

# Nirmanay

The Journal of Decision Science

## **Impact of Demonetization Announcement on Indian Stock Market : An Event Study**

Dr. Shilpa Lodha, Ms. Ekta Kumawat, Mr. Chirag Bapna

## **Awareness of Quality Standards in Health care : An Exploratory Study**

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## **Customer Satisfaction towards Use of Royal Foam Pvt. Ltd. Products**

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## **Purchase Scenario of Maggi before and after ban**

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## **Advantages in Restructuring I.T. in Supply Chain Management**

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## **An Empirical Study of Forensic Accountants' Skills - A Users' Perception**

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Ms. Chitra Rathore



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## Vice Chancellor's Message



I am pleased to write this message as Janardan Rai Nagar Rajasthan Vidyapeeth (deemed-to-be University) enters in thirty two years of its existence as university. With the innovation and new courses, university is committed to offer new experiences in the field of socially relevant education and research. Research has always been about ideas that inform our existence that permeate our universe and beyond that can surprise and enthrall. The vision behind this scholarly endeavor is to promote a culture of learning and rationality, with quest for knowledge you can reach the timeless constellations of ideas that lies ahead of sky.

I congratulate the editorial team and advisory board for bringing IX edition of this journal with their continued efforts. I wish you all the best in your all such academic pursuits.

A handwritten signature in black ink, appearing to read 'S.S. Sarangdevot', written in a cursive style.

Prof. (Col.) S.S. Sarangdevot

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# From the Editor's Desk

Welcome to the Volume IX of 'Nirnay' 2018, Journal of Decision Sciences the Journal of Faculty of Management Studies, JRN Rajasthan Vidyapeeth (Deemed to be University), Udaipur.

The present issue consists of Research papers and management perspective in varied domains of management research. The authors of these papers have used different methodologies in presenting their findings.

The paper "Impact of Demonetization Announcement on Indian Stock Market: An Event Study" by Dr. Shilpa Lodha, Ekta Kumawat and Chirag Bapna tells us how stock market was affected by Demone tization announcement.

The paper "Awareness of Quality Standards in Health care: An Exploratory Study" by Dr. Pallavi Mehta, Mr. Bhagirath Chavda tries to find out how much the healthcare institutes are using quality procedures and medicines and how consumers are affected by it.

The paper "Customer Satisfaction towards Use of Royal Foam Pvt. Ltd. Products" by Dr. Sunil Mishra & Dr. Vineet K. Jain studies the market pattern for royal foams products in Rajkot district that how much potential is there for its products and how to select the dealers and markets for it.

The paper measuring perception of customers towards banking institutions identified factor affecting customer perception in - A comparative study of (Indian public and private sector banks) by Dr. Dhimen Jani & Dr. Lalit Pipliwal that how customer is affected in private and public sector banks.

The paper "Purchase scenario of Maggi before and after ban" by Dr. Ankita Pathak & Dnyaneshwari Diwate is based on acceptance of Maggi noodles in Indian market before ban on it and after the ban and how the company managed to get back in the market.

The paper "Advantages in restructuring IT in supply chain management" by Dr. Chandresh Kumar Chhatlani & Bharat Kumar Sukhwal is giving an insight as to how to make IT equipments and technology more efficient in use for the supply chain management thereby reducing cost and time.

The paper "An Empirical Study of Forensic Accountants' Skills - A Users Perception" by Dr. Nidhi Nalwaya shows that how frauds are being conducted even by best and reliable examining of accounts and how to stop them.

The paper "A Study of Relationship between Job Satisfaction and Talent Retention in Higher Educational Institutions of India" by Hemant Trivedi & Shikha Dubey is based on retention of talented people by higher educational institutions to maintain quality of education in India.

The paper "Emotional intelligence: Communication effectiveness mediates the relation between stress management and job satisfaction" by Ms. Jyoti Solanki explains that how effective communication process can reduce stress and increase job satisfaction.

The paper "Investment Pattern and Consumer Awareness about Mutual Fund in Udaipur District (with special reference to SBI Mutual Funds)" by Ms. Chitra Rathore attempts to examine how much consumers are aware about mutual funds and how they invest in it.

The current edition has impressive variety of articles that are of interest to a wide variety of practitioners, researchers and academicians. We are sincerely hopeful that the readers will find this issue to be interesting and useful in the contemporary context. I am thankful to one and all for their immense contribution and further request for suggestions, if any, so that the necessary changes can be accommodated in the forthcoming edition and in favor of a greater audience and readers.

**Chief Editor  
Prof. Anita Shukla**

# Impact of Demonetization Announcement on Indian Stock Market : An Event Study

\*Dr. Shilpa Lodha, \*\*Ekta Kumawat, \*\*\*Chirag Bapna

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Economics is a broad study of the pecuniary conditions of a country and of the effects of various policy decisions of the government and the central bank. Every trivial change creates a domino effect, triggering several pros and cons to be discussed in the subsequent phase. The following event study dwells into the minutiae, interpretation and conclusions of the recent financial exercise of 'Demonetization' on stock market. This study deals with one of the most important questions that whether or not Indian stock market overreacted during the stock specific news. The impact of it on sectoral indices and sectoral growth is moreover an important issue of concern. The study deals with it by undertaking sample studies of few of the sectors and impact on them.

With a sample period of 81 trading days, 9th November 2016 as the event day and an event window of 10 prior days from the event day, this study provides a qualified swot of the situations in a comprehensive manner. The methodology consisted of sample selection (i.e. Stock market), defining a sample period, defining an event window, estimation period, expected return hypothesis, AR & CAR and significance testing.

Results concluded that Banks (Public/Private), Financial Services and PSUs yielded positive returns while a stark difference was seen on sectors like Realty along with Auto, IT and media. A detailed analysis of the above drawn conclusions will help us in understanding the effect of this decision in a more actualized and expounding way. The report duly acknowledges the support of individuals and backup from various sources (duly mentioned) in felicitating this study.

**Key words :** Demonitization, Indian Stock Market

## Introduction

On 8 November 2016, India's Prime Minister Mr. Narendra Modi announced the Government of India's decision to cancel the legal tender character of Rs. 500 and Rs. 1,000 banknotes with effect from 9 November 2016. He also announced the issue of new Rs. 500 and Rs. 2,000 banknotes in exchange for the old banknotes which will be placed in circulation from 10th November 2016. Notes of one hundred, fifty, twenty, ten, five, two and one rupee will remain legal tender and will remain unaffected by this decision.

Demonetization is a tool of Government to eliminate the currency. Demonetization is the act of stripping a currency unit of its status as legal tender, it is necessary whenever there is a change of national currency. The old unit of currency must be retired and replaced with a new currency unit.

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Thus, Demonetization of currency means discontinuity of the particular currency from circulation and replacing it with a new currency.

The objective behind the demonetization policy are to make India corruption free, to control black money, to control increasing price rise, to stop funds flow to illegal activity, to make people accountable for every rupee they possess and pay income tax return, to make a cashless society and create a Digital India.

According to Harish Damodaran (2016) as per the RBI the total bank notes in circulation valued to Rs.16.42 trillion (US\$240 billion) of which nearly 86% (around Rs.14.18 trillion (US\$210 billion)) were Rs.500 and Rs.1,000 banknotes. In terms of volume, the report stated that 24% (around 22.03 billion) of the total 90266 million banknotes were in circulation. According to a Bloomberg report, banks were estimated to have received 14.97 trillion rupees (around \$220 billion) by the December 30 deadline, or 97% of the 15.4 trillion rupees' worth of currency demone tized.

### Demonetization in India

The act of demonetization has happened twice in India, first in the year of 1946 and then in the year of 1978. In January 1946, Rs. 1,000 and Rs. 10,000 banknotes were withdrawn but the same Rs. 1,000, Rs. 5,000 and Rs. 10,000 notes were reintroduced in 1954, and were again demonetized in January 1978. The second demonetization has taken place in the year of 1978 by the Janata Party government. It had decided to withdraw Rs. 1,000, Rs. 5,000 and Rs. 10,000 notes by issuing an ordinance on the morning of 16 January that year.

### Demonetization in other Countries

Demonetization has also been done in few other countries like United States of America (1969), Ghana (1982),Nigeria (1984),Myanmar (1987), Soviet Union (1991),North Korea (2010),Pakistan (2016), Zimbabwe (2015), Australia (1996), Fiji, Singapore, Russia, Greece and the Philippines.

The Purpose of Demonetization by different countries was to reducing black money, reduce corruption, to tackle tax evasion and empty excess liquidity and increase economic growth in long run, increase transparency.

### Impact of Demonetization

After the announcement of demonetization there was liquidity crisis in the market and the people were struggling to have some liquidity in the form of new currency notes. Banks were struggling to deal with long queues of people trying to exchange their old high-value currency notes with newly circulated currency notes. ATMs remained closed.

This move has shown its impact on the Indian Stock Markets. Consequent to this decision, on 9th November 2016, the Sensex plunged by 1,688 points (6.12%) and the Nifty Fifty dropped 541.30 points (6.33%). The rupee was trading to 66.85 per US\$ down by 23 paise.

Due to demonetization announcement and sudden drop in stock market alot of investors are withdrawing capitals from stocks, some because they are out of fundsand others because they expect a crash, perhaps an opportunity to buy at lower levels.

### Event Study

The event study methodology firstly applied by Fama, Fisher, Jensen, and Roll (1969), who employ it to test the market's efficiency in responding to stock split announcement. Event Study is related to the study of speed of incorporating new announcement or information into stock prices. This is related with testing of semi-strong form of efficiency of stock market. It studies the behavior of stock prices near an event which may have some impact on them.



Figure 1: Hypothesized Event Causality

Source: Sorenson (2012)

An event may be merger & acquisition, earnings announcement, appointment of a new CEO, stock splits, bonus issue, dividend announcement, IPO's, political events, sports events, weather, more recently - demonetization etc. These events may cause a change in investor's mood which in turn causes changes in stock prices as is evident from Figure 1.

### **Statement of the Problem**

The question of whether or not Indian stock market is overreacted during any stock-specific news is best answered by a comprehensive and concurrent analysis of the various tests and data available while using the event study, like stock and market-specific data. Demonetization of Indian currency may contain important information for the investors. This paper empirically investigates the information content of demonetization announcement by Indian government on Nifty and some of the sectoral indices.

### **Review of Literature**

Jain (2017) examined the impact of demonetization on the returns of 25 Public sector bank and 15 private banks listed on NSE using event study analysis and regressions. The data spans from July 27, 2016 to November 22, 2016. It found that the public sector banks have recorded higher returns after demonetization; the private ones witnessed a decline in returns.

Jain, Shekhar & Deshpande (2017) examined the behavior of stock prices of hospitality sectors, as the announcement of Demonetization as event study methodology. The study showed that in short and medium terms the demonetization will have various effects on the many sections of the hospitality industry in the country, but in the long term will positively impact the growth of the hospitality sector.

Mahajan & Singla (2017) studied the effect of demonetization on various participants of financial inclusion drive such as ordinary individuals, informal sector, rural population,

MSMEs, NBFC MFIs and E-wallet companies. The study revealed that ordinary individuals were the most adversely affected. The new type of deposits called benami deposits have also come up with demonetization. With the aim of achieving financial inclusion along with making India a cashless and digital economy, efforts are required to make technology reach the bottom of the pyramid.

Masood & Ali (2017) analyzed the volatility pre and post demonetization in Indian stock market. The study conducted by using daily closing prices time series on BSE S&P Sensex and NSE Nifty for a period of prior and post three months. It was from the analysis that mean value of Pre Sensex and Pre Nifty was negative, Post Sensex and Post Nifty was positive respectively. The volatility (SD) of all three indices Sensex, Bank index and Nifty increased in post demonetization and the banking sector highly influenced than other sectors in the stock market.

Bharadwaj, Mohith, Pavithra & Ananth (2017) analyzed the impact of demonetization on Indian stock market using efficient market hypothesis. This study focused on the calculation of risk and return values for 16 different companies from NSE-India before and after the demonetization process and the analysis is being done through single Sharpe model. The data collected for the past five years from 2012 to 2016 and for 5 months from November 2016 to March 2017. According to the analysis from the year 2012 to 2016, the 4 sectors namely energy, media, realty and private banking was in a good process and follows random walk process thus investor can make their move in investing in these companies for better return and low risk. But after demonetization there is an Impact on Indian Stock Market due to the effect of Demonetization therefore, Investor has to update the investment information then and there from the Market for their better investment in with low risk and high return.

Sathyanaarayana and Garghesha (2017) examined the stock market reaction towards the announcement of demonetization in India in short term. For the purpose of analysis of the data, Mean, Standard Deviation and Paired t test have employed in the study. For the purpose of the study two Indian stock exchanges, NSE and BSE have been selected and total 20 days SENSEX were used i.e. 10 days pre and 10 days post announcement of demonetization. It revealed that in both NSE and BSE stock indices are negatively reacted towards the announcement of demonetization in short term and post demonetization situation was quite different in the stock market.

Sharma, Geetika & Kovid (2017) investigated the impact of demonetization on the performance of NIFTY Index and the sample of 9 National Stock Exchange (NSE) sectoral indices. The comparison of closing price and trading volume of the indices in pre-demonetization and post-demonetization period was conducted using independent sample t-test. The results of the study indicated that there was negative impact of demonetization on various sectors of Indian stock market.

Singh & Singh (2017) analyzed the immediate impact of demonetization on Indian economy and what are the probable consequences of the demonetization. It was concluded that in the Short-term there would be a disruption in the current liquidity situation but in the long-term would have a meaningful impact. Demonetization would higher the tax collection and a better tax to GDP ratio, lower inflation appealing the central bank to reduce interest rates, it increase the tax net and along with GST result in reduction of black money generation.

Singh & Thimmaiah (2017) revealed that the impact of demonetization will have the positive in the long run but the majority of industry currently suffering with huge amount of losses due to that they are not able to support the economy much. It showed that its impact will be

felt in modernization of Indian payment system, reduction in the cost of banking services as well as reduction in high security and safety risks also included curbing banking related corruptions and fostering transparency.

T & Shenoy (2017) analyzed the demone tization effect on performance and volatility of the twelve sectoral indices of NSE in India. It showed that all sectoral indices performed significantly different in pre and post demonetization periods except the PSU bank index and in case of volatility of the sectoral indices results showed no significant difference in pre and post demonetization periods.

Tiwari & Anjum (2017) compared the opinion of banker, management students and management faculties on demonetization and analyzed the impact of demonetization used descriptive research design through self designed questionnaire from Pune. The data was analyzed using mean score, t test, and ANOVA. It found that respondents were moderately satisfied with positive effect of demonetization on reducing fake currency, increase tax compliance. Respondent considered no significant impact of demonetization on terrorism and respondents were neutral regarding execution of demonetization and planning.

Adnan & Hossain (2016) analyzed the differences in stock price reaction due to merger announcement both target and acquiring companies by using event study methodology. It was found that prior to the announcement of merger both the target and acquiring companies CAAR value show an upward trend but post-announcement period day 1 to day 3 that sudden fall down of CAAR for the acquiring company's. It is observed that target companies CAAR value over the period of post-merger announ cement until day 4 is higher than the merger companies CAAR value.

Lodha & Soral (2016) examined the infor mation content of quarterly earnings announcement and

to examine the speed of information of this information into stock prices. The sample consisted of listed companies of NSE during 2012 to 2015. They found, using event study, that Indian stock market is semi-strong efficient and investors quickly absorb the information regarding earning announcement. This helped investors to accommodate this information quickly into stock prices.

Wang, Miao & Wang (2014) studied the announcement effects of the convertible bonds of 50 listed companies in the A-share market of China. The result showed that issuing announcement of the convertible bonds can lead stock prices to decline and the announcement effect of the ordinary convertible bonds is more significant than the convertible bonds with warrants.

Mahmood, Sheikh & Ghaffari (2011) explored the effect of cash paid as dividend on share prices. Value relevance of cash dividend announcement is tested on a sample of around 100 corporate dividend announcements in Karachi Stock Exchange (KSE), during the period of 2005 to 2009. The result showed that dividend announcements are positively value relevant.

Akbar & Baig (2010) analyzed the reaction of stock prices to cash, stock, and simultaneous cash and stock dividend announcements of 79 companies listed on the Karachi Stock Exchange from July 2004 to June 2007. Abnormal returns from the market model are evaluated for statistical significance using the t-test and Wilcoxon Signed Rank Test. The findings suggested insignificant abnormal returns for cash dividend announcements. However, the average abnormal and cumulative average abnormal returns for stock and simultaneous cash and stock dividend announcements are mostly positive and statistically significant.

### Research Gaps

After in depth analysis of available literature it was found that both demonetization and event

study have been separately studied for stock markets but a combination of both was not found in the literature. In other words, researchers could not find any research which has studied the impact of demonetization on stock markets using event study. Further, present research is one of its kinds where impact of demonetization on sectoral indices has also been studied.

### Objectives of the Study

The study has the following objective:

To study the impact of demonetization on Indian stock market and compare the effect on performance of the different sectors.

### Hypotheses

According to the objectives of the study, following two hypotheses were formulated:

**H01:** There is no impact of demonetization on returns of Nifty and selected sectoral indices.

**H02:** There is no significant difference between impacts of demonetization over different sectors. In other words, demonetization has affected equally various sectoral indices.

### Research Methodology of the Study

**Sample Selection:** The main aim of the present study is to examine the impact of demonetization announcement on stock market. For the purpose of the study the Indian stock market NIFTY Index and Eleven sectoral indices of NSE i.e. Auto index, Bank index, Financial Services index, FMCG index, IT index, Media index, Metal index, Pharma index, Private Bank index, PSU Bank index, and Reality index have been selected as sample. The study is based on secondary data and the required data have been collected from official website of NSE and other secondary sources like research journals, articles, research papers and websites.

### Sample Period:

It is an event study thus daily closing values for Nifty and other eleven sectoral indices have been collected from the official website of NSE ([www.nseindia.com](http://www.nseindia.com)). The next day of announcement of demonetization i.e. 9th

November, 2016 has been taken as event day. Ten trading days prior and after the event day constituted the event window. For estimation of alpha and beta of sectoral indices, it was decided to take 60 trading prior to the event window as estimation period. Thus the sample period is 81 trading days from 27th July, 2016 to 24th November, 2016.

Thus daily closing prices for Nifty and eleven sectoral indices were collected for the following periods:

**Event Window:** from 26 October, 2016 to 24 November, 2016 consisting of 21 days.

**Estimation Period:** from 27 July 2016 to 25 October, 2016 consisting of 60 days.

**Event Study Methodology:**

The event study methodology aims at investigating effect of an event on stock prices or index returns which has been taken as dependent variable. The present event study is based on market model which comprises of following five steps:

**1. Defining an event window**

In the present paper, demonetization announcement has been taken as event and the date of this announcement is called the event date. It is the date on which Honorable Prime Minister Shri Narendra Modi announced the cancellation of the legal tender character of Rs. 500 and Rs. 1,000 banknotes.

Since it is not a regular and repetitive event, investors cannot start anticipating the impact of this announcement on a company or an index a few days ago. Event window defines how many days preceding and following the event date to be included in the study.

Therefore, it was proposed to have an event window consisting of:

- Event date ( $t=0$ )
- Ten trading days prior to event date ( $t-1, t-2, \dots, t-10$ )
- Ten trading days after the event date ( $t+1, t+2, \dots, t+10$ )

Since this was one of the rarest announcements that could be made by any government, only one event window for each of the sectoral index was framed.

**2. Defining estimation period**

In order to estimate the stock returns, had the event not been occurred, an estimation period has to be specified. The estimation period gives the unbiased estimate of returns of a security if the event had not taken place. It may be prior or post event date. For the present research, an estimation period of 60 trading days prior to the event window was considered to be appropriate. The data for estimation period was separately collected for each of the indices.

Figure 2 gives an overview of event window and estimation period.

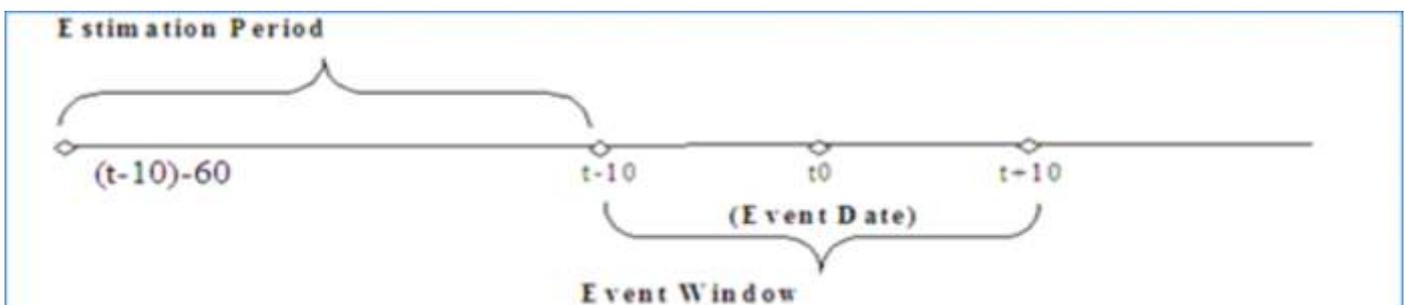


Figure 2: Time Line of the Estimation Period and Event Window

The demonetization announcement was made on November 8th 2016 on evening so November 9th 2016 is selected as the event day (t =0) for this study. The event window is set as 21 days and is considered as t-10 to t+10 to the event day t = 0. The estimation window is from t-70 to t-11 i.e. 60 days prior to the start of event window.

### 3. Estimating Expected Returns

For estimating the effect of demone tization announcement over indices, returns have been calculated as follows:

- Index Returns  $R_{it} = \log(P_{it} - P_{(it-1)})$   
Equation 1

- Market Returns  $R_{mt} = \log(P_{mt} - P_{mt-1})$   
Equation 2

Here, Rit is return from sectoral index i at time t, Pit is the price of sectoral index i at time t, Pit-1 is price of sectoral index i at time t-1, Rmt is the return from market index (Nifty)m at time t, Pmt is the value of market index (Nifty)m at time t and Pmt-1 is the value of market index (Nifty) m at time t-1.

These calculated returns for both sectoral index and for market index (Nifty) are realized or actual returns. These returns are to be compared with expected returns or normal returns. The normal returns have been calculated on the basis of estimation period using market model. The market model uses the following OLS regression equation:

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} + \epsilon_{it} \text{Equation 3}$$

The E (Rit) is the expected or normal return from sectoral index i at time t,  $\alpha_i$  is intercept coefficient,  $\beta_i$  is the slope coefficient (or sensitivity of the sectoral index to market returns), Rmt is return on market index m at time t and  $\epsilon_{it}$  is residuals.

The  $\alpha$  and  $\beta$  coefficients are estimated by regressing sectoral index returns on market index returns for each of the estimation period. These coefficients have been used to

estimate expected or normal returns from the sectoral index over the relevant event window on the basis of actual market index returns during the same window.

### 4. Abnormal Returns and Cumulative Abnormal Returns (AR and CAR)

After calculating expected or normal returns, it has to be confirmed whether actual returns deviate from the expected ones. So, abnormal returns have been calculated by taking the difference of actual returns and expected returns for the security over the event window.

$$AR_t = R_{it} - E(R_{it}) \text{Equation 4}$$

Where ARt is Abnormal Returns from sectoral index i at time t, Rit is Actual Returns from sectoral index i at time t and E (Rit) is the Expected or normal returns from sectoral index i at time t

For computation of cumulative abnormal returns, the individual day's abnormal return (AR) is added together from the beginning of the period to some specified period and is tested for significance. Abnormal returns are then cumulated to have Cumulative Abnormal Returns (CAAR) as follows:

$$CAR_{(t1, t2)} = \sum_{t=t1}^{t2} AR_{it} \text{Equation 5}$$

### 5. Significance Testing

The procedure by Brown & Warner (1985) was followed in the statistical analysis to test the significance of the cumulative average abnormal returns in terms of the null hypothesis that such returns are equal to zero. It follows a t-distribution and is formulated as:

$$t_{(AR)} = \frac{CAR_{(i,t)}}{(\sigma_{(AR)}) / \sqrt{N}} \text{Equation 6}$$

Here,  $\sigma_{(AAR)}$  is the standard deviation of AR and N is the number of earnings announcement on day t. Significance testing of CAR can also be done in a similar way:

$$t_{((CAR))} = \frac{?CAR?_t}{(?_((CAR)))/?d}$$

Equation 7

Here,  $\sigma(AAR)$  is the standard deviation of CAR and  $d$  stands for number of days for which the AR is cumulated. These calculated  $t$  values were tested at 5 % level of significance.

### Analysis

Table 1 shows the Alpha (Intercept or Constant) and Beta (slope) values for all sectoral indices along with their standard error and R-square.

**Table 1 : Alpha and Beta Values of Sectoral Indices during Estimation Period**

Index	Alpha	Beta	St. Error	R-Square
Auto	0.121709	1.425846	0.489251	0.76024
Bank	0.053411	1.276252	0.341045	0.839437
Financial Service	0.033055	1.263193	0.277136	0.885795
FMCG	-0.05055	0.761515	0.462579	0.502923
IT	-0.10177	0.255886	0.694691	0.04821
Media	0.091323	0.091323	0.091323	0.091323
Metal	0.125147	1.397773	0.77981	0.545344
Pharma	-0.01273	0.965455	0.485537	0.596137
Private Bank	0.038902	1.250399	0.383454	0.798783
PSU	0.162526	1.827597	0.88054	0.616602
Realty	0.004438	1.471122	0.873301	0.514423

Table 1 shows that except for IT and Media sector, R-square is greater than 50% for all other indices. This shows that the variations in these sectoral indices could be better explained by variations in Nifty. The sign of intercept (alpha) tells the relationship between sectoral index and Nifty. All indices are positively correlated with Nifty except FMCG, IT and Pharma which are negatively correlated with Nifty.

If we look at Beta (slope) coefficients it is revealed

that except 4 indices, all other indices have beta values of greater than 1, which shows their higher volatility than Nifty. The Sectoral indices FMCG, IT, Media and Pharma have beta values less than one which implies that these indices are less volatile than Nifty. These alpha and beta values were then used as inputs to market model to calculate expected returns from these indices and thereafter calculate Abnormal Returns.

**Table 2 : Abnormal Return and T-Statistic for NSE Sectoral Indices**

Days	Auto		Bank		Fin. Serv*		FMCG		IT		Media	
	AR	t-stat.	AR	t-stat.	AR	t-stat.	AR	t-stat.	AR	t-stat.	AR	t-stat.
T-10	0.356	0.727	-0.511	-1.498	-0.313	-1.129	-0.140	-0.303	-0.615	-0.885	0.674	0.796
T-9	-0.938	-1.918	-0.169	-0.496	0.473	1.708	0.807	1.745	-0.917	-1.320	-0.433	-0.512
T-8	0.047	0.096	-0.103	-0.303	0.079	0.284	0.108	0.233	-0.106	-0.153	-0.333	-0.393
T-7	0.065	0.134	0.005	0.015	0.038	0.137	0.080	0.172	0.197	0.283	0.863	1.020
T-6	0.281	0.574	-0.313	-0.917	0.112	0.405	-0.364	-0.787	-0.313	-0.451	-0.550	-0.649
T-5	0.724	1.480	0.157	0.461	0.246	0.889	-0.101	-0.218	-1.089	-1.567	-0.985	-1.164
T-4	0.092	0.187	0.255	0.748	0.307	1.108	0.426	0.921	-0.349	-0.502	-0.155	-0.183
T-3	-0.199	-0.406	0.077	0.227	-0.052	-0.187	3.051	<b>6.596*</b>	0.362	0.521	-0.139	-0.164
T-2	-0.718	-1.468	0.227	0.664	-0.253	-0.914	0.013	0.028	1.225	1.763	-0.031	-0.036
T-1	0.656	1.340	0.419	1.228	0.180	0.650	-0.131	-0.283	0.094	0.136	-0.172	-0.203
T	0.663	1.356	1.248	<b>3.660*</b>	0.987	<b>3.562*</b>	-0.964	<b>-2.085*</b>	-3.225	<b>-4.642*</b>	-0.915	-1.081
T+1	-2.742	<b>-5.605*</b>	1.223	<b>3.586*</b>	-0.195	-0.704	-0.233	-0.504	0.756	1.088	0.787	0.930
T+2	-1.344	<b>-2.748*</b>	2.166	<b>6.352*</b>	0.861	<b>3.108*</b>	-1.020	<b>-2.205*</b>	-1.536	<b>-2.212*</b>	-0.926	-1.094
T+3	-2.157	<b>-4.409*</b>	0.725	<b>2.125*</b>	0.312	1.126	-0.845	-1.826	0.005	0.007	-1.266	-1.495
T+4	0.114	0.233	-0.464	-1.362	0.055	0.198	-0.973	<b>-2.103*</b>	1.907	<b>2.745*</b>	0.303	0.359
T+5	0.451	0.922	-0.303	-0.889	0.191	0.690	-0.141	-0.305	-0.267	-0.385	0.179	0.211
T+6	0.327	0.669	-0.244	-0.717	-0.274	-0.988	-0.243	-0.524	-0.662	-0.952	-1.748	<b>-2.065*</b>
T+7	-0.023	-0.047	-0.609	-1.786	-0.233	-0.841	-0.211	-0.456	0.295	0.424	-1.608	-1.899
T+8	-0.077	-0.157	-0.707	<b>-2.074*</b>	-0.247	-0.891	0.459	0.992	0.451	0.649	0.130	0.154
T+9	0.082	0.167	-0.476	-1.396	-0.366	-1.321	0.133	0.288	0.299	0.431	0.439	0.519
T+10	-0.496	-1.013	-0.636	-1.866	-0.464	-1.676	0.070	0.152	1.006	1.448	-0.264	-0.312

**Table : Abnormal Return and T-Statistic for NSE Sectoral Indices (Contd.)**

Days	Metal		Pharma		Private Bank		PSU		Realty	
	AR	t-stat.	AR	t-stat.	AR	t-stat.	AR	t-stat.	AR	t-stat.
T-10	0.367	0.470	0.372	0.765	-0.559	-1.458	0.178	0.202	1.075	1.231
T-9	-0.994	-1.275	0.307	0.632	-0.088	-0.230	-1.032	-1.172	-0.382	-0.437
T-8	0.711	0.912	0.298	0.613	-0.141	-0.367	-0.372	-0.423	0.182	0.208
T-7	0.611	0.783	0.303	0.623	0.026	0.069	-0.064	-0.072	0.541	0.619
T-6	1.974	<b>2.532*</b>	-0.187	-0.386	-0.395	-1.029	-0.023	-0.026	-0.344	-0.394
T-5	2.079	<b>2.665*</b>	-0.694	-1.429	0.217	0.565	-0.429	-0.487	-0.407	-0.466
T-4	0.661	0.848	-1.215	<b>-2.502*</b>	0.470	1.226	-1.406	-1.597	-0.805	-0.922
T-3	-1.360	-1.745	-3.665	<b>-7.549*</b>	0.251	0.655	-1.147	-1.303	-1.418	-1.623
T-2	-0.363	-0.466	0.540	1.111	0.137	0.357	0.863	0.980	-0.807	-0.924
T-1	0.304	0.390	-1.139	<b>-2.347*</b>	0.441	1.150	0.101	0.114	-0.370	-0.423
T	-0.129	-0.166	0.026	0.053	0.824	<b>2.149*</b>	3.691	<b>4.192*</b>	-8.669	<b>-9.927*</b>
T+1	2.441	<b>3.130*</b>	2.418	<b>4.980*</b>	0.870	<b>2.268*</b>	3.509	<b>3.985*</b>	-2.106	<b>-2.411*</b>
T+2	2.925	<b>3.750*</b>	1.477	<b>3.043*</b>	1.622	<b>4.230*</b>	5.164	<b>5.864*</b>	-2.013	<b>-2.305*</b>
T+3	-0.500	-0.642	0.745	1.533	0.002	0.006	3.877	<b>4.403*</b>	-0.796	-0.912
T+4	-1.536	<b>-1.970*</b>	-0.702	-1.446	-0.948	<b>-2.472*</b>	1.927	<b>2.188*</b>	-1.153	-1.320
T+5	0.350	0.448	-0.650	-1.339	-0.278	-0.724	0.236	0.268	0.013	0.015
T+6	-0.585	-0.750	1.036	<b>2.134*</b>	-0.170	-0.442	0.093	0.106	1.821	<b>2.085*</b>
T+7	-0.920	-1.179	1.200	<b>2.471*</b>	-0.373	-0.974	-1.885	<b>-2.140*</b>	-0.578	-0.662
T+8	0.204	0.261	0.250	0.515	-0.232	-0.604	-3.137	<b>-3.562*</b>	-0.954	-1.092
T+9	1.828	<b>2.344*</b>	0.854	1.759	-0.362	-0.944	-0.928	-1.053	2.473	<b>2.831*</b>
T+10	1.830	<b>2.346*</b>	0.332	0.684	-0.852	<b>-2.223*</b>	0.825	0.937	0.931	1.066

Table 2 shows the Abnormal returns and their t-statistics. The significance of t-statistic has been highlighted in Bold i.e. wherever the t-statistics is Bold, it shows that the t-statistic is significant at 5% level of significance. Table 2 reveals that FMCG, Metal and Pharma sectors had significant abnormal returns before the event day, but it is not because of demonetization as this announcement was of a kind which nobody could anticipate. On the event day i.e. on 9th November, 2016, Bank, Financial Services, Private Bank and PSU produced significantly different positive abnormal returns whereas FMCG, IT and Realty sectors experienced significantly different negative abnormal returns. Abnormal returns of auto, Media, Metal and Pharma sector were not significant. Among these, highest positive abnormal returns were of

PSU and Bank sectors whereas highest negative abnormal returns were of Realty and IT sector.

As far as post event window i.e. ten days after the event is considered, the highest positively affected indices were PSU, Bank and Private bank sector which produced continuous significantly different abnormal returns for five, four and three trading days respectively. Returns for PSU turned to be significantly negative from seventh day onwards. Bank and Private Bank sectors also started producing negative returns from fourth day of the event.

In the post event window, Pharma and Metal sectors had significant positive abnormal returns for two days post event and Auto sector had significant negative abnormal returns for three days post event.

**Table 4 : Cumulative Abnormal Returns of Sectoral Indices**

Time	Auto	Bank	Fin Ser	FMCG	IT	Media	Metal	Pharma	Pvt Bank	PSU	Realty
t-10	0.36	-0.51	-0.31	-0.14	-0.61	0.67	0.37	0.37	-0.56	0.18	1.08
t-9	-0.58	-0.68	0.16	0.67	-1.53	0.24	-0.63	0.68	-0.65	-0.85	0.69
t-8	-0.54	-0.78	0.24	0.77	-1.64	-0.09	0.08	0.98	-0.79	-1.23	0.88
t-7	-0.47	-0.78	0.28	0.85	-1.44	0.77	0.69	1.28	-0.76	-1.29	1.42
t-6	-0.19	-1.09	0.39	0.49	-1.75	0.22	2.67	1.09	-1.16	-1.31	1.07
t-5	0.53	-0.93	0.64	0.39	-2.84	-0.76	4.75	0.40	-0.94	-1.74	0.67
t-4	0.63	-0.68	0.94	0.82	-3.19	-0.92	5.41	-0.82	-0.47	-3.15	-0.14
t-3	0.43	-0.60	0.89	3.87	-2.83	-1.06	4.05	-4.48	-0.22	-4.30	-1.56
t-2	-0.29	-0.38	0.64	3.88	-1.61	-1.09	3.68	-3.94	-0.08	-3.43	-2.36
t-10	0.36	0.04	0.82	3.75	-1.51	-1.26	3.99	-5.08	0.36	-3.33	-2.73
t	1.03	1.29	1.81	2.78	-4.74	-2.17	3.86	-5.06	1.18	0.36	-11.40
t+1	-1.71	2.52	1.61	2.55	-3.98	-1.39	6.30	-2.64	2.05	3.87	-13.51

t+2	-3.06	4.68	2.47	1.53	-5.52	-2.31	9.22	-1.16	3.68	9.03	-15.52
t+3	-5.22	5.41	2.78	0.69	-5.51	-3.58	8.72	-0.42	3.68	12.91	-16.32
t+4	-5.10	4.94	2.84	-0.29	-3.60	-3.28	7.19	-1.12	2.73	14.84	-17.47
t+5	-4.65	4.64	3.03	-0.43	-3.87	-3.10	7.54	-1.77	2.45	15.07	-17.46
t+6	-4.32	4.39	2.76	-0.67	-4.53	-4.84	6.95	-0.73	2.28	15.17	-15.64
t+7	-4.35	3.79	2.52	-0.88	-4.24	-6.45	6.03	0.47	1.91	13.28	-16.22
t+8	-4.42	3.08	2.28	-0.42	-3.79	-6.32	6.24	0.72	1.68	10.14	-17.17
t+9	-4.34	2.60	1.91	-0.29	-3.49	-5.88	8.06	1.57	1.32	9.22	-14.70
t+10	-4.84	1.97	1.44	-0.22	-2.48	-6.15	9.89	1.90	0.46	10.04	-13.77



Figure 3: Cumulative Abnormal Returns of Sectoral Indices (1)

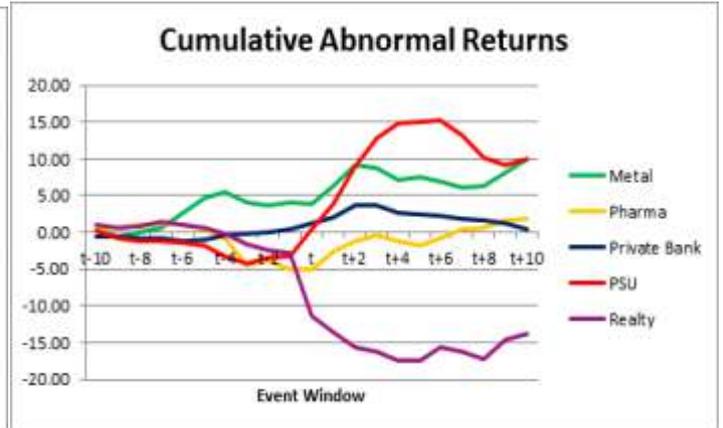


Figure 4: Cumulative Abnormal Returns of Sectoral Indices (2)

Table 4, Figure 3 and Figure 4 displays the cumulative abnormal returns of the sectoral indices during the event window. The performances of different sectoral indices are very different from each other. As was earlier noticed in case of abnormal returns, the performance of Bank, Financial Service, Private Bank and PSU was better in post event period than in pre event period. All these sectoral indices produced positive cumulative abnormal returns (CAR). Realty sector produced highest negative cumulative abnormal returns (CAR), proving it to be the most adversely affected index of NSE due to demonetization. Other sectoral indices which produced negative CAR in post event period were Auto, IT and Media. CARs of FMCG turned to be negative eventually after a slight rise after the event day. Metal index was a surprise to show substantial increase in CAR in post event period despite struggling between 0 to 2% CAR in pre event period.

**Conclusion**

This paper attempts to explore the size of impact of demonetization over various sectoral indices of NSE. For this purpose daily closing prices of Nifty and eleven sectoral indices were collected from 27th July 2016 to 24th November 2016 consisting of 81 trading days. These days include 60 days for estimation period and 21 days for event window. The event date was taken as 9th November, 2016. Returns were calculated for Nifty and sectoral indices by log-differencing to avoid non-stationarity of the data. Alpha (intercept) and beta (slope) coefficients were calculated by regressing returns of sectoral indices over returns of Nifty for the estimation period. These alpha and beta values were then used to measure expected returns from sectoral indices during event window using Market Model. Abnormal returns (AR) were calculated by differencing actual returns and expected returns and these abnormal returns were cumulated to find out Cumulative Abnormal Returns (CAR). Later t-test was used to test their significance.

Empirical analysis shows that demonetization has affected different indices in a different way. Bank, Financial services, PSU and Private Bank yielded highest positive AR and CAR. The result was as expected as the compulsory exchange or deposition of cancelled currency brought their cash position better thereby increasing their liquidity. Realty sector was having highest negative AR and CAR. This was again for the reason that market was having crunch of liquidity and people were more worried about basic needs and other necessity rather than thinking of investment in real estate. Auto, IT and Media sector also produced negative ARs and CARs.

### References

- Adnan, A., & Hossain, A. (2016). Impact of M&A Announcement on Acquiring and Target Firm's Stock Price: An Event Analysis Approach. *International Journal of Finance and Accounting*, 5(5): 228-232.
- Akbar, M., & Baig, H. H. (2010). Reaction of Stock Prices to Dividend Announcements and Market Efficiency in Pakistan. *The Lahore Journal of Economics*, 15: 1103-125.
- Chakravorti, B. (2017, march 14). Early Lessons from India's Demonetization Experiment. *Harvard Business Review*.
- Fama, E.F., Fisher, L., Jensen, M.C. and Roll. R. (1969). The Adjustment of Stock Price to New Information. *International Economic Review*, 10(1) 1-21.
- Jain, R. (2017). Is Demonetisation a Windfall for the banking sector? Evidence from the Indian stock market. *Economics Bulletin*, Volume 37, Issue 2, 712-722.
- Jain, S. K., Shekhar, C., & Deshpande, S. (2017). Market Reaction to Demonetization : An Empirical Study Using Event Study Technique. *International Educational Scientific Research Journal*, Volume : 3 Issue : 5 E-Issn No : 2455-295X.
- Rajini, K. & Shanthini, B. (2017). Impact of Demonetization - A Conceptual Framework. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, e-ISSN: 2279-0837, p-ISSN: 2279-0845 11-14.
- Lodha, S. & Soral, G. (2016). Investors' Behaviour towards Earnings Announcements: An Event Study in Indian Stock Market. *Indian Journal of Accounting*, (Online Issue), 1 (1), 47-61.
- Mahajan, P., & Singla, A. (2017). Effect of Demonetization on Financial Inclusion in India. 6th International Conference on Recent Trends in Engineering, Science & Management, (pp. ISBN: 978-93-86171-21-4). Punjab.
- Mahmood, S., Sheikh, M. F., & Ghaffari, A. Q. (2011). Dividend Announcements and Stock Returns: An event study on Karachi stock exchange. *Interdisciplinary Journal of Contemporary research in Business*, Volume 3 Issue 8.
- Masood, S., & Ali, M. M. (2017). Volatility in Indian Stock Market - Pre and Post Demonetization. *Airo International Research Journal*, Volume IX, ISSN: 2320-3714.
- Chellasamy, P. & Anu. K.M. (2017). Impact of Demonetisation on Indian Stock Market: With Special Reference to Sectoral Indices in National Stock Exchange of India. *IOSR Journal of Economics and Finance (IOSR-JEF)*, Volume 8, Issue 3 Ver. I PP 51-54.
- Padmavathy, S., Umashankar, M., & Indhu, V. (2017). Share Price Behavior Around demonetization. *International Journal of Management Research & Review*, Volume 7 Issue 6 665-673.
- Prakash, A. S. (2013). Event Study Test of Incorporating Earning Announcement on Share Price. *IOSR Journal of Economic & Finance (IOSR-JEF)*, Volume 2 Issue 1 09-18.
- Bharadwaj, R., Mohith, S., Pavithra, S. & Ananth, A. (2017). Impact of Demonetization on Indian Stock Market. *International Journal of Management (IJM)*, Volume 8, Issue 3 75-82.
- Devarajappa, S. (2017). Market Reaction Towards the Announcement of

- Demonetization in India: A Case Study of BSE & NSE. *EPR International Journal of Economic and Business Review*, Vol - 5, Issue- 6 88-92.
- Sathyanarayana, S., & Gargasha, P. S. (2017). The Impact of Policy Announcement on Stock Market Volatility: Evidence from Currency Demonetisation in India. *IOSR Journal of Business and Management (IOSR-JBM)*, ISSN: 2319-7668. Volume 19, Issue 1. Ver. VII (Jan. 2017), 47-63.
  - Sharma, P., Geetika, & Kovid, R. K. (2017). Demonetization and Stock Market Performance: Evidences from India. *International Journal of Research in Finance and Marketing (IJRFM)*, Vol. 7 Issue 6, pp. 155~165.
  - Singh, B., & Thimmaiah, N. B. (2017). Demonetization - Won or Lost. *Acme Intellects International Journal of Research in Management, Social Sciences & Technology*, Vol- 17 ISSN 2320 - 2939.
  - Singh, P., & Singh, V. (2017). Impact of Demonetization on Indian Economy. *International Journal of Science Technology and Management*, Volume 5, Issue 12 625-635.
  - Singh, V. (2017). An Analysis of the Demonetization Effect on Sectorial Indices in India. *International Journal of Engineering Technology, Management and Applied Sciences*, Volume 5, Issue 4, ISSN 2349-4476 378-382.
  - Sunil T, S. V. (Vol. 7 Issue 5, May - 2017). Impact of Demonetization on Stocks of Selected Sectors - An Event Study. *International Journal of Research in Finance and Marketing (IJRFM)*, 29-38.
  - Tiwari, R., & Anjum, B. (2017). Review of Demonetization in India. *SaiBalaji International Journal of Management Sciences*, Volume 1, Issue V, ISSN.2349-6568.
  - Wang, B., Miao, J., & Wang, F. (2014). Research on the Announcement Effects of the Convertible Bonds in the A-Share Market of China. *Modern Economy*, 5, 333-340.
  - Yohavarshini, G., Madhumamtha, B., & Priya, C. (2017). A Study on Demone tisation in India and Its Effectuations. *International Journal of All Research Education and Scientific Methods (IJARESM)*, Volume 5, Issue 1 ISSN: 2455-6211,.
  - <http://www.spellerstep.com/latest/biggest-demonetization-failures-world>. Retrieved on 08/05/2017
  - [https://www.quora.com/Has-any-country-other-than-India-ever-had-Demone tization-of-their-currency-notes-1](https://www.quora.com/Has-any-country-other-than-India-ever-had-Demone-tization-of-their-currency-notes-1). Retrieved on 08/05/2017
  - <http://www.indiatimes.com/news/world/here-s-a-list-of-countries-that-have-tried-demonetisation-before-india-265743.html>. Retrieved on 08/05/2017

# Awareness of Quality Standards in Health care : An Exploratory Study

\*Dr. Pallavi Mehta, \*\*Mr. Bhagirath Chavda

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Rapid and significant change in the consumer's awareness level and rapid transformation in the health care system has provoked cautious investigation of the quality of health care services and the effectiveness of the quality standards as well as other prominent methods used to review and improve quality. It is well investigated that improvement in the quality of health care will take the strenuous and cooperative efforts of health policymakers, health care practitioners, health care service providers, health organizations, consumers of care, purchasers of care, and those organizations that define the state of the art and monitor the quality of health care services.

**Key Words:** *Consumer's Awareness, Health Care Services, Quality Standards.*

## Healthcare Industry

Engaging and supporting the growth of the health care industry has been an important element of public policy. The private health care industry is valued at \$40 billion and is projected to grow to \$ 280 billion by 2020 as per market sources. The current growth rate of this perennially and most rapidly growing area of the economy, the healthcare industry, at 14% is projected to be 21% in the next decade. Even during the global recession of 2008, this sector remained relatively recession-proof. The private health care industry is complex and differentiated. It includes insurance and equipment, which accounts for about 15%, pharmaceuticals which accounts for over 25%, about 10% on diagnostics and about 50% is hospitals and clinical care. The private sector growth cannot be seen merely as a consequence of limited public sector investment. The Government has had an active policy in the last 25 years of building a positive economic climate for the health care industry. Amongst these measures are lower direct taxes; higher depreciation in medical equipment; Income Tax

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exemptions for 5 years for rural hospitals; custom duty exemptions for imported equipment that are lifesaving; Income Tax exemption for Health Insurance; and active engagement through publicly financed health insurance which now covers almost 27% of the population. Further forms of assistance are preferential and subsidized allocation of land that has been acquired under the public acquisitions Act, and the subsidized education for medical, nursing and other paramedical professional graduating from government institutions and who constitute a significant proportion of the human resources that work for the private sector; and the provision for 100% FDI. Indeed in one year alone 2012-13-as per market sources the private health care industry attracted over 2 billion dollars of FDI much of it as venture capital. For International Finance Corporation, the section of the World Bank investing in private sector, the Indian private health care industry is the second highest destination for its global investments in health. While recognizing that the growth of such industry brings in revenue through medical tourism and that it provides employment, there is a necessity and a rationale for the health Ministry to intervene and to actively shape the growth of this sector for ensuring that it is aligned to its overall health policy goals, especially with regards to access and financial protection. There is also a need to ensure that excessive capitalization and overcrowding in a few cities does not lead to demands on public financing, and that the basic policy structure, especially as regards costs, standards and regulation is not

unduly influenced by the requirements and perceptions of industry.

### Objectives and Hypothesis of the Study

The main objective of the research is to study the level of awareness of among patients and employees towards Quality Standards.

- **H01:** The awareness among patients towards quality standards have no significant relationship with socio demographic factors.
- **Ha1:** The awareness among patients towards quality standards have a significant relationship with socio demographic factors.

### Research Methodology

It is an exploratory type of research to study the relationships between different variables. The target population of the study included both employees working at public and private hospitals and patients of the selected hospitals. The primary data is collected for analysis and interpretations are discussed along with application of chi-square test for hypothesis testing

### Sample Size

The sample size taken for the research was 500 employees. The respondents were selected on random basis. The sample included employees of public and private hospitals and their patients. The detailed distribution of the sample size is as-

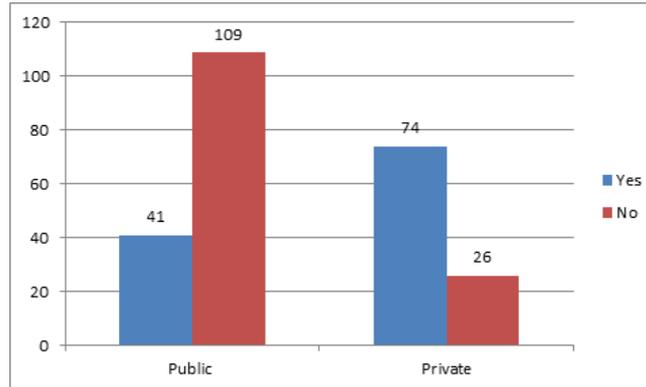
### Data analysis and Interpretation

This hypothesis was tested by cross tabulating awareness about quality standards among patients with various socio demographic factors like on the basis of type of hospital, gender and income of employees

**Table 1: Awareness about quality standards among patients of public and private hospital**

Awareness of quality standards among Patients	Type of Hospital				Total
	Public		Private		
	Frequency	Percent	Frequency	Percent	
Yes	41	27.33%	74	74%	115
No	109	72.67%	26	26%	135
Total	150		100		250

**Graph 1: Awareness about quality standards among patients of public and private hospital**



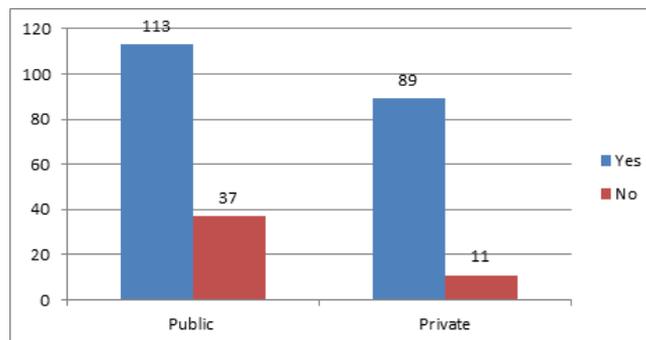
**Interpretation:** The above table and graph shows that out of 250 patients 115 are aware about the quality standards and 135 do not know about quality standards in healthcare. Out of 150 patients of public sector healthcare 109 (72.67%)

are unaware about the quality standards and maximum 74% patients from private hospitals are aware about the quality standards as compared to the patients of public hospitals.

**Table 2: Awareness about quality standards among employees of public and private hospital**

Awareness of quality standards	Type of Hospital				Total
	Public		Private		
	Frequency	Percent	Frequency	Percent	
Yes	113	75.33%	89	89%	202
No	37	24.67%	11	11%	48
Total	150		100		250

**Graph 2: Awareness about quality standards among employees of public and private hospital**



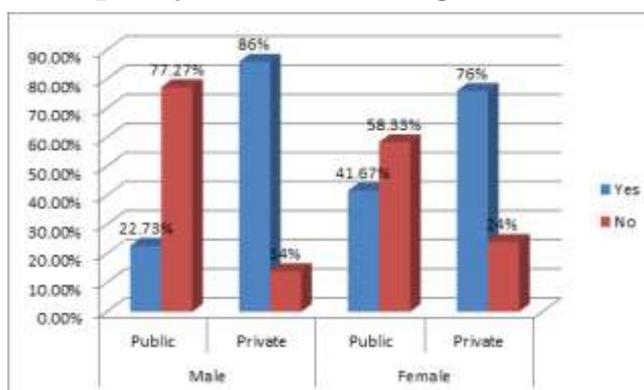
**Interpretation:** The above table and graph shows that the maximum no. of employees in both public and private health facility providers 75.33% and 89% are aware about the health

quality standards. Only 11 employees of private and 37 employees of public were unaware about the various quality standards recommended to provide improved quality healthcare.

**Table 3: Awareness of quality standards among Patients on the basis of Gender**

Awareness of quality standards	Gender of sampled patients								Total
	Male				Female				
		Public		Private		Public		Private	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Yes	15	22.73%	43	86%	35	41.67%	38	76%	131
No	51	77.27%	7	14%	49	58.33%	12	24%	119
Total	66		50		84		50		250

**Graph 3: Awareness of quality standards among Patients on the basis of Gender**



**Interpretation:** The above table and graph shows that when classified on the basis of gender, females patients of both the public and private hospitals are more aware as compared to males. 76% females selected from private hospitals are

aware and 41.67% females from public hospitals are well aware about the need of quality standards in health care. In comparison to this only 27.73% male from public hospitals 86% from private hospitals are well aware.

**Table 10: On the basis of Type of Hospital**

Awareness of quality standards among Patients on the basis of Type of Hospital			
	Public	Private	Total
Yes	50	81	131
No	100	19	119
Total	150	100	250

**Table 11: Chi square value**

Tabular Value	Calculated Value	Degree of Freedom	H0 Accepted or Rejected
3.84	72.12	1	Rejected

\*At 95% level of significance

**Interpretation:** The null hypothesis says that the awareness among patients towards quality standards have no significant relationship with type of hospital. The null hypothesis is rejected when statistically tested by applying chi square at 95% level of significance. The calculated value

of chi square is more than the tabulated value at 1 degree of freedom and so the null hypothesis that the two attributes are independent is rejected, which proves that the 2 attributes awareness of quality standards and type of hospitals are associated with each other.

**Table 12: Awareness of Quality Standards among Employees on the basis of Type of Hospital**

Awareness of quality standards among Employees on the basis of Type of Hospital					
	Public		Private		Total
Yes	113		89		202
No	37		11		48
Total	150		100		250

**Table 13: Chi Square value**

Tabular Value	Calculated Value	Degree of Freedom	H0 Accepted or Rejected
3.84	7.21	1	Rejected

\*At 95% level of significance

**Interpretation:** The awareness among employees towards quality standards has no significant relationship with type of hospital. The null hypothesis is rejected when statistically tested by applying chi square at 95% level of significance. The calculated value of chi square is

more than the tabulated value at 1 degree of freedom and so the null hypothesis that the two attributes are independent is rejected, which proves that the two attributes awareness of quality standards and type of hospitals are associated with each other.

**Table 14: Awareness of Quality Standards among Patients on the basis of Gender**

Awareness of quality standards among Patients on the basis of Gender					
	Male		Female		Total
	Public	Private	Public	Private	
Yes	15	43	35	38	131
No	51	7	49	12	119
Total	66	50	84	50	250

**Table 15: Chi Square Value**

Tabular Value	Calculated Value	Degree of Freedom	H0 Accepted or Rejected
7.815	63.901	3	Rejected

\*At 95% level of significance

**Interpretation:** When the null hypothesis of no significant relationship between awareness of quality standards among patients and gender was tested by applying chi square test. The results shows that the null hypothesis stands rejected at 95% level of significance and 3 degree

of freedom. As the tabulated value 7.81 is less than the calculated value and so the two variables under study does have a significant relationship with each other. We can interpret that the gender of patients has a significant relationship with the awareness about quality standards in healthcare.

**Table 16: Awareness of Quality Standards among Employees on the basis of Gender**

Awareness of quality standards among Employees on the basis of Gender					
	Male		Female		Total
	Public	Private	Public	Private	
Yes	59	29	70	44	202
No	7	21	14	06	48
Total	66	50	84	50	250

**Table 17: Chi Square Value**

Tabular Value	Calculated Value	Degree of Freedom	H0 Accepted or Rejected
7.815	369.165	3	Rejected`

\*At 95% level of significance

**Interpretation:** The null hypothesis of no significant relationship between awareness of quality standards and gender of employees was tested. The employees when classified on the basis of gender to statistically test their awareness level, the null hypothesis stands rejected at 95% level of significance and 3 degree of freedom. As the tabulated value is less than the

calculated value and so the two variables under study does have a significant relationship with each other. The null hypothesis is rejected when tested by using chi square and so we can interpret that the gender of employees has a significant relationship with the awareness about quality standards in healthcare.

**Table 18: Awareness of Quality Standards among Employees on the basis of Income**

Awareness of quality standards among Employees on the basis of Income											
	Below Rs. 20000		Rs. 20000 - 30000		Rs. 30000 - 40000		Rs. 40000 - 50000		Above Rs. 50000		Total
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	
Yes	5	24	19	8	52	11	26	22	25	10	202
No	5	12	1	7	13	3	4	1	0	2	48
Total	10	36	20	15	65	14	30	23	25	12	250

The awareness level of employees is classified on the basis of income and hospital category as shown in the table above. Total 207 employees are aware, out of which maximum 52 employees from public hospital and are from income group

30000-40000. The data reveals that different income groups show different level of awareness to test this difference we applied chi square and the test results are shown below.

**Table 19: Chi Square Value**

Tabular Value	Calculated Value	Degree of Freedom	H0 Accepted or Rejected
16.9	382.69	9	rejected

\*At 95% level of significance

**Interpretation:** The respondents were classified on the basis of income to study the relationship between the attribute under study I.e. Awareness of quality standards among Employees and their Income. The null hypothesis states that the awareness among employees towards quality standards has no significant relationship with income of the employees of both public and private sector. The null hypothesis is rejected as

the calculated value of chi square is more than the tabular value at 95% level of significance and 9 degree of freedom. It can be inferred that the awareness of quality standards among Employees and their Income have a significant relationship with each other which means that people with different income levels will show different level of awareness.

**Table 20: Awareness of quality standards among Employees on the basis of Age Group**

Age group	Awareness				
	Employees		Patients		
	Yes	no	yes	no	
21 -30 Years	35	11	21	19	86
31 -40 Years	113	13	77	18	221
41 -50 Years	40	17	20	41	118
51 -60 Years	14	7	13	28	62
60 Years & Above	-	-	-	13	13
	202	48	131	119	500

**Table 21: Chi Square value**

Tabular Value	Calculated Value	Degree of Freedom	H0 Accepted or Rejected
21.026	3207.01	12	rejected

\*At 95% level of significance

**Interpretation:** The respondents were classified on the basis of age to study the relationship between the attribute under study I.e. Awareness of quality standards among Employees and patients and their age. The null hypothesis states that the awareness among employees towards quality standards has no significant relationship with age of the respondents of both public and private sector. The null hypothesis is rejected as

the calculated value of chi square is more than the tabular value at 95% level of significance and 12 degree of freedom. It can be inferred that the awareness of quality standards among respondents and their age have a significant relationship with each other which means that people with different age groups will show different level of awareness

## Discussion and Conclusion

The purpose of health care delivery is to provide holistic, patient centered, respectful, timely, safe, high quality, efficient and effective services to the patients addressing their individual health care needs in a safe environment. Integral to the success of this target is quality of healthcare. Along with the doctors, nurses are among the front line care providers. In contrast to doctors nurses spend the major bulk of their duty time with the patients, as such, their role in the care coordination across the continuum from illness to wellness is immense. Quality of health care depends upon minimization of risks and proper diagnosing the patients problems and overcoming the challenges that need attention and care interventions, but service providers are not aware about quality standards and so are not able to contribute in health enhancement and health improvement also some of the patients do not understand the importance of quality standard and are not aware about the recent updation in health policy.

Continuous improvement and sustainability is a cause for concern among service providers so that quality assessment is done through systematic techniques and involves a process which is rational and have a strategic vision of quality. In the contemporary context of quality standards in health specially within the scope of hospitals, significant focus has been placed on the implementation of quality standard and accreditation system which is defined as a systematic method allowed for quality assessment of services. According to previously defined standards, the study revealed interesting information about the inclination of public and private hospitals towards adoption of quality standards. It is clear that the success of implementation and monitoring of accreditation depends on rational, innovative and participative human resources. The employees and the patients suggested that benefits of

hospital accreditation are related to the enhancement of service quality and increases patient satisfaction. The quality standards encourage health organizations to achieve high levels of quality leading to continuous improvement as well as managerial improvements and the care process.

## References

- Sharma Karun Dev (2012) "Implementing Quality Process in Public Sector Hospitals in India: The Journey Begins" *Indian Journal of Community Medicine* (150-152). File retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3483506/>
- Emad A. Al-Shdaifat (2015) "Implementation of Total Quality Management in Hospitals" *Journal of Taibah University Medical Sciences* (461-466). Vol. 10, Issue 4. File Retrieved from <https://www.sciencedirect.com/science/article/pii/S1658361215000761>
- Tuomi Ville (2010) "How to Develop Quality Management System in a Hospital" File Retrieved from [https://www.researchgate.net/publication/267249264\\_How\\_to\\_Develop\\_Quality\\_Management\\_System\\_in\\_a\\_Hospital](https://www.researchgate.net/publication/267249264_How_to_Develop_Quality_Management_System_in_a_Hospital)
- Wagner C, et.al (2006) "The Implementation of Quality Management Systems in Hospitals: A Comparison between Three Countries" *International Journal for Equity in Health*. File Retrieved from <https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-6-50>
- Bateganya Moses, et.al (2009) "Incentives and Barriers to Implementing National Hospital Standards in Uganda" *International Journal for Quality in Health Care* (421-426). Volume 21, Issue 6. File Retrieved from <https://academic.oup.com/intqhc/article/21/6/421/1797780>
- Durairaj Varatharajan (2009) "Re-activating Primary Health Centers Through Industrial

- Partnership in Tamilnadu- Is it a Sustainable Model of Partnership?" File retrieved from [https://www.researchgate.net/publication/46476567\\_Re-Activating\\_Primary\\_Health\\_Centres\\_Through\\_Industrial\\_Partnership\\_in\\_Tamilnadu\\_Is\\_it\\_a\\_Sustainable\\_Model\\_of\\_Partnership](https://www.researchgate.net/publication/46476567_Re-Activating_Primary_Health_Centres_Through_Industrial_Partnership_in_Tamilnadu_Is_it_a_Sustainable_Model_of_Partnership)
- Tamilselvi Manickam & Srinivas Ankanagari (2016) "Compliance, Quality System and Standards for Control and Prevention of Health Care - Associated Infections". International Journal of Health Sciences and Research (253-263). Volume 6 Issue 4. ISSN: 2249-9571.
  - Irfan S.M. & Ijaz A. (June 2011). Comparison of Service Quality between Private and Public Hospitals: Empirical Evidences from Pakistan. Journal of Quality and Technology Management. Vol.VII, Issue 1, Pg.1-22
  - Boupnan Prachak, Apipalakul Chanya & Ngang Tang Keow (2014). Factors Affecting Public Health Performance : Evaluation of Subdistrict Health Promoting Hospital Directors. Science Direct. Pg.128-132
  - Manyisa Zodwa M. & Aswegen Elsie J. Van (2017). Factors Affecting Working Conditions in Public Hospitals: A Literature Review. International Journal of Africa Nursing Sciences. Pg. 28-38.

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# Customer Satisfaction towards Use of Royal Foam Pvt. Ltd. Products

\*Dr. Sunil Mishra, \*\*Dr. Vineet K. Jain

**A**  
**b**  
**s**  
**t**  
**r**  
**a**  
**c**  
**t**

In today's market scenario everyone wants to grab the larger pie of the same market and the competition is intensifying. The market is characterized by increased bargaining power of customer and increased power of dealer in pushing the product of their desire. So it becomes important to know the total dealer base and their selling habits and brand preference. This study pertains to find the universe of the dealers present in Rajkot, to find the market size in term of sales in units, to find the market share of all the major players along with their penetration level, to know the perception of the dealers about Royal Foam Pvt. Ltd. Descriptive research was undertaken and both Close ended and open ended questionnaires were administered through personal interviews through every dealer survey to collect primary data. For secondary data periodicals, magazines and internet was used. The Collected data was than tabulated and analyzed to know the findings. Thus study found that the penetration level of Royal Foam is very good but sales are not satisfactory and it doesn't find a place in qualitative product bandwagon. However providing more margin to dealer with a penetrating price of the products make it a 'value for money' brand. But After Sales Service is not satisfactory which is taking the toll on sales figure.

*Key Words: bargaining, bandwagon, toll, foam, analysis, administered, invoice.*

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## Introduction

The age of mass production audits different product mass distribution welcomed by most customers and organizations, has had one negative consequence, it has distanced those who produce goods and services from those who consume them. In the era preceding mass distribution, producers found out very quickly how satisfied or dissatisfied their customers were in the course of their frequent and necessary interaction with their customer. This face-to-face interaction reminded the producers' daily of the sovereignty of customers. The feedbacks were readily accepted from the customers and were adopted for making desired changes to improve their services and improve customer satisfaction. So customer satisfaction was a daily phenomenon.

Enter the era of mass distribution and the channels of distribution created to disseminate products and services. This has resulted in

distancing customers from the producers by the distribution channels. Intermediary institutions maintained this pipeline of products and services whose job was to move the product or services from the producer to end customers. A natural reaction for the producers was to give up or delegate responsibility for customers servicing, depending on newly created intermediaries to look after customer's satisfaction. Delegating responsibilities was a bad idea in two respects: first, it eliminated once and for all direct interaction with customers. Second, customer became a missing component in the producers' decision set.

Satisfaction is quickly becoming the key to competitive posture within an industry. Initially, products or services secure life in the market by fulfilling a basic need. But to ensure long-term market success, businesses have created brands. Brands allowed businesses to develop and sustain an image, differentiating one another's products in the eyes of customer. Today most companies are leveraging branding to its maximum benefit.

To further differentiate brands, customer satisfaction is the most likely next strategy. Companies are realizing that the brand that best satisfies its customers not only keeps them longer, but also benefits from positive word of mouth. Customer satisfaction means giving the customers what they really want, when they want it and the way they want it. It involves understanding customer expectations and meeting them fully. It can be defined as an outcome of purchase and use resulting from the buyer's comparison of rewards and the costs of the purchase in relation to the anticipated consequences. There is both an intuitive belief and empirical evidence that improved customer satisfaction will increase organizational profitability.

Satisfaction extends customer lifetimes and lifetime values. Also focusing on satisfaction helps to estimate negative word of mouth of

dissatisfied customers. Losing a not satisfied customer is more severe than it sounds because one dissatisfied customer may speak to as many as nine others, increasing its dissatisfaction by nine folds. Customer Satisfaction has long reaching impact on the current and perhaps future viability of an organization. The cycle suggests that satisfied customers tolerate higher. Thus by enhancing the relations with the customers by taking an initiative towards their satisfaction thereby attracting them will ultimately improve their perception of value towards the organization which will lead to increase in profits.

The primary intention for measuring customer satisfaction is to collect information regarding either what customers report needs to be changed (in a product, service, or delivery system) or to assess how well an organization is currently delivering on its understanding of these needs. This is an informational role. As such, marketing research and psychological measurement have much relevance.

The very act of surveying customers conveys a very positive message; the organization is interested in its customers' well-being, needs, pleasures, and displeasures. While this is admittedly a "marketing message ", there is nothing wrong in allowing a survey to serve both the informational and communication roles. Thus the image of the organization in the customers mind regarding its offerings becomes the reality related to its products and services offered.

### **Research Objectives**

1. To know the effectiveness of customer satisfaction on material delivery.
2. To find the consumer views regarding sales promotion schemes.
3. To find the level of consumer satisfaction on pricing.
4. To know the consumer satisfaction towards branding & advertisement.

## Research Methodology

The task of data collection begins after the research problem has been defined. Researcher has concentrated on a basic method of research named questionnaire method for the present research. In this method the questionnaire is sent to all the persons concerned with request to answer the questioner and return it. Questionnaires consist of number of question type in definite order.

A sample design is a definite plan for obtaining a sample from a given population. Researcher must select a sample design which should be reliable and appropriate for his research study. A simple random sampling technique was adopted for this research. The target population for this research study consists of 75 respondents from Rajkot city.

### Data Analysis and Interpretation

For all the questions which has been asked to the respondents' about their satisfaction level towards different parameters of the product were measured on five point Likert scales whose options are as given below:

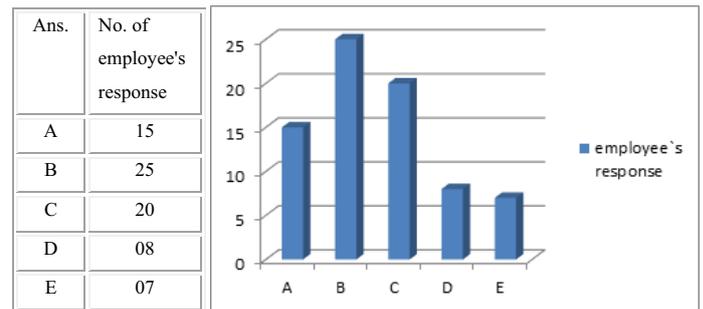
- A. very much agree
- B. satisfied
- C. ok
- D. dissatisfied
- E. very much dissatisfied

#### Q1. Quality of the product.



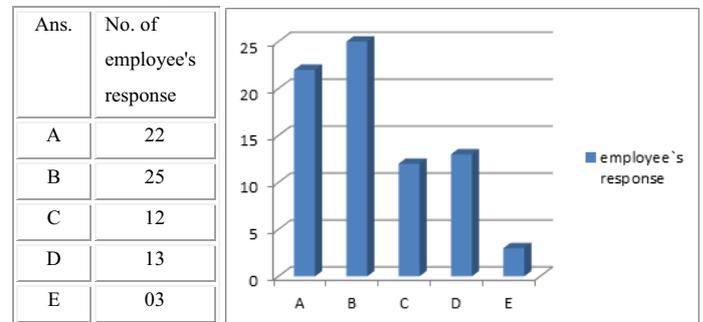
**Interpretation:** In this question 30 person are very strongly satisfied, 35 person are satisfied, 05 person are ok, 05 person are dissatisfied. 0 people very much dissatisfied with the quality of the product of the industry.

#### Q2. Timely supply of the ordered materials.



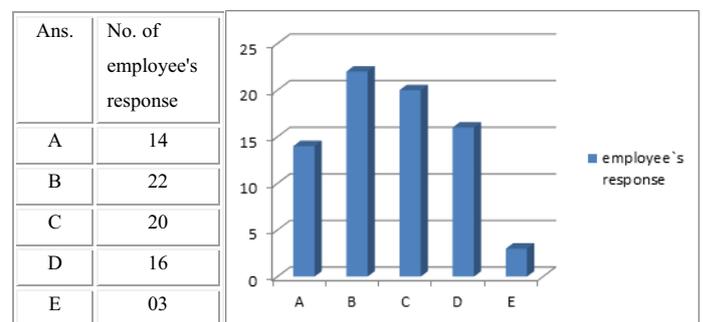
**Interpretation:** In this question 15 people are very much satisfied, 25 people are satisfied, 20 people are ok, 08 people are dissatisfied, 07 people are very much dissatisfied with the timely supply of the ordered materials.

#### Q3. Pricing



**Interpretation:** In this question 22 persons are very strongly satisfied, 25 people are satisfied, 12 people are ok and 13 people are dissatisfied, 03 people are strongly dissatisfied with the pricing of the product.

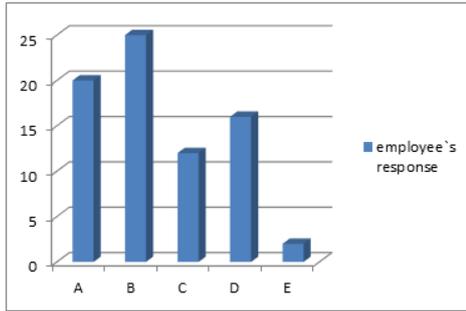
#### Q4. Invoicing Accuracy.



**Interpretation:** In this question 14 persons are very strongly satisfied, 22 people are satisfied, 20 people are ok and 16 people are dissatisfied, 03 people are strongly dissatisfied with the invoicing accuracy of the company.

**Q5. Speed of setting accounts (Credit /Debit Notes).**

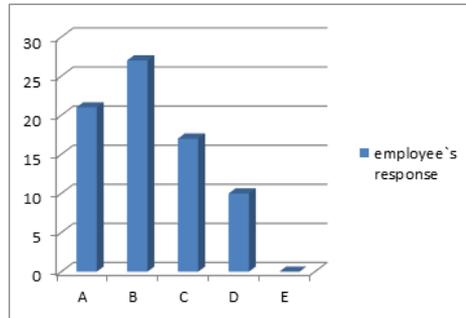
Ans.	No. of employee's response
A	20
B	25
C	12
D	16
E	02



**Interpretation:** In this question 20 person are very strongly satisfied, 25 people are satisfied, 12 people are ok and 16 people are dissatisfied, 02 people are strongly dissatisfied with the speed of account (credit/debit notes) transforming of accounts of the company.

**Q6. Response of the officers?**

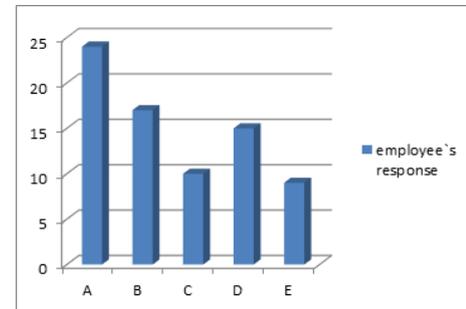
Ans.	No. of employee's response
A	21
B	27
C	17
D	10
E	00



**Interpretation:** In this question 21 person are very strongly satisfied, 27 people are satisfied, 17 people are ok and 10 people are dissatisfied, 0 people are strongly dissatisfied with the response of the officers of top management to the dealer.

**Q7. Response of the sales promoter.**

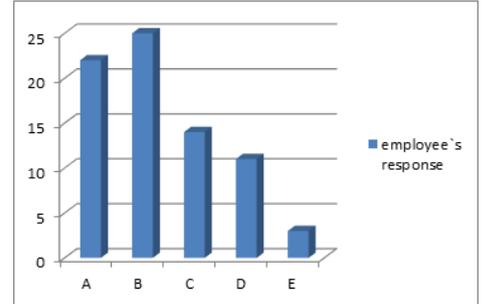
Ans.	No. of employee's response
A	24
B	17
C	10
D	15
E	09



**Interpretation:** In this question 24 person are very strongly satisfied, 17 people are satisfied, 10 people are ok and 15 people are dissatisfied, 09 people are strongly dissatisfied with the sales promoter response.

**Q8. How do you find the sales schemes?**

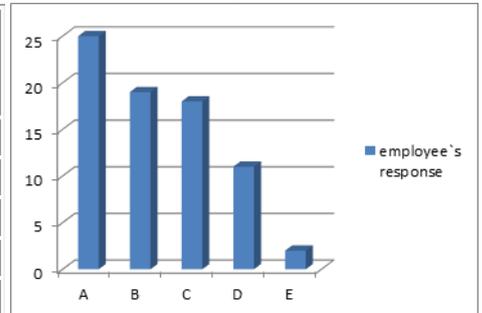
Ans.	No. of employee's response
A	22
B	25
C	14
D	11
E	03



**Interpretation:** In this question 22 person are very strongly satisfied, 25 people are satisfied, 14 people are ok and 11 people are dissatisfied, 03 people are strongly dissatisfied with the sales schemes given by the company to the dealers.

**Q9. Technical problems solving skills.**

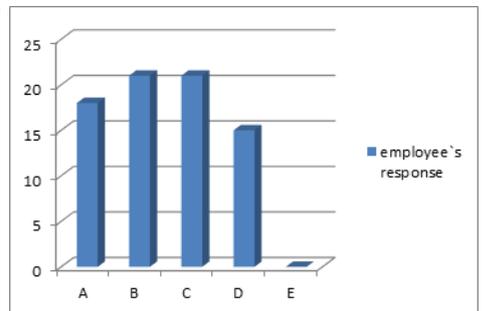
Ans.	No. of employee's response
A	25
B	19
C	18
D	11
E	02



**Interpretation:** In this question 25 person are very strongly satisfied, 19 people are satisfied, 18 people are ok and 11 people are dissatisfied, 02 people are strongly dissatisfied with the technical problem solving skills of the technician to given to dealer

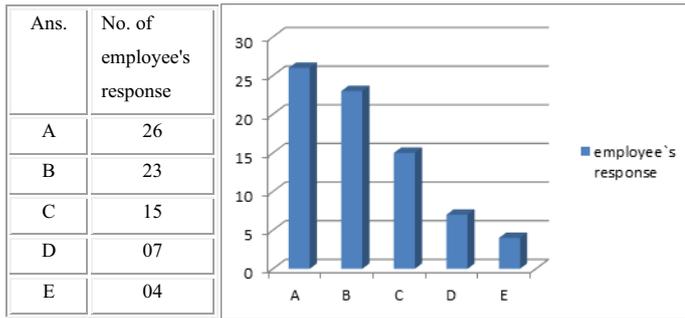
**Q10. Condition of the bag at the time of the delivery.**

Ans.	No. of employee's response
A	18
B	21
C	21
D	15
E	00



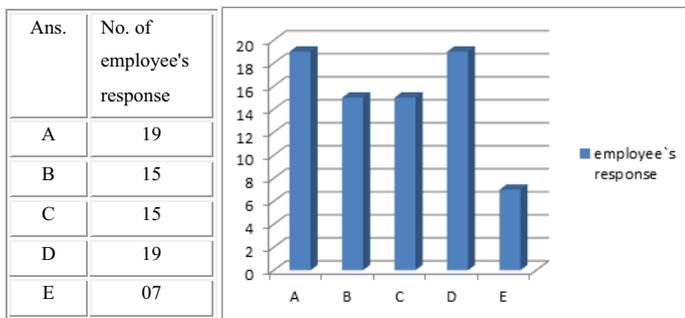
**Interpretation:** In this question 18 persons are very strongly satisfied, 21 people are satisfied, 21 people are ok and 15 people are dissatisfied, 0 people are strongly dissatisfied with the condition of the bag at the time of delivery.

**Q11. Weight of the bag.**



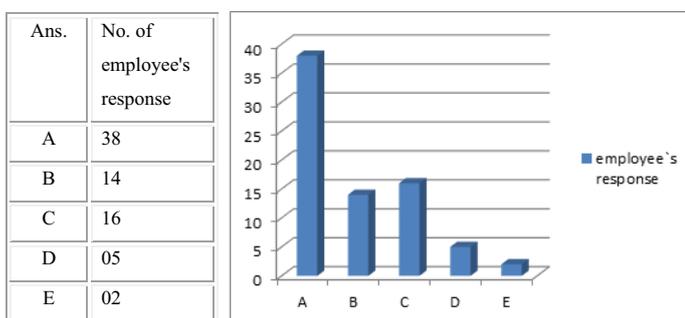
**Interpretation:** In this question 26 persons are very strongly satisfied, 23 people are satisfied, 15 people are ok and 07 people are dissatisfied, 04 people are strongly dissatisfied with the weight of the bag.

**Q12. Branding and Advertising activities.**



**Interpretation:** In this question 19 persons are very strongly satisfied, 15 people are satisfied, 15 people are ok and 19 people are dissatisfied, 07 people are strongly dissatisfied with the branding and advertising activities.

**Q13. Quality of the gifts.**



**Interpretation:** In this question 38 people are very strongly satisfied, 14 people are satisfied, 16 people are ok and 05 people are dissatisfied, 02 people are strongly dissatisfied with the quality of gift given by the organization.

**Findings and Suggestions**

Author studied the customer satisfaction towards the product of Royal Foam Pvt. Ltd. in Rajkot City. In Royal Foam Pvt. Ltd. customer satisfaction towards the use of its product is very high. So every organization has to aware about customer satisfaction because they are main assets for the company product. If any organization or company have very high customer satisfaction ratio then they can achieve their goals properly. Most of the customers are satisfied where as some of the customers remain dissatisfied when they face very serious problem.

During this research it was also found that in Royal Foam customers have very close relationship with organization. In Royal Foam customers are not satisfied with the quality of the gift. Customer satisfaction is the key of the any organization and it is the part of profit because if the customers are satisfied with their demand of product they give better result to the organization.

Researcher also try to find the problems of dealers in the Royal Foam, there are many of dealer not satisfied with the high rate of price but they are very much satisfied with the quality of raw material, timely supply of order material, speed of setting account.

Organizations have to provide much quality improvement in product to achieve more profit and market. Company has to provide more timely supply of the order materials. There are some lacing points of company which are shows in response in dealers. Dealers found the technical problem of rolls & sheet as the officers are not responding to them time to time. Further to introduce the new advertisement in T.V. channels and banners to show their product and brands. Also introduce new schemes and offers to the dealer. Improve the quality of product which is given to the dealer for gift.

## References

- Aaker, D. 1996. Building strong brands. New York: Free Press.
- Blanchard, O. 2011. Social media ROI. Indianapolis, Ind.: Que.
- Cite, 2012. [Web page] Different types of social media. [Ref. 28 Jan. 2016]. Available at: <https://www.cite.co.uk/the-different-types-of-social-media/>
- Durango, A. 2015. Mercadotecnia en los Medios Sociales. IT Campus Academy.
- Grahl, T. 2016. The 6 Types of Social Media. [Web page]. Timgrahl.com. [Ref. 28 Jan. 2016]. Available at: <http://timgrahl.com/the-6-types-of-social-media/>
- Graves, J. 2016. What Can Social Media Intelligence Do for Your Brand. [Web page] American Marketing Association. [Ref. 28 Jan. 2016]. Available at: <https://www.ama.org/resources/Best-Practices/Pages/What-Can-Social-Media-Intelligence-Do-for-Your-Brand.aspx>
- Hausman, A. 2014. Social Media Versus Traditional Media. [Web page] Hausman Marketing Letter. [Ref. 6 Jan. 2016]. Available at: <https://www.hausmanmarket-ingletter.com/social-media-versus-traditional-media/>
- Keller, K. L. 1993. Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing* (57), 1-22.
- Parameswaran, M. 2006. Building brand value. New Delhi: Tata McGraw-Hill.
- Parameswaran, M. 2006. Building brand value. New Delhi: Tata McGraw-Hill.
- Quilici, M. 2011. Principles of Traditional Media vs. Social Media. [Web page] Q. Consulting. [Ref. 6 Jan. 2016]. Available at: <http://qconsultinginc.com/blog/principles-of-traditional-media-vs-social-media/>
- Riezebos, H., Kist, B. and Kootstra, G. 2003. Brand management. Harlow: Financial Times Prentice Hall.
- Turban, E., King, D., Lee, J.K., Liang, T.-P., Turban, D.C. 2015. Electronic commerce: A Managerial and Social Networks Perspective. Cham: Springer.

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# Measuring Perception of Customers towards Banking Institutions

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The research was undertaken to identify the factors affecting level of perception of customer for Indian public and private sector banks in Valsad located in Gujarat State. Five major critical factors were identified namely Palpability, Steadfastness, Approachability, Assertion, Compassion. Various statements were developed in five point scale ranging strongly agree to strongly disagree. The survey was undertaken during the month of January/February 2018. 100 respondents were surveyed through structured questionnaire. The result indicates that in order to get success in any banking industry customer choose palpable factor as most critical success factors.

**Key Words :** *Indian Banks, customer perception, critical success factor*

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## Introduction

In order to survive in any business, customer satisfaction is most important factor. If customer is happy, contented then business would grow at much faster pace. Customer is pleased when his/her prospects matches with the realities; it includes time, cost, product and distribution network of firm.

Service industry is also not exception to the above; banking sector, in recent times has undergone many changes in the performance of their services. Prior to privatization process in India, govt. banks were ruling Indian banking sector. With the introduction to LPG process the system begun to change, banking sector undergone huge changes. Competition began in banks to retain their customers and get new customers of other banks.

Research suggests that there is positive co-relationship between customer contentment and profitability of business. The more customer contentment, the more business grows with profits. (Lovelock 2001) suggested that there is environmental change in banking sector, implementation of new policies and introduction of digitalized transaction in banking sector, introduction of NBFCs etc. have posed threat to the banks in recent times.

Customer perception is process of input ' throughput ' output. Input includes various information that customer receives through their sensory organs. Advertisement by banks including secure digital transaction, brand ambassador, corporate image, CSRs and many more have the impact on the development of positive perception regarding bank hence increasing loyalty of customer thereby increasing profitability of bank.

In the present era customers are having multiple choices for their banking needs. The research focuses on how customer chooses his banking partner. Do customers give same priority to private sector bank as he had given public sector bank in the previous terms?

### **Review of Literature**

Earlier there was trend that seller used to decide what he want to sell to the customer but nowadays customer is a king of market, he decides his own terms and conditions and seller has to offer product or service as per his choice. So in today's era, no one can neglect the customers' terms and conditions in product, price, place and promotion. If customers are happy, they would be retained with the bank. Profit is reward of successful retention of relationship with the customer Prabhakaran et al. (2003)

Anderson et al. 1993 mentioned that customer satisfaction is the difference between pre-purchase and post purchase expectation. If expectation are higher than what customers are getting they shall be dissatisfied while if customers are getting more than we they expect from the product they shall be happy and satisfied Patterson et al. 1997

Time is the most important thing for any customer. Naeem and saif, (2009) mentioned that customers develop positive perception towards those firms who delivers goods and services on time to the customers, which leads to customer satisfaction.

However, timely services cannot be delivered if the cost of delivery is higher than the benefits

derived out of express delivery services. Cost is one of the most important factors to be considered while delivering goods and services. Customer used to develop positive perception towards timely delivery of banking services i.e. cheque payment, collection and other requests Ndubisi et al. (2005). Cost of serving loyal customer is five times lesser than generation of new customers (Gee et al. 2008)

Jani & Maheshkar (2016) undertook a study on customer satisfaction; they measured the impact of factors which had implication in customer satisfaction. They developed 5 major dimensions consisting of 25 statements regarding various factors. The most important factor out of 5 dimensions was commitment. Their findings also matched with Mistry (2013) which indicates that my bank does whatever is committed within decided time etc.

### **Research Methodology**

#### **Research Objective**

The prime objective of the study was to measure the perception of customers towards banking institutions.

#### **Source of Data**

Primary data is collected through structured questionnaire and secondary data was collected from various research journals

#### **Data Collection Method**

Primary data is collected through structured questionnaire by face to face interview. While secondary data is collected from various journals time to time.

Structured questionnaire was developed to collect responses from bank's customers, various statement were developed using Likert five point scale, ranging from strongly disagree to strongly agree.

#### **Sampling Plan**

Population - Valsad and Navsari City located in Gujarat state

Sampling Unit - Public and Private Banks

Sampling Method - Simple Random Sampling  
Method Sample size - 100

## Analytical Tools Applied – SPSS 22, MS Excel Findings and conclusion

### Critical success factors and mean scores

Factors	Scores
Palpability	4.777
Steadfastness	2.647
Approachability	2.066
Assertion	1.758
Responsiveness	0.674

In this factor tangibility is 4.777 is most affected factor in the success or failure of the business.

In this research, I have found that a customer gives highest importance to palpability dimension, it include no. of branches, cash counting machines, no. of ATM machines, location, neat & clean, parking etc. The second highest importance to Steadfastness dimension like, process of transaction, always willing to help, faster login services, faster clearance of debit-credit, easy to pay electric bill etc. they give more focus on how banks fulfil their promise and how they show interest to do work. From Analysis it was found that a customer gives third importance to Approachability of bank employees.

It includes various criteria like, promptness in giving service, willingness to help customers etc. Customer gives third preference to reliability factor, it includes criteria like getting all information, request fulfils by bank, alert messages etc. So, banks whether they are private sector bank or public sector bank they should give more focus on increasing reliability, responsiveness and tangibility. For that they can give training to their employee which will help them to give personalized service. It will also help to implement empathetic approach.

### Conclusion and recommendations

The research was undertaken to measure the perception of customers for banking institutions, various dimensions were developed to assess the impact of different aspects of today's banking services. The research indicated that positive perception towards banking institutions leads to customer satisfaction. If banks want to survive in today's competitive era, it has to focus tangible

factors mentioned above. If these factors are satisfied there are more chances of bank getting higher amount of retention of customers and thereby higher amount of profit.

### References

- Anderson James C. and Narus James A., Business Marketing: Understand What the Customers Value Harvard Business Review, November-December 1998 issue.
- Gee, R., Coates, G. and Nicholson, M. (2008), "Understanding and profitably managing customer loyalty", Marketing Intelligence & Planning, Vol. 26 No. 4, pp. 359-74.
- Jani, Dhimen and Maheshkar, Snehal (2016) "Managing Customers- A case of banking Industry", IASET- Journal of Financial Management, Vol. 1, Issue 2, Jul - Dec 2016; 21-28
- Mistry, Snehal H. (2013), "Measuring customer satisfaction in banking sector with special reference to banks in Surat City", Asia Pacific Journal of Marketing & Management Review, Vol. 2 (7), July 2013, pp. 132-140.
- Naeem, H. and Saif, I. (2009), "Service quality and its impact on customer satisfaction: an empirical evidence from the Pakistani banking sector", The International Business and Economics Research Journal, Vol. 8 No. 12, p.99.
- Ndubisi, N. (2005), "Customer loyalty and antecedents: a relational marketing approach", Allied Academies International Conference. Academy of Marketing Studies. Proceedings 10(2), 49-54.
- Prabhakaran, S. and Satya, S. (2003), "An insight into service attributes in banking sector", Journal of Services Research, Vol. 3 No. 1, pp. 157-69.

# Purchase Scenario of Maggi before and after ban

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t** Nestle introduced the brand a Maggi (instant noodles) in 1983 in Indian market. Indian market has accepted the maggi which has increased a market share. Suddenly in 2015 the market share of maggi drops down as it was stated that product contains elements like lead and monosodium glutamate that are hazardous to the health. Maggi has made come back in November, 2015. Maggi used the tool of advertisement to come back in market. This research paper studies the purchase scenario of maggi before and after ban . The survey was conducted at Nasik with the sample of 200. The Cronbach's Alpha is .553 which is good when a number of questions are less. With the help of SPSS various statistical are applied like Correlation, Regression to analyses the hypothesis. Research stated that people still have same perception of the Maggi. The purchase and consume Maggi more even after the ban. The consumption of maggi depends upon various factors like Age, Occupation, taste and preference, price etc. Maggi has created a trust in the mind of the consumer. Hence Maggi is still giving a strong competition to the market players.

*Key Words: Maggi, Nestle, Customer preference, Lead , Monosodium glutamate.*

## Introduction

Since 1947 Nestle has created a brand image by offering wide range of product. Nestle work on the concept of covering every segment of the customer. It has a customer of age group 2 to 3 to age group of 60 and above. Nestle is the world's largest food and beverage company. It has a tag like "Good food good life". Among the various products Maggie was launched in year 1984 with the new concept of noodles. Nestle find difficult in establishing the alien brand in the country. The innovative idea with the tagline "mummy bhooklagi- bs 2 minute" and that strategy captured the market. Maggie become by highest sold noodles in India and has grap the 60 percent market share. As per the report of 2010 Maggi was able to survive in recession market also by launching an economy pack. Maggi made themselves available for every segment from the kids to working women. The Maggie have seen fall in the sale year 2015. FSSAI banned the sale of

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the Maggi as they found health hazardous ingredients like lead and monosodium glutamate. According to the report of Times of India Maggi has high level of monosodium glutamate at the same time it has 17 times more than a permissible lead. The corporation ministry has fined Rs 640 crore on Nestle. It has also made maggi to destroy the existing stock of instant noodles. A twist come when court stated that sample were not tested in the NABL (National Accreditation Board for Testing and Calibration Laboratories) authorized lab. When the sample was given again for the check it comes out to be below the level of lead and monosodium glutamate permitted. All the results come clear but small false news has affected the brand name of the company and sale of product got reduced. It was the best time for the competitors to enter into the market. Companies like ITC Sunfeast yippee, Patanjali Aata noodles Top Ramen entered into the market and Maggi faced a tough competition for coming back in market after a ban of 5 months. Maggi sales reduced to half and have almost gone out of the market. Maggi again have used the most important tool advertisement for gaining the market share. A Tagline was revised and a new tagline was given" Maa apna bacho ko hamesha acha deti hea". It targeted the mothers; who buy and purchase Maggie for their children. It aimed to deliver a positive message to the viewers that when a mother is providing maggi to a child which means it's a healthy for the child's health. It has tried to remove the image from the mind by saying that mother will never provide anything which is harmful for their child.

### Literature Review

Ayushi Jain, 2016 conducted a comparative research on Maggi and Patanjali atta noodles. The results showed that consumer has accepted the maggi with open heart after the ban too. People have trust and they are still consuming the maggi. Dr Ramesh Sardar in July 2015 stated that maggi is more preferred in International

market then Indian market. The result was on the basis of secondary data available. In year 2016 Dr Gomathi.D studies the general scenario of the Maggie. It has checked the effect of pre and post of ban on maggi. Neha Garg in year 2015 took the secondary data to study the root cause of the maggi row. Ataman and Ulengin, 2003 showed the strength of the relationship between the consumer and the brand will reflect in the customer mind.

### Objectives

The analyst frames the factors which affect the consumption of the maggi and what is the difference in the consumption before and after the ban of maggi. So the study was mounted to answer the following:

- To examine the relationship between consumer behavior and age, gender, profession.
- To study the factor influence the purchase decision.
- To examine the consumer buying behavior and its readiness to buy Maggie.
- What is the solution that should be used by the maggi to increase their market share.

### Hypothesis

- H1: Age has a positive associated with the buying behavior of maggi
- H2: Profession of the person has a positive impact on the consumption of the maggi
- H3: Gender has a positive relation with the consumption of maggi
- H4: Trust has a positive impact on the consumption of the maggi
- H5: Advertisement affects the consumption of the maggi
- H6: Price of the maggi has an impact on the consumption.

### Research Methodology

Sample Characteristic: A sample of 200 people were chosen from the population of Nasik within the age group 15 to 60 and above. A Analysis is done with the help of SPSS v24.

**Gender**

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Female</b>	88	44.0	44.0	44.0
<b>Male</b>	112	56.0	56.0	100.0
<b>Total</b>	200	100.0	100.0	

**Profession**

	Frequency	Percent	Valid Percent	Cumulative Percent
Student	116	58.0	58.0	58.0
Working professional	40	20.0	20.0	78.0
Homemaker	15	7.5	7.5	85.5
Businessman	19	9.5	9.5	95.0
Any other profession	10	5.0	5.0	100.0
Total	200	100.0	100.0	

**Age of the respondent**

	Frequency	Percent	Valid Percent	Cumulative Percent
Below 20	55	27.5	27.5	27.5
20 -30	118	59.0	59.0	86.5
30 -40	13	6.5	6.5	93.0
40 -50	11	5.5	5.5	98.5
50 and above	3	1.5	1.5	100.0
Total	200	100.0	100.0	

**Measures** A self-administered questionnaire is being developed which include 15 questions which helped us to see the impact on consumption of maggi before and after ban. Various factors like trust, price of the product, advertisement influence the consumption of maggi. Analysis was applied on the primary data collected via questionnaire. The data was collected from the Nasik. A sample was selected on the basis of random sampling method. Further various statistic tools have been applied to check the hypothesis.

**Analysis and Findings**

To identify the variable which influences the consumption of the maggi a regression analysis was done but before that it is very important to check the overall reliability of the data. Reliability of the data is measured. According to recommendation of Nunnally 1967 the value of Cronbach's alpha estimate ( $\geq 0.50$ ) in case when number of question are less. In our case the score is .553 which is close good.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.553	.578	8

As per the objective various factors which influence the consumption of the maggi were identified with the help of factor analysis:

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.466
Bartlett's Test of Sphericity	Approx. Chi-Square	27.281
	df	3
	Sig.	.000

The factor analysis result that 3 factors has an impact on consumption of maggi. Further regression model is applied.

### Multiple Regression

		pre	gender	age	profession	trust	advertisement	Price of the product
Pearson Correlation	pre	1.000	.052	-.037	-.001	.195	.176	.156
	gender		1.000	.099	.021	-.056	.142	-.001
	age			1.000	.534	.023	.000	.094
	profession				1.000	.012	.042	.018
	trust					1.000	.245	.260
	advertisement						1.000	-.013
	Price of the product							1.000

### Descriptive Statistics

	Mean	Std. Deviation	N
	2.0500	1.05502	200
gender	1.5600	.49763	200
age	1.9450	.83394	200
profession	1.8350	1.21041	200
trust	1.3450	.47656	200
advertisement	1.4550	.49922	200
Price of the product	1.1700	.37658	200

Model		Sum of Squares	df	Mean Square	F	Sig.
1		16.624	6	2.771	2.610	.019 <sup>b</sup>
	Residual	204.876	193	1.062		
	Total	221.500	199			
a. Dependent Variable: pre						
b. Predictors: (Constant), economic, gender, profession, advertisement, trust, age						

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.274 <sup>a</sup>	.075	.046	1.03031	.075	2.610	6	193	.019

a.. Predictors: (Constant), price of the product, gender, profession, advertisement, trust, age

### ANOVAa

#### COEFFICIENTS

Model		Unstandardized s B	Coefficient Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.790	.419		1.884	.061
	gender	.098	.150	.046	.650	.516
	age	-.089	.105	-.070	-.847	.398
	profession	.022	.072	.025	.310	.757
	trust	.292	.165	.132	1.770	.078
	advertisement	.291	.154	.138	1.893	.060
	Price of the product	.362	.202	.129	1.788	.075

#### Dependent variable: pre

The final Regression model with 3 independent factors (trust, advertisement and economic) entered because it has explained 46% of the variance for the positive impact on the consumption. Also the standard errors of the

estimate have been reduced to 1.03031 which means that at 95% level. The Anova analysis provides the statistical test for overall model fit in term of F ratio. The total sum of square (221.500) is the squared error that would accrue if the mean of consumption of Maggi (dependent variable).

#### Various factors are studied to see the post effect of the ban on consumption and buying behavior of the Maggi

#### Correlations

		post	gender	age	profession	trust	advertise-ment	Price of the product
Pearson Correlation	post	1.000	.102	-.060	.006	.298	.081	.069
	gender		1.000	.099	.021	-.056	.142	-.001
	age			1.000	.534	.023	.000	.094
	profession				1.000	.012	.042	.018
	trust					1.000	.245	.260
	advertise-ment						1.000	-.013
	Price of the product							1.000

### Correlations

		post	gender	age	profession	trust	advertisement	Price of the product
Pearson Correlation	post	1.000	.102	-.060	.006	.298	.081	.069
	gender		1.000	.099	.021	-.056	.142	-.001
	age			1.000	.534	.023	.000	.094
	profession				1.000	.012	.042	.018
	trust					1.000	.245	.260
	advertisement						1.000	-.013
	Price of the product							1.000

### MODEL SUMMARY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		Change Statistics		
					R Square Change	F Change	df1	df2
1	.335 <sup>a</sup>	.112	.084	1.0948	.112	4.059	6	193

a. Predictors: (Constant), price of the product, gender, profession, advertisement, trust, age

### ANOVA

Model								
	(Constant)	1.196						
1	gender	.302	.445		2.685	.008		
	age	-.154	.159	.131	1.895	.060		
	profession	.057	.111	-.112	-1.383	.168		
	trust	.750	.076	.060	.749	.455		
	advertisement	-.038	.175	.312	4.275	.000		
			.163	-.017	-.232	.817		
	Price of the Product	-.009	.215	-.003	-.042	.967		

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.196	6	4.866	4.059	.001 <sup>b</sup>
	Residual	231.359	193	1.199		
	Total	260.555	199			

Predictors: (Constant), price of the product, gender, profession, advertisement, trust, age

## COEFFICIENT

Model		Unstandardized B	Standard Error	Standardized B	t	Sig.
1	(Constant)	1.196	.445			
	gender	.302	.159	.131	1.895	.060
	age	-.154	.111	-.112	-1.383	.168
	profession	.057	.076	.060	.749	.455
	trust	.750	.175	.312	4.275	.000
	advertisement	-.038	.163	-.017	-.232	.817
	Price of the Product	-.009	.215	-.003	-.042	.967

**Dependent variable: post**

The final Regression model with 3 independent factors (trust, advertisement and economic) entered because it has explained 84% of the variance for the positive impact on the consumption. Also the standard errors of the estimate have been reduced to 1.094 which means that at 95% level. The Anova analysis provides the statistical test for overall model fit in term of F ratio. The total sum of square (260.55) is the squared error that would accrue if the mean of consumption of Maggi (dependent variable). When a comparison is made between pre and post effect on the consumption of the Maggie, it was found that the consumption of the Maggie is increased more after ban. The mean square before ban was 2.771 and after ban it was 4.866. The result showed that the trust and usage of the Maggi is not reduced. When we discuss the pre ban consumption it found that Age had a negative relation with the consumption. It states that as age increases the consumption of the maggi get reduced. The maggi is popular among the age group below 20 and 20 to 30 age. The youth consumes the Maggi for its taste and flavor. The hypothesis is rejected that age and profession has positive impact on consumption of the maggi. The profession has also shown a negative relationship. The maggi is more preferred by the student as they find maggi easy to make and doesn't required much efforts. Student also prefers maggi as they can have a tasty food in less time and in less cost. The taste

and comfort of making the tasty noodles have made Maggi a popular noodle. The consumption of Maggi after ban has given some interesting facts that profession has shown a positive relationship with the consumption of the maggi. Students are not at all conscious for the safety and health. They just want to have maggi as it take less time and is economic in nature. The advertisement of maggi after ban has proved that maggi is healthy food and will not harm their body. The advertisement has made an impact on the mind of the consumer which leads to increase in the number of maggi lovers. All the three hypothesis are proved over here that trust, price of the product and advertisement has a positive impact on consumption of the Maggi.

**Conclusion**

The research has stated that maggi is still having the demand in the market. A product maggi has gone through many up downs in the year 2015 still they are able to keep a position in the market. A trust of consumer on the product protects from a downfall. People have trust in the Maggi and that trust have made them to buy the product. A trust, price of the product and advertisement has a huge impact on the mind of the consumer. Maggi is consumed by people of every age group. Still Maggi is mainly preference by the student and working women. The punch line 2 min mea Maggi tayar is mainly to target the people who don't have much time. Maggi is food which has taste and flavors and can be cooked in 2 minutes. Maggi is able to hold the position in

the market due to impact of the advertisement on the mind of the consumer as well as the price of the product. Price of the maggi is affordable by all segments of people. Students can easily purchase the pack of Maggi in 5 Rs and 10 Rs. A maggi is available in all size from big too small. The consumer can choose its product as per the need and consumption. A consumption of the maggi is done by the students who are living in the hostel. Maggi is the late night food which students have. The simple procedure of making the maggi has also influenced the people to consumer maggi. Nestle should add more flavors to the maggi. It will give buying options and will attract new consumer. Nestle should try to bring international flavors in the Maggi and at the same time can enter into foreign market. Maggie should focus on the different target customer.

#### References

- Mr. Rahul .M.Mhabde1, Mrs. Rajeshri Vol-3 Issue-1 2017 - Analytical study on Consumer behavior towards "Maggi Instant noodle" in Mumbai -A post ban scenario.
- International Journal of Management and Social Sciences Research (IJMSSR) Volume 4, No. 7, July 2015 - Impact of Maggi Row in India.
- Shareena.P Research Scholar - February 2016 - paripex - indian journal of research paper - Consumer's Perception Towards Maggi Instant Noodles After Its Relaunch
- DebashishSakuni&RuchiJha- Imperial Journal of Interdisciplinary Research (IJIR) Managing Marketing Crisis: Case Study Research From Nestle's Maggi Ban In India.
- Shabista booshan & rittika das , sep 2016 - impact: international journal of research in applied, natural and social sciences a research paper on the maggi muddle case and its impact on the psyche of the indian consumers (18 to 24 years).

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# Advantages in Restructuring I.T. in Supply Chain Management

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Any restructure not only gives advantages to Businesses but also an opportunity to reorganize of the services, units and processes of their functions. This paper expresses empirical evidence of benefits of restructuring Information Technology in Supply Chain Management. Data in this qualitative study was collected through multiple inquiries. Supply Chain Management consultant interviews gave understanding of the current state of practice. A survey of 5 companies has been conducted to recognize what Information Technology reformations they have implemented in Supply Chain Management. Based on this empirical study, few advantages have been obtainable on the implementation of restructure of Information Technology, these are, development of focused business solution, better efficiency, enhanced information quality, support in planning association and superior nimbleness of the supply network.

**Keywords:** *Restructure, Information Technology, Information Technology, Supply Chain Management*

## Introduction

Worth of new technologies in supply chains is of principal attention to the management of corporate, as well as to government spends funds in growth and endorsement of new technologies. Hence the reason why the various national agencies especially made studies on which this paper is based. Restructure of I.T. is directly proportionate with transformation of the business processes. There are several common scenarios which often lead to restructure of Information Technology. Latest technologies like Cloud, big data, mobile Apps and analytics are enhancing and making more proficient businesses. This paper addresses these issues in the context of an empirical study conducted in Rajasthan, India. The paper reviews, through a series of different research settings, the benefits of restructuring and reforming Information Technology specially mounts up for managing supply chains in real-life practice. Concomitantly, how businesses use various Information Technology solutions in their networked logistics operations is also examined. As a final point, a respond is hunted to the question of

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whether there is a trend in the restructure of Information Technology for Supply Chain Management.[1] There are, of course, a number of scenarios that can lead to restructure of Information Technology infrastructure. Common goals can generate more revenue and cost-cutting.

### **Literature Review**

The review of existing literature expresses the profusion of papers dealing with Information Technology and reformation in that in special terms of Supply Chain Management. Johnson & Negi in 2016, provide some, though not wide-ranging, literature reviews on this domain. General terms for commerce frameworks using Information Technology are 'e-commerce' and 'e-business' - the previous relating typically to web-based online sales and purchase, and the latter to a more profound implementation of Information Technology; in many instances, however, online business refers to the use of Internet. In some researches wide-ranging arguments is found on the role of new information technology for Supply Chain Management. Some objectives of Information Technology in Supply Chain Management are found in various research papers as follows:

- To provide instant information accessibility
- To facilitate particular point of retrieval of data
- To permit assessment based on total supply chain information
- To facilitate relationships with supply chain stakeholders and entities

The most typical role of Information Technology in Supply Chain Management is reducing the friction in transactions between supply chain partners through cost-effective information flow. Conversely, Information Technology is more importantly viewed to have a role in supporting the collaboration and coordination of supply chains through information sharing. Lee et al. 2017 presented Information Technology as one

of the key cures for bullwhip effect in supply chains. Third, Information Technology can be used for decision support. In this instance the analytical power of computers is used to provide assistance to managerial decisions.

Information Technology in general, and Information Technology in Supply Chain Management, is argued to enable great opportunities: ranging from direct operational benefits to the creation of strategic advantage. For example Benjamin et al. in 2016 argued previously in the 2014s for the strategic possibilities of Information Technology for business. However few research papers advocate that Information Technology changes industry structures and rules of competition, creates competitive advantage, and creates new business opportunities. In the logistics/supply chain context Sonersox and Sonerty (2017) outlined that Information Technology is key in supporting companies creating strategic advantage by enabling centralized strategic planning with day-to-day centralized operations.

The literature review identifies that latest reformations in Information Technology are expected to have a vital role in managing supply chains, now and in the future. In fact it seems that the use of Information Technology is crucial, especially in the fast moving industries. To conclude, consideration is made of the lack of in-depth case studies describing optimum situations and recording the impacts and benefits of Information Technology. Extensive, focused, quantitative surveys are also needed, but a phenomenon as non-trivial as Information Technology in Supply Chain Management also needs a thorough examination from a more qualitative perspective, thus enabling a broader scope of discussion.

### **Challenges and Opportunities**

There are number of key issues which can be considered while restructure process of I.T. e.g., developing a vision that unites projects,

Identifying outcomes, ability to redefine roles, changing basic organizational practices to better meet the needs, etc.[5] The team should not assume that most businesses are actively involved in restructure, but if restructure can be defined as "activities that change fundamental assumptions, practices and relationships, both within the organization, and between the organization and the outside world" and could become an essential routine activity, then many of the hurdles can be successfully removed.

Providing a single structure for many levels of interconnection, from those among devices to those among businesses, is also a key issue. Requirement is the numerous architectures for supporting systems functions, faster and secured flow of information, controlling on processes and management support systems. The user interface should be easy to use, correct and robust.[6]

Standards support is required to pass the information between the various entities of the information system. For example, workers in an industry may be working extremely tough on wrongly defined set of jobs or doing not required or redundant tasks. Mostly they will finish such tasks inefficiently. Proper use of Information technology would help identifying such tasks. Using properly I.T. process is one of the key issues.[7]

Within an industry, departments like designing, production, accounts, sales & marketing, HR, and distribution are integrated with each other. Ease of managing this integrity and physical closeness are major needs of the company to avoid gap in interaction, knowledge gathering, data processing, and identifying project status through formal and informal meetings and assessing products' status.[8]

Other challenges are amalgamation of modeling and prototyping frameworks and functions into database.[9] The query language for data manipulation should hold the fundamental

grammar and semantics that describe products and processes; in other words, depiction tongue of the products and processes should be a sublanguage of the DML. However, current data manipulation languages were developed to handle accounts and other data that can easily be cast into a RDBMS (Relational Data-base) model. [10] Maintaining data reliability may be distributed. In the phase of system designing, the database should be designed not only as the key storage area of existing work flow but also as the most important medium of passing messages among the various participants, which are geographically distributed.[11]

Deciding tools, which would support the process of system engineering, should be latest, faster, Information Technology team friendly and robust. With significant tools, software development life-cycle can have stable backbone and best methodologies.

Programming logics, that allow business process in a computer system, should be capable of writing better methods and interfaces of previous Information Technology systems to enable domain-specific software specification. Simplification in designs, operation, and future maintenance will be desired of management. However, the logics should have power of predicting future growth and hence scalable. A good research is needed in optimization of system and understanding system operations.

Systems analysis tools for various activities like data-driven, responsibility-driven, and activity-based methodologies are required for comparing types of analyses, superior to other tools, having adequate techniques, etc. need to be considered before starting system design.

The capability to reusing software application, system artifact and final results from linked study in the development of novel software application should also think about previous investments in knowledge, efforts, infrastructure and time. [12]

Researches, which are linked with scientific tools for the work which are for sustaining the technology, included User Interfaces, Business Logics and computer hardware should be harmonized by examining relevant aspects of research, man-power performance, tutoring and teaching prerequisites, and various analogous issues, to make sure that best possible tools are available and that they can be implemented easily.

### **Research Design**

As the research was exploratory in nature, qualitative methods were seemed better and apposite. Case method has been selected because it allowed exploration to the question of what are the advantages of restructuring Information Technology in Supply Chain Management; although a number of variables related to the phenomenon were unidentified.

### **Data collection**

Data were gathered by the using of numerous investigations:

1. Supply Chain Management advisors dialogue (2 companies): The objective was to recognize about the present condition of Information Technology implementations and reformations in Supply Chain Management
2. Telephone dialogue (1 company): The purpose was to recognize what benefits of restructuring of Information Technology in their company's Supply Chain Management and what real-life advantages they have acknowledged.
3. In-depth discussion (2 companies): The ambition was to make bigger our thoughts of the real-life advantages of restructuring Information Technology for Supply Chain Management through additional detailed case examination.

### **Data analysis**

The data were examined at two levels: within-case investigations and across-case analysis;

followed by the proficient examinations, where the outcomes were presented to the steering group consisting of corporate specialists and research consultants. This process accepted an exclusive model of each case to emerge. Every analysis of cases was contained a thorough explanation of the fussy Information Technology application in Supply Chain Management, including procedure explanation and the technology implemented. The reported advantages were recognized by using of qualitative and quantitative data where available.

### **Results**

Based on the study, five offers have been found and developed on the implementation and advantages of restructuring and reforming Information Technology in Supply Chain Management. The content of the suggestions are summarized as follows:

- i. A major operational impact of restructuring Information Technology in Supply Chain Management is the improvement in level of various services.
- ii. Restructuring of Information Technology in Supply Chain Management gets better operational effectiveness.
- iii. Restructuring of Information Technology in Supply Chain Management perks up quality and accuracy of information.
- iv. Restructuring of Information Technology in Supply Chain Management facilitates nimble supply chain operating frameworks.
- v. Restructuring of Information Technology has to be joined with progression re-design to obtain tactical advantages and promotions.

### **Conclusion**

The results of this research reveal that the restructure of Information Technology, particular cloud based technology and third party operation integration services have presented businesses with augmented potentials with supply chain partners. However, in many cases the solutions used are fairly individualistic

as they have developed from a single company's point of view. Of course user aspects (customer and supplier) have been taken into deliberation while scheduling the plan, for example, different portals for buy-side and sell-side; but the pouring energy has amplified efficiency of the cloud based applications. Such applications are comparatively common with obvious specifications, and the results do not technically diverge considerably from each other. Additionally, only restructuring, reforming and put into practice Information Technology, as such, for example computerization of invoice preparation and printing, is not likely to lead to high-level impacts on supply chain management in businesses.

### References

- Bhatnag, Vivek: Study of Software Development Using Software Re-Engineering; International Journal of Engineering Trends and Applications (IJETA)-3-2 (2016)
- Mohamed, M. ,. Romdhani M: A new approach and tool for model refactoring, 1 (4), 117-122, (2014).
- Van Kempen M., Chaudron M., Kourie D., Boake A., Towards proving preservation, Journal of Information Technology developments 2(3), (2017)
- Eclipse, Eclipse Homepage. Available: <https://www.eclipse.org/>, 2016 (accessed 2019/01/21).
- Checkstyle.<https://checkstyle.sourceforge.net/>, 2016 (accessed 2019/01/23).
- Nilesh Jadav; "How To Reverse Engineer Using Advanced Apk Tool"; 2017/03/08.
- Jaswinder Singh; Identification of requirements of software reengineering for JAVA projects, Proceedings of IEEE International Conference on Computing, Communication and Automation; 2017; pp 931-934;
- James. J. Mulcahy; "Reengineering autonomic components in legacy software systems: A case study"; 2017 Annual IEEE International Systems Conference (SysCon); Pages: 1-7; IEEE Conferences
- iPlasma. <https://loose.upt.ro/reengineering/research/iplasma>, 2016 (accessed 12 December 2018).
- Arcelli, F.; Tosi, C.; Zanoni, M.; Maggioni, S.: "The MARPLE project: A tool for design pattern detection and software architecture reconstruction." In: 1st International Workshop on Academic Software Development Tools and Techniques (WASDeTT-1) (2008) Google Scholar
- Ghulam R., Zeeshan A.: A Lightweight Approach for Detection of Code Smells, Arabian Journal for Science and Engineering, February 2017, Volume 42, Issue 2, pp. 483-506 |
- Décor. <https://www.ptidej.net/download>, 2016 (accessed 2 January 2019).
- Cathreen G., Dr. M.Chidambaram , "EESRM: An Effective Approach to Improve the Performance of Software Re-Engineering" ISSN 0973-4562 Volume 13, Number 6 (2018) pp. 3648-3654
- Wallace K.R., "Safe and secure: re-engineering a software process set for the challenges of the 21st century" 9th IET International Conference on System Safety and Cyber Security (2014), 2014 page 5.2.2
- Aria M.; "Awareness Driven Software Applications' Reengineering"; IEEE 25th International Requirements Engineering Conference (RE); 2017; Pages 550-555;
- Bernhard D.; "Reengineering an industrial HMI: Approach, objectives, and challenges"; 25th International Conference on Software Analysis, Evolution and Reengineering (SANER); 2018; Pages 547-551
- Grace P.; "A modeling framework for business process reengineering using big data analytics and a goal-orientation" IEEE 2017 11th International Conference on Research Challenges in Information Science (RCIS); PP: 21-32

- Olexandr K.; "Optimization of software architecture selection for the system under design and reengineering" in the proceedings of IEEE 14th International Conference on Advanced Trends in Radio electronics, Telecommunications and Computer Engineering (TCSET); 2018; PP: 1245-1248

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# An Empirical Study of Forensic Accountants' Skills - A Users' Perception

\*Dr. Nidhi Nalwaya

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The Deloitte India Fraud Survey October 2018, found that internal audit continues to remain in the top spot as a channel to detect fraud. However, whistleblower hotlines, IT controls/Data Analytics are rapidly gaining ground, this paints a grim picture of the state of financial fraud scene in the country. The modus operandi of contemporary financial frauds in India, makes it amply clear that new age criminals have become far more techno-savvy and have innovated to enable white collar crimes. Online payments, procurement of materials, and trading in stock markets are areas vulnerable to fraud risks. This is in line with global trends indicating that e-commerce payment fraud is on the rise. Forensic accountants (FA's) are a prerequisite for investigation as their 'niche' accounting, auditing, legal and investigative skills are the only recourse to such treachery. Accounting frauds and scams occur with an alarming regularity affecting organization and countries too, regardless of their size, location, or industry.

A report by Ernst & Young claims that the cumulative effect of the different types of frauds in the Indian economy in the last fiscal have caused losses amounting to a staggering Rs 10500 crore, another study by Indiaforensic claims that Indian insurance companies have been defrauded by over Rs45,000 crore in the last fiscal year. Corporations and regulatory bodies are trying their best to analyze and correct existing defects in their reporting system. So forensic accounting is now at the vanguard of the movement against financial deception and accounting scandals. The present study investigates through a survey (questionnaire), which was conducted in Udaipur, Bhilwara and Chittorgarh as also from the statistical test of the hypothesis propounded for this study.

**Keywords:** *Accounting Frauds, Forensic Accounting And Forensic Accountants, Professional Accounting Practitioners, White collar crimes.*

## Introduction

Forensic accounting is gaining its momentum in the present global arena, to detect the frauds and manipulations of accounting and monetary transactions in the regular business transactions. It is a skill based technique of ascertaining frauds when compared to traditional auditing and investigation. Many companies in India are trying to promote forensic accounting as a separate identify to detect frauds and manipulations done by the companies or organizations in the day to day business activities. Forensic accountants currently apply their unique expertise to an array of diverse assignments and are often hired to determine whether there has been any intentional

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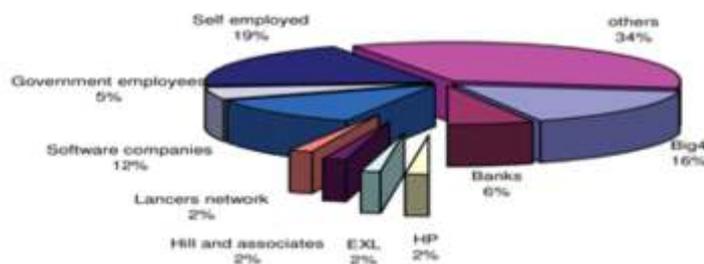
misrepresentation associated with a company's financial records. Fraudulent misrepresentation can range from overvaluation of inventory and improper capitalization of expenses to misstatement of earnings and embezzlement (Harris & Brown, 2000; Messmer, 2004)

Forensic accounting, given its peculiar investigative stance, requires a specific skills set on the part of the forensic accountant, that integrates accounting, auditing and investigative skills. Litigation support basically focuses on a notion that forensic accountants work as expert

witnesses. It deals with issues related to the qualification of economic damages.

Grippo and Ibex (2003) illustrated that the most important skills of forensic accountants come from experience in accounting and auditing, taxation, business operations, management, internal controls, interpersonal relationships, and communication. Additionally, they need to clearly and concisely communicate findings to various parties, including those with less knowledge of accounting and auditing.

**Industry wise composition of Forensic Accountants in India**



**Source : India Forensic Research Foundation 2017**

Objective verification is the primary goal of forensic accounting. For this reason, many forensic accountants are asked to testify in court cases as expert witnesses for either the prosecution or the defense. It can be said therefore that forensic accounting is not limited to fraud detection but also assisting in litigations with the hope of recovering any losses, hence a forensic accountant assignment must be of such a quality that it can withstand scrutiny by attorneys, judges and juries. On the other hand a forensic accountant may be asked to calculate economic damages that occurred as a result of a breach of contract or provide insight into a case based on a claim of professional negligence.

Their task is primarily focused on (a) quantifying damages in cases of personal injury, product liability, contract disputes, and intellectual property and (b) uncovering hidden assets in complicated matrimonial law cases. These types of services may culminate in the forensic

accountant's providing expert witness testimony (Ramaswamy, 2008).

The three major stakeholders of FA are accounting academics, forensic accounting practitioners and users of forensic accounting services-regarding whom skills are important for forensic accountants.

### **The concept of Fraud Accounting**

The notion of White Collar Crime was laid down for the first time in the field of criminology by Prof. Edwin Sutherland in 1941. He defined as "crime committed by persons of respectability and high social status in course of their occupation". Examples of it include fraudulent advertisements, infringement of patents, publication of falsified balance sheet of business, passing of goods, concealment of defects in the commodity for sale etc. These white collar crimes by nature are such that the injury or the damage caused as a consequence of them is so widely diffused in the large body of citizens that their

enormity as regards personage victim is almost trifling. Hartung defines a white-collar offense as a violation of law regulating business, which is committed for a firm by the firm or its agents in the conduct of its business.

However, accounting figures are heavily exposed to fraud due to their influence on numerous crucial decisions that affect various key social actors with far reaching implications. For example, accounting figures are sources of rewards for management, a basis for investors' decisions and a basis for the assessment of firm performance and grouping in the sense of profitable and non-profitable firms. These numerous needs and interest makes accounting figures to be extremely susceptible to fraud. There have been many attempts to measure "the true extent of fraud, but compiling 'reliable' statistics around fraud is not easy." As one of the key aspects of fraud is 'deception', it can be difficult to identify and survey results often only reflect the instances of fraud that have actually been 'discovered'. It is estimated that "the majority of frauds go undetected and, even when a fraud has been found it may not be 'reported'. One reason for this may be that a company that has been a 'victim' of fraud does not want to risk 'negative' publicity." Although survey results and research may not give a complete picture, the various statistics do offer a useful indication as to the extent of the problem. Findings vary, and it is difficult to obtain a complete picture as to the full extent of the issue, but these surveys all indicate that fraud is prevalent within organizations and remains a serious and costly problem.

India has developed its corporate-sector, stock-markets and the accounting profession. The growing importance of the corporate-sector calls for its efficient working and greater transparency. However, the prevalence of creative (or fudging) accounting, and fraudulent practices followed by some of the Indian companies hinders this. In spite of number of checks and balances required by regulatory

agencies, there have been number of accounting scandals since the 1980s. Firms adopt accounting procedures that "minimizes unfavorable economic effects and enhance favorable ones

During the recent series of corporate fraudulent financial reporting incidents in the US, "almost all cases of foreign corporate accounting frauds were committed by the entities that conducted their businesses in more than one country, and most of these entities are also listed on U.S. stock exchanges." The corporate scandals of the last few years came "as a shock not just because of the enormity of failures, but also because of the discovery that questionable accounting practice was far more insidious and widespread than previously envisioned" (Bhasin and Shaikh, 2013)

It can be claimed that the above accounting scandal occurred because of integrated factors, such as, lack of auditor independence, weak law-enforcement, dishonest management, poor internal-control and inability of CG mechanisms in monitoring top-management behaviors. Unfortunately, it is also true that most frauds are perpetrated by people in positions of trust in the accounting, finance, and IT functions (Carpenter et al., 2011). Consequently, there should be alternative tools to detect the possibility of financial frauds.

India Fraud Survey Edition I December 2014 by Deloitte revealed the topmost frauds experienced by organizations -Senior management was identified as most susceptible to commit fraud, whereas external parties were least likely to commit fraud, as per survey respondents felt a stringent regulatory environment can help reduce incidents of fraud to some extent

There is no doubt that "qualified, trained and mature accounting professionals, possessing forensic skills, can prove to be a valuable asset to the corporate-sector, and gradually help to improve their CG systems." Initially, forensic accountant's (FA's) were used by the government agencies to uncover and investigate leading

frauds. They became financial detectives-independent experts employed by management to uncover fraudulent financial reporting and misappropriated assets.

To combat the frauds effectively one needs the active support of government at every stage. There are three-four such agencies in India, which are dedicated to the mission of combating frauds. Serious Fraud Office looks into violations of Income Tax, FEMA, RBI Act, etc.; CBI (Economic Office Wing) deals with big financial frauds; Central Vigilance Commission deals with corruption are the major government agencies that combat frauds of different types.

### **Review of Literature**

Many of these crimes are difficult to identify because the perpetrators have concealed their activities through a series of complex transactions. Usually large volumes of financial information are involved, and the complexity of these investigations can strain a company's resources (Brooks, Riley, & Thomas, 2005; Kahan).

Lee and Blaszczynski (1999) suggested that "employers expected accounting students to learn a multitude of skills, not simply how to generate and use accounting information. These skills include being able to communicate, work in a group environment, solve real world problems, and use computer and Internet tools.

Grippio and Ibex (2003) illustrated that "the most important skills of FA's come from experience in accounting and auditing, taxation, business operations, management, internal controls, interpersonal relationships, and communication." Furthermore, Akers and Porter (2003) advocated that "the AICPA and the Institute of Management Accountants recognize emotional intelligence skills as critical for the success of the accounting profession." Similarly, Messmer (2004) stated that "successful FA's must have analytical abilities, strong written and verbal communication skills, a creative mindset, and business acumen. They must be able to

interview and elicit information from potentially uncooperative people and possess a strong amount of skepticism.

In modern technology-based era, most of the criminals behind fraud use sophisticated technology and accounting tricks to commit complex frauds. This means that a FA needs the state-of-the-art facilities to uncover fraud (Ozkul and Pamukcu, 2012).

DiGabriele (2008, 2009), in a US study found that "both academics and practitioners agreed that critical thinking, unstructured. Ahadiat (2010) conducted a study in which he asked respondents to rate the skills expected of an accountant and the auditor. The results from his study shows that "accounting curricula across the United States were revised to include instructions aimed at improving students' knowledge, skills, and abilities, which would go beyond their technical knowledge. These skills included, communication skills, analytical skills, presentation skills, team orientation, critical thinking, among others."

A study conducted by Sugahara and Coman (2010) attempted to compare the differences in 'Japanese' accounting faculty and practitioners' perceived importance of generic skills for CPAs in order to assess the CPA Law Amendment of 2003. It was found that "Japanese accounting faculty and practitioners commonly perceived the information skill type as the most important, and the behavioral skill type as the second most important, but they tended to regard the interpersonal skill type as less important.

Chukwunedu and Okoye (2011) revealed that "forensic accounting techniques injected in an audit and given cost/benefit considerations is capable of increasing the ability of the auditor to detect fraud and thus help bridge the audit expectation gap. This finding has implications for both accounting education and accounting practice.

It is apparent that the academic literature has identified some of the forensic accounting

courses and course contents, whereas the practitioner literature suggests core skills necessary in practice. However, the literature has not yet empirically identified the views of three major stakeholders-accounting academics, forensic accounting practitioners, and users of forensic accounting services-regarding which skills are important for FA's. All the three stakeholders will be significant in shaping the future of forensic accounting. A humble and earnest effort by the authors has been made in the present paper to relate the basic skills needed for traditional accounting and auditing services with the and the ones required for specialized services in the areas of fraud investigations, forensic accounting and forensic auditing.

### **Objective of the Study**

The primary objective of this study is to assess and determine whether the necessary skills required by the FA's significantly differ from the expectations of stakeholders viz clients and Professional accountants.

### **Research Methodology**

A random sample of 360 accounting academicians, professional accounting practitioners (CA, CS, Taxation practitioners) and Advocates and other agencies personnel was drawn out from Udaipur, Bhilwara and Chittorgarh. The research instrument (questionnaire) was divided into three sections, and it was sent out and retrieved as follows: 360 questionnaires were given hand-to-hand by trained assistants to members of the stakeholders' groups. 120 for each group of professional accountants, accounting academics and lawyers/anti-graft agencies personnel. However, only 210 questionnaires were finally retrieved as per schedule, with 195 found to be reasonably complete in most respects.

The questionnaire comprised six questions attempted to map the profile of the respondents, such as, primary profession, gender, education, experience, professional qualification/license, and involvement with forensic accounting services. one question specifically asked the

participants to identify, at least, five core skills (out of 11) that FA's needs to possess, and rank them on a 5-point Likert-type scale, ranging from 4 (strongly agree) to 0 (strongly disagree), another skill-related broad statements were presented being the important skills of FA's. as suggested by DiGabrielle in 2008, "The skills required for the FA's are inclusive of but not limited to : deductive analysis, critical thinking, unstructured problem-solving, investigative flexibility, analytical proficiency, oral and written communication, legal understanding.

The respondents were to rate the same on a 5-point Likert-type scale, ranging from ranging from 4 (strongly agree), 3 (Agree), 2 (Neutral), 1 (disagree) to 0 (strongly disagree)." Also, the respondents had to mark some questions regarding basic education and career-paths of FA's, their likely demand in the future-next 5, 10 and 20 years, and need to know computer-based forensic techniques and software tools. The scales were anchored at each end with the descriptors "extremely unimportant" to "extremely important". The responses from the above stated aspects of the survey instrument enabled us to assess participants views on the 'core' skills of FA's, the extent of differences in views about these skills between current and previous research, and general trends about FA's education, career-path, demand-supply scenario, and computer-proficiency.

In conducting the data analysis, we used SPSS and Excel packages to compute descriptive statistics for group membership (tables of frequencies and percentages) as well as the responses relating to the competencies (both percentages within each category and overall means, standard deviations, variances and ranges). Moreover, the correlations among the items were also computed. chi-square ( $\chi^2$ ) for testing hypothesis

### **Data Analysis, Findings and Results**

A total of 195 respondents fully-completed the survey instrument, of them 40 (31%) were professional/forensic accountants, 40 (31%)

accounting academics, and 50 (38%) were users of forensic accounting services. The overall response rate was 54 percent, which is little above the average score. The demographic profile of the sample is as follows: approximately 70 percent of the sample comprised of men, 62 percent were over the age of 40 years, 93 percent were having undergraduate/masters' education, 77 percent were having experience with business forensics, 88 percent had experience with accounting, and 92 percent had experience with auditing, respectively.

The questionnaire comprised the list of choices provided to the participants vide relevant academic and professional literature,

consultation with forensic accounting practitioners, and users of forensic services.

we can conclude as follows: "The skill competency items rated as the most important were effective written communication (M=15.5, SD=5.1), auditing skills and oral communication (M=14.75, SD= 6.7 & 5.2). Research skills (M=13.75, SD=6.8), and investigative ability (M=13.5 & 13.25, SD=4.4 & 3.6) take the second position in terms of importance. The items rated as least important were: understanding the goal of a case (M=6.5, SD=2.9), solve unstructured problems (M=10, SD= 3.6), and synthesize results of discovery and analysis (M=10, SD=5.4)

#### Descriptive Statistics for Skill Competency Required for Forensic Accountant's

Skills Required for FA's	Mean	Standard Deviation	Variance	Range
1. Auditing Skills	14.75	6.7	44.9	15
2. Effective oral communication	14.75	5.2	26.9	11
4. Effective written communication	15.5	5.1	25.7	11
5. Investigative ability	13.25	3.6	12.9	8
6. Investigative intuitiveness	12	4.2	18.0	9
7. Organize an unstructured situation	12.25	6.6	43.6	14
8. Research Skills	13.75	6.8	45.6	15
9. Solve unstructured problems	10	3.6	12.7	8
10. Synthesize results of discovery and analysis	10	5.4	28.7	11
11. Understand the goals of a case	6.5	2.9	8.3	7

The correlations among the important ratings for the skill-competencies are shown in. The following general observations can be made: " The highest correlations were between Critical thinking-Sociology-Understanding the goal of the case, Effective written communication-Psychology, Investigative ability-Simply the information, Organizing an unstructured situation-Solve structured problems-Solve unstructured problems, Simply the information-Tell the story, Solve structured problems-Solve unstructured problems-Psychology skills, and Understand

the goals of a case-Sociology, all with 99 percent ( $r = 0.99$ ) and between Critical / strategic thinker- Solve unstructured problems, Effective written communicating- Solve unstructured problems, Organizing an unstructured situation-Research Skills-Psychology skills, and Simply the information-Solve structured problems all with 98 percent ( $r = 98$ ), whereas the lowest was Understand the goals of a case with 36 percent ( $r = 0.36$ ). However, most of the correlations were above 50 percent ( $r = 0.50$ ), thus, showing reasonable levels of statistical significance."

### Correlation Analysis

Type of Skill	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<b>Auditing Skills</b>	1.00																			
<b>Effective oral communicator</b>	0.43	0.70	1.00																	
<b>Effective written communicator</b>	0.91	0.94	0.70	1.00																
<b>Investigative ability</b>	0.87	0.78	0.69	0.94	1.00															
<b>Investigative intuitiveness</b>	0.77	0.68	0.68	0.88	0.84	1.00														
<b>Organizing an unstructured situation</b>	0.98	0.94	0.69	0.97	0.91	0.82	1.00													
<b>Research Skills</b>	0.93	0.97	0.74	1.00	0.83	0.92	0.84	1.00												
	0.88	0.97	0.74	0.94	0.82	0.92	0.86	0.90	1.00											
<b>Solve unstructured problems</b>	0.96	0.98	0.69	0.98	0.88	0.89	0.79	0.99	0.99	1.00										
<b>Synthesize</b>	0.88	0.97	0.74	0.94	0.82	0.92	0.86	0.90	0.90	0.90	1.00									
<b>Solve unstructured problems</b>	0.96	0.98	0.69	0.98	0.88	0.89	0.79	0.99	0.99	0.99	0.95	1.00								
<b>Synthesize results of discovery and analysis</b>	0.96	0.93	0.78	0.94	0.85	0.91	0.75	0.99	0.87	0.94	0.97	0.97	1.00							
<b>Understand the goals of a case</b>	0.85	0.96	0.88	0.99	0.88	0.93	0.85	0.99	0.99	0.93	0.96	0.98	0.99	1.00						

**Hypothesis Testing:**

**Hypothesis-:** "The necessary skills of FA's will not meet employers' expectations."

The Table below shows the details of the chi-square tool used for testing this hypothesis.

**Testing Using Chi-square (x2)**

**What is your involvement with forensic accounting services? What licenses or professional qualifications do you possess? Cross-tabulation**

Count		What is your professional qualification ?					Total
		ACCA or CA	CFA	CS	Advocate	Others	
What is your involvement with forensic accounting services?	I undertake services of forensic accountants	9	0	0	0	0	9
	I consider myself a forensic accountant	14	2	2	0	0	18
	I employ forensic accountants in my firm chambers	5	0	0	0	0	5
	I have no involvement	6	0	2	21	4	33
<b>Total</b>		<b>34</b>	<b>2</b>	<b>4</b>	<b>21</b>	<b>4</b>	<b>65</b>

**Table: Chi-Square Tests**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi -Square	<b>57.469<sup>a</sup></b>	12	0.000
Likelihood Ratio	74.881	12	0.000
Linear -by -Linear Association	42.829	1	0.000
No. of Valid Cases	65		

If the p-value is greater than the level of significance, accept H0 and reject H1, otherwise reject H0 and accept H1. In this case, the p-value = 0.000 and the level of significance is 0.050, therefore, we accept H1 which says "the necessary skills of Forensic Accountants will meet employers' expectations" and reject H0.

**Conclusion**

The increasing demands in the current regulatory, legal, and business environments should stimulate accounting programs to emphasize and embrace forensic accounting.

This research surveyed practitioners, academics, and users of forensic accounting services to determine whether there are differences in views of the relevant skills.

The results indicate that practitioners and academics agree that critical thinking, unstructured problem solving, investigative flexibility, analytical proficiency, and legal knowledge are important skills of forensic accountants. surveyed academics, practicing fraud and forensic professionals in order determine the perceptions of the professional

community. Since little research exists in this area, present research is 'exploratory' in nature.

The results indicate that "potential practitioners and academic agree that critical thinking, unstructured problem-solving, investigative flexibility, analytical proficiency, and legal knowledge are more important skills of FA's.

Potential practitioners of forensic accounting services rated analysis the more important than did academic staff. However, both groups agreed with prospective users, who viewed deductive analysis as very important. The groups did not differ on oral communication, written communication, or composure rankings. These results show that some skills are relevant and important to the outcome of forensic accounting education. Educators can use these skills as a guide to direct academic curriculum with the proper learning outcome objectives. In correlating the important skills as identified by our respondents, it was found that critical thinking, sociology and understanding the goal of the case highly correlated to each other, likewise effective written communication, psychology, investigative ability and simplify the information.

Others are effective written communication, solve unstructured problems, organizing an unstructured situation, research skills, psychology skills, simply the information and solve structured problems, amongst others. Most of the important skills have "correlations within and above 50 percent, showing that most of them have significant association with one another for FA's to function effectively.

The hypothesis tested clearly states that "The necessary skills of FA's, will meet employers' expectations." Employers, who include lawyers and anti-graft agencies personnel, are the users of forensic accounting services and if they concur with what accounting academics and professionals say should be the skills requirement of FA's, then academic and professional institutions should not hesitate to

incorporate these skills in their curricula. Moreover, we found that all of the skills investigated in this study are 'potentially' important for FA's. This concern has led to higher demand for FA's in countries like India and China. The Ministry of Corporate Affairs in India has also established the Serious Fraud Investigation Office, which seeks the help of FA's. The government recently proposed to give more teeth to the SFIO under the new Companies Bill by providing it statutory recognition and empowering it with more powers.

## References

- Sharma N, Vyas Rahul (2017), International Journal of Advanced Educational Research, "A click on I Agree? We've all done it: Clicked or Skipped" Volume 2; Issue 5; Page No. 25-29
- American Institute of Certified Public Accountants (2011), "The 2011 Forensic and Valuation Services Trend Survey," AICPA, available at [www.aicpa.org](http://www.aicpa.org).
- Arens, A.A. and Elder, R.J. (2006), "Perspectives on Auditing Education after Sarbanes-Oxley", Issues in Accounting Education, Vol. 21 No. 4, November, pp. 345-362.
- Association of Certified Fraud Examiners (2010, 2012), "Report to the Nