOULD</b>	8	9.8	9.8	100.0
<b>Total</b>	82	100.0	100.0	

Since alcohol and tobacco products are impulsive buys most of the respondents thinks that the ad for such products should be banned. If the ban on surrogate advertising comes into effect, could be a new challenge for liquor and cigarette brands. Brands will have to re-look at their advertising budgets, and maybe seek other avenues to promote their brands.

**HYPOTHESIS TESTING**

**PART-1**

**H<sub>0</sub>**– Highly educated people are not familiar with the concept of surrogate ads.

**H<sub>1</sub>** - Highly educated people are familiar with the concept of surrogate ads.

**EDUCATION BY CLASSIFICATION \* ALCOHOL and TOBACCO PRODUCTS ADVERTISEMENTS**

<b>CROSS TABULATION</b>						
			Awareness towards ALCOHOL and TOBACCO PRODUCTS advertisements (surrogate ads).			Total
			YES	NO		
EDUCATION CLASSIFICATION	GRADUATE	Count	13	2	15	
		Expected Count	14.6	.4	15.0	
	POST GRADUATE	Count	56	0	56	
		Expected Count	54.6	1.4	56.0	
	PROFESSIONAL	Count	11	0	11	
		Expected Count	10.7	.3	11.0	
Total		Count	80	2	82	
		Expected Count	80.0	2.0	82.0	

<b>CHI-SQUARE TESTS</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.157 <sup>a</sup>	2	.010
Likelihood Ratio	7.025	2	.030
Linear-by-Linear Association	5.822	1	.016
N of Valid Cases	82		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .27.

The above table shows that the respondents those are highly educated are familiar with the concept of surrogate ads. Chi square table shows that:

$$\chi^2_{cal} > \chi^2_{tab} \text{ (i.e. } 9.157 > 5.991)$$

Hence null hypothesis is rejected at 2 degree of freedom and 5% level of significance.

**PART-2**

H<sub>0</sub> – Highly educated people thinks surrogate ads are unethical.

H<sub>1</sub> - Highly educated people thinks surrogate ads are ethical.

**EDUCATION BY CLASSIFICATION \* PERCEPTION TOWARDS SURROGATE ADS**

		YOUR THINKING TOWARDS SURROGATE ADS		Total	
		UNETHICAL	SHOULD BE BANNED		
POST GRADUATE	Expected Count	14.5	.5	15.0	
	Count	53	3	56	
PROFESSIONAL	Expected Count	54.0	2.0	56.0	
	Count	11	0	11	
Total	Expected Count	10.6	.4	11.0	
	Count	79	3	82	
		Expected Count	79.0	3.0	82.0

CHI-SQUARE TESTS			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.446 <sup>a</sup>	2	.485
Likelihood Ratio	2.341	2	.310
Linear-by-Linear Association	.023	1	.879
N of Valid Cases	82		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .40.

The above table shows that the respondents those are highly educated are familiar with the concept of surrogate ads and think that these ads are not required and unethical for the society. Both the chi square table shows that:

$$\chi^2_{cal} < \chi^2_{tab} \text{ (i.e. } 1.418 < 5.991)$$

Hence null hypothesis is accepted at 2 degree of freedom and 5% level of significance.

**DISCUSSION**

Pros & Cons of surrogate advertising are just like a two sides of a coin. There is no doubt that advertising attracts us in number of ways but there are also a number of controversies associated with advertising. Generally, this controversy is concerned about the impact of advertising on economy, society and ethics. In this study the impact of surrogate advertising on the consumer’s mind and their perception towards alcohol and tobacco ads are observed. Almost all of the respondents are aware with the concept of surrogate ads and thinks that these ads are unethical.

**CONCLUSION**

As long as tobacco and alcohol brands have a presence and are allowed to retail, they will surely seek ways to promote their products to the masses, through surrogate ads or otherwise. The survey clearly suggests that respondents are aware with the surrogate ads and their motive to remind the core product. Therefore, it up to the customers to deal with these unethical ads so that these ads should not escalate in number and start decreasing and lasts no impact on the consumption rate of alcohol and tobacco.

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### ABSTRACT

*The main objective of the study is to investigate the impact of the different promotional mix elements on the satisfaction of the tourist visited the Mussoorie hill station of Dehradun district in Uttarakhand State. Mussoorie, queen of hills, is one of the major summer tourist's destination of India. The data was collected by using a survey questionnaire which was distributed among 200 respondents at the main exit points of the Mussoorie hill station. Data has been analyzed by using Statistical Package for Social Research-17 by using descriptive statistics and simple linear regression technique. The findings of the study reflected that apart from the direct marketing, the other elements of promotional mix, i.e. advertising, sales promotion and publicity were having significant impact on tourist's satisfaction and were responsible in creating awareness in the potential tourists. Also it was found that certain satisfaction attributes were not up to the mark so some recommendations have been given.*

### KEYWORDS

Mussoorie, promotional mix elements, tourist's satisfaction.

## 1. INTRODUCTION

Tourism has been considered as an important vehicle for socio-economic development of a state or country. It is an important source of foreign exchange generation and also contributes to the national balance of payments and act as a major source of income and employment. Around the globe, the most promising reason for pursuing tourism as a development strategy is its alleged positive contribution to the local or national economy (Sharpley, 2004).

Tourism is one of the most important and key industry of Uttarakhand State and has enormous potential for tourism development and a pool of tourist activity can be found widely spread in the state. Mussoorie, also known as the queen of hills has a variety of beautiful and cheerful scenic landscape, waterfalls, lakes, temples etc best suited for tourism activities. Mussoorie is a small town on hills but filled with various tourism dimensions.

It is a well-known fact that for any business to prosper especially in service sector, the needs of the consumers should be satisfied by providing a quality product or service (Peterson & Wilson, 1992). Consumer satisfaction is very crucial for the service based businesses like tourist attractions (Oliver, 1994; Otto & Brent Richie, 1996; Pearce & Moscardo, 1998; Sparks, 2000; Matear, Osbourne, Garret & Gray, 2002). There exists a strong link among consumer satisfaction and service provider profitability (Bolton & Drew, 1994; Hill, 1996). Therefore, a need arises for assessing the relationship and impact of the different promotional mix elements on tourist satisfaction so that marketer and tourism firm operators would develop optimal strategies to maximize satisfaction and hence profitability.

## 2. LITERATURE REVIEW

### 2.1 PROMOTION MIX

Promotion is one of the 4 P's of Marketing and is very effective way to reach potential customers to influence their purchase decisions and actions related to the product or services. Promotion helps in informing the customers about the availability of the product and to make them aware about the marketing activities (Bagozzi, 1998). Promotion strategy is defined as an activity of marketers to communicate with the target audience in the various or selected market (Kotler, Rein & Haider, 1993).

Promotional mix, also known as marketing communication mix, contains tools of advertising, personal selling, sales promotion, publicity and direct marketing which are used by the companies to accomplish its advertising and marketing objectives (Kotler, 2007).

Mohammadi, Esmaily and Salehi (2012) in their study of Prioritization of promotion tools based on AIDA model by Analytic Hierarchy process in production sector of sport industry identified the best possible promotional mix in production sector of sport industry. They used AIDA model, for analysis AHP (Analytical Hierarchy process) model was used. Different 17 promotional tools were selected for the study and importance of each variable was correlated with customer awareness and interest.

### 2.2 TOURIST'S SATISFACTION

Tourist satisfaction may be defined as the psychological and emotional state of the tourist after or during experiencing his visit or trip Baker and Crompton (2000). Tourist's satisfaction is the social and behavioral judgment provided by the tourists as a feedback to overall tourism performances which comprise the tourism environment, infrastructure, social services, facilities provided at the destination, safety etc. of the tourism activities found at the place of tourism. Hence it is the best indicator to show the quality of the services provided by the tourism activities. Therefore, it is very important for the sustainable development of tourist attractions.

Fuchs and Weiermar (2003) applied multi-attribute model to define tourist satisfaction. They calculated through different dimensions of service quality like safety, security, aesthetics appeal, service orientation, amenities and accessibility of services. They also measured of tourism activities like food and accommodation, shopping, transportation and other attractions.

Barsky and Labagh (1992) stated 9 different factor for satisfaction by expectation met, which were location, price, room, employee attitude, facilities, service, packing, reception, food and beverages. Bojanic (1996) discovered a powerful and positive correlation between perceived value and satisfaction in a tourism context.

Monsef and Raji (2013) in their study entitles as Assessment of Advertising Role in Guilan Province Tourism Industry Development evaluated the relationship between advertising as a promotional tool and satisfaction of tourist. For this purpose, he used correlation method and he concluded that there was a significant relationship between advertising and tourist satisfaction.

Sarker, Aimin & Begum (2012) examined the impact of marketing mix elements on satisfaction of tourist of East Lake (China) in their study entitled as Investigating the Impact of Marketing Mix Elements on Tourists' Satisfaction: An Empirical Study on East Lake. They found that six out of seven elements of marketing mix were positively related to satisfaction but tourists were not satisfied with the prices of the product and services. For their study they used survey questionnaire method and tested the responses on SPSS software. Same software was used for the analysis purpose.

## 3. RESEARCH GAP

After going through literature it has been found that now much work has been done in evaluating the impact of promotional mix on tourist satisfaction. A few studies presented relationships and impact between marketing and satisfaction but that were too very limited. Also no work has been done specifically in Mussoorie which is one of the major tourist destinations in Uttarakhand, India. Therefore, the current study tries to find the impact of promotional mix elements on tourist's satisfaction through the tourists visited Mussoorie.

#### 4. OBJECTIVES

The present study has certain specific research objectives. They are as follows

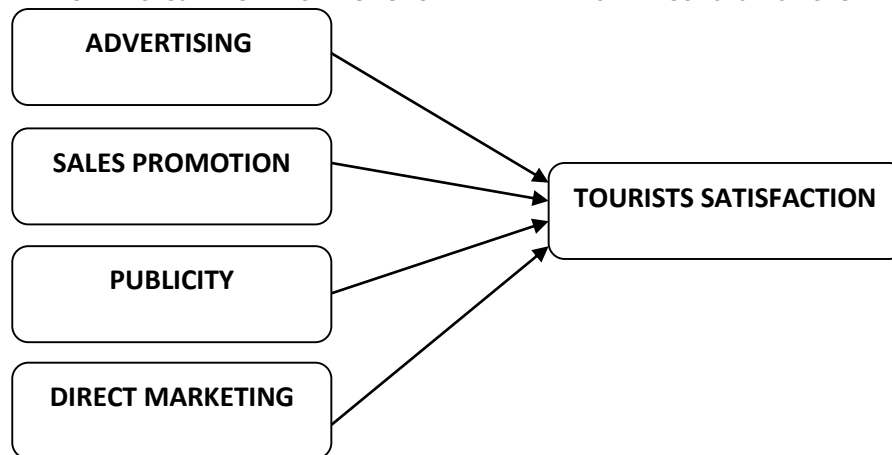
1. Evaluating the impact of the different promotional mix elements on tourist's satisfaction.
2. Giving recommendations and suggestion to policy makers for future development.

#### 5. METHODOLOGY

##### CONCEPTUAL MODEL AND HYPOTHESES

##### 5.1 RESEARCH MODEL

FIG. 1: PROPOSED MODEL FOR PROMOTIONAL MIX ELEMENTS AND TOURIST SATISFACTION



In the Fig. 1, the model having four promotional mix elements have been taken into consideration which are advertising, sales promotion, publicity and direct marketing and their impact on tourist satisfaction has been evaluated. The general form of the study model was,

$$S = a + b_1P_1 + b_2P_2 + b_3P_3 + b_4P_4 + e$$

Where, S is tourist satisfaction, P<sub>1</sub> is advertising, P<sub>2</sub> is sales promotion, P<sub>3</sub> is publicity and P<sub>4</sub> is direct marketing; a is constant; b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub> and b<sub>4</sub> are respective coefficients to estimate and e is the error.

##### 5.2 HYPOTHESES

Based on the objective of the study following four null hypotheses were created:

- H<sub>01</sub>:** There is no significant impact of advertising on tourist's satisfaction of the tourist visited Mussoorie.  
**H<sub>02</sub>:** There is no significant impact of sales promotion on tourist's satisfaction of the tourist visited Mussoorie.  
**H<sub>03</sub>:** There is no significant impact of publicity on tourist's satisfaction of the tourist visited Mussoorie.  
**H<sub>04</sub>:** There is no significant impact of direct marketing on tourist's satisfaction of the tourist visited Mussoorie.

##### 5.3 METHOD

The study is both empirical in nature, which is based on both qualitative and quantitative data. The study uses both primary and secondary sources for collecting data. Convenience sampling technique was used and 200 tourists were selected as respondents, which were all above 18 years so as to get correct responses.

18 questions were taken under 4 elements of promotional mix and 23 questions for tourist's satisfaction were included in the questionnaire. The tourist's selection was done on the main exit points of Mussoorie and specific destinations.

Independent variables taken were advertising, sales promotion, publicity and direct marketing as elements of promotion mix which have been regressed with tourist's satisfaction as dependent variable. Primary data has been collected in the form of well-structured questionnaire on Likert's five-point scale.

P > 0.05 (significance value greater than 0.05) shows that there is no significance difference in the mean at 95% level of confidence. The study has been done at the confidence level of 95%.

#### 6. DATA ANALYSIS

After the collection of data by survey questionnaire, in close relation to the objectives and hypothesis of the study, the analysis of the data was done by using Statistical Package for Social Research (SPSS)-17. For hypothesis testing and analysis, inferential analysis has been used. Cronbach's alpha for reliability test, descriptive statistics techniques and linear regression were applied for this purpose.

##### 6.1 RELIABILITY TEST

According to Nunnally (1978), Cronbach's alpha with larger alpha values (greater than 0.70) shows higher internal consistency in the measured dimension and has greater reliability. From table 1, the Cronbach's alpha value is greater than 0.70, therefore it is evident that the questionnaire had good internal reliability and data could be utilized for further analysis.

##### 6.2 DEMOGRAPHIC AND TRAVEL DETAILS OF THE TOURIST

In the respondents 71% were Indians and 29% were foreigners. Most of the tourists were males which contributed 67% while females were 33%. Majority was between the age group of 26-35 years with 27.5% followed by 46-55 years with 24.5% and 36-45 years with 22.0%. Tourist above the age of 55 years counted for 8% and the remaining 18% were less than 26 years. 54.5% belonged to Hindu religion followed by 25.5% Christians in which majority was of foreigner and 14% Muslims. Sikh, Buddhist and other contributed in the remaining percentage. Married tourists were found to be 56.5% as compared to single tourists with 43.5%. 80% of the tourists visited with friends and family while 14.5% with spouse. 3% came alone for the visit and 2.5% selected the response as 'other'. Most of the tourists who visited Mussoorie had good educational background in which 59.5% were graduates, 25.5% post graduates and 11% were technical. It was also found that only 2.5% have studied up to high school and 1.5% was having degree above post-graduation. All types of visitors from student to employee, business man to home maker were found. 34.5% respondents had monthly income more than 40,000 rupees, 25% had no income and remaining under 40,000 rupees.

Purpose of visit of 50% of the tourist was recreational or for pleasure, 15% contributed as pilgrimage and 12.5% for knowing cultural and historical significance in which again majority was of foreigners. Others came for adventure, honeymoon or education or on official visit. 72% stayed in hotels and guest house while 17% stayed at friends and relative's places, few didn't stay anywhere and contributed for 1.5%. Railways were found to be the most preferred mode of travel with 44% responses followed by chartered taxi with 29%. Air travel got the least response of 4% only. Day visitors were only 13(6.5%) while most of the tourist stayed for one day to one week, in which 28% stayed for 3-5 nights, 26% for 1-2 nights, 23.5% for 1 week. 32 tourists stayed for more than a week with a contribution of 16%.

##### 6.3 DESCRIPTIVE STATISTICS

In table 2, the mean scores and std. deviations of the variables are clear. Among the independent variables advertising with the mean score of 3.8107 secured first rank followed by Publicity, Sales Promotion and Direct Marketing with 3.6875, 3.6510 and 2.4000 mean scores respectively.

## 6.4 REGRESSION ANALYSIS

Simple Linear Regression analysis has been used to evaluate the impact of independent variables on the dependent variable. The single variable regression takes the linear form of functional relations like:

$$y_i = \alpha + \beta x_i + \varepsilon_i$$

When there are  $n$  data points  $\{(x_i, y_i), i = 1, \dots, n\}$ ,  $y$  is the dependent variable, ' $x$ ' is the independent variable, ' $\beta$ ' is the slope of the straight line and ' $\alpha$ ' is the  $y$ -intercept.

1. **H<sub>01</sub>**: There is no significant impact of advertising on tourist's satisfaction of the tourist visited Mussoorie.

The value of  $R^2$  was found to be 0.663 which depicts that 66.3% variance in tourist's satisfaction is explained by advertising.  $F = 389.177$  at  $P = 0.000$  explains the model's goodness of fit. Value of  $t = 19.728$  shows positive and strong relationship between advertisement and tourist's satisfaction. So after assessing these results it can be inferred that this hypothesis is rejected at 95% significance.

2. **H<sub>02</sub>**: There is no significant impact of sales promotion on tourist's satisfaction of the tourist visited Mussoorie.

The value of  $R^2$  was found to be 0.703 which depicts that 70.3% variance in tourist's satisfaction is explained by advertising.  $F = 467.685$  at  $P = 0.000$  explains the model's goodness of fit. Value of  $t = 21.626$  shows positive and strong relationship between sales promotion and tourist's satisfaction. So after assessing these results it can be inferred that this hypothesis is rejected at 95% significance.

3. **H<sub>03</sub>**: There is no significant impact of publicity on tourist's satisfaction of the tourist visited Mussoorie.

The value of  $R^2$  was found to be 0.677 which depicts that 67.7% variance in tourist's satisfaction is explained by advertising.  $F = 414.991$  at  $P = 0.000$  explains the model's goodness of fit. Value of  $t = 20.369$  shows positive and strong relationship between publicity and tourist's satisfaction. So after assessing these results it can be inferred that this hypothesis is rejected at 95% significance.

4. **H<sub>04</sub>**: There is no significant impact of direct marketing on tourist's satisfaction of the tourist visited Mussoorie.

The value of  $R^2$  was found to be 0.007 which depicts that 0.7% variance in tourist's satisfaction is explained by advertising.  $F = 1.384$  at  $P = 0.241$  does not explain the model's goodness of fit. Value of  $t = 1.176$  shows positive and extremely weak relationship between direct marketing and tourist's satisfaction. So after assessing these results it can be inferred that this hypothesis is accepted at 95% significance.

## 7. DISCUSSION

After observing the mean score of the elements of promotional mix it was found that highest mean score was of advertising, 3.8107, which created awareness in the tourist and later they were satisfied with the services availed in Mussoorie. Direct marketing got the lower mean score of 2.4 and was found to be insignificant in relation to tourist's satisfaction. The remaining two independent variables publicity and sales promotion followed advertising in order and have significant relationship with tourist satisfaction. Their mean score was found to be 3.6875 and 3.6510 respectively, which shows that tourist was motivated up to an extent but not highly motivated by these promotion tools. The overall satisfaction of the tourists is also in a good range and has mean score of 3.7003 which shows that tourists have scored their satisfaction levels near satisfied but not highly satisfied.

## 8. CONCLUSION AND RECOMMENDATIONS

### 8.1 CONCLUSION

Based on the results and discussion of descriptive statistics and regression analysis the study can be concluded that only direct marketing has no significance in creating awareness in tourists and also has no significant impact on tourist satisfaction. While the remaining three independent variables i.e. advertising, sales promotion and publicity were effective in creating awareness and found to have a strong and positive impact on tourist's satisfaction.

### 8.2 RECOMMENDATIONS

As level of satisfaction is not as high as it should be more focus should be given on the different satisfaction attributes in Mussoorie so that it would lead to profitability. Although advertising, sales promotion and publicity are having a better participation in influencing the awareness and motivational levels of tourist and converting them from potential to actual tourists but somewhere direct marketing is lagging behind, so proper emphasis should give on different tools of direct marketing like direct mails, Kiosk marketing etc., in promoting Mussoorie as tourism destination.

The foreign tourists are often mocked by locals and other peoples which should be avoided at all cost. Awareness regarding the true sense and meaning of '*Atithi Devo Bhava*' should be implemented in the society. Also proper historical description and path directions should be in English too. Publication of some 'Information Brochure' in major foreign languages should be done.

Information Technology infrastructure and tourist information database should be properly developed and maintained. Up-to-date information should be available to the tourists round the clock.

Tourist's information centre should be placed in different entry and exit point so that it would be more convenient for the tourists and they can collect right information very easily.

Cleanliness and ecofriendly environment should be well promoted and improved.

Frequency in the different promotional tools like advertising and publicity should be implemented so as to create top of mind awareness.

## 9. LIMITATIONS

As this research is based on the tourist behavior therefore possibilities of some biased and irresponsible information could be provided while filling questionnaires which will be reflected in the analysis and interpretation that cannot be simply neglected. Respondents usually hesitate to share their true self and therefore it is one of the major limitations of the survey based research. Sample size could have been more to make it more representative and the findings cannot be generalized over total population of tourists in Mussoorie. Time and money constrains were also one of the limitations of the study. Data was only collected during the peak seasons. In the study only four elements were taken into consideration, other elements can also be incorporated in the study like personnel selling, word of mouth etc.

## 10. DIRECTION FOR FUTURE RESEARCHES

As the study has some limitations and had specific objectives, other elements relating to the promotion and satisfaction can be covered in future researches. Destination image also affects the tourist satisfaction which can be incorporated in the model. More and advanced statistical tools and techniques could be used for analyzing more results from the same or associated model.

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**APPENDIX**

**TABLE 1: RELIABILITY TEST**

Variables	Cronbach's Alpha (a)*
Advertising	0.751
Sales Promotion	0.744
Publicity	0.869
Direct Marketing	0.745
Tourist satisfaction	0.897

Source: Compiled and calculated by researcher

\*Cronbach's Alpha value of 0.7 or higher are considered acceptable (Nunnally, 1978)

**TABLE 2: DESCRIPTIVE STATISTICS**

Statements	N	Mean	Std. Deviation
Advertising	200	3.8107	.37317
Sales Promotion	200	3.6510	.43236
Publicity	200	3.6875	.53328
Direct Marketing	200	2.4000	.43698
Tourist's Satisfaction	200	3.7033	.33907

Source: Compiled and calculated by researcher

**TABLE 3: REGRESSION ANALYSIS**

Model	R	R Square	Coefficients	t	F	P
Advertising	.814	.663	.814(.740*)	19.728	389.177	.000
Sales Promotion	.838	.703	.838(.657*)	21.626	467.685	.000
Publicity	.823	.677	.823(.523*)	20.369	414.911	.000
Direct Marketing	.083	.007	.083(.065*)	1.176	1.384	.241

Predictors: (Constant), Advertising, Sales Promotion, Publicity & Direct Marketing  
 Dependent Variable: Tourist's Satisfaction

Source: Compiled and calculated by researcher

\* Unstandardized Coefficients

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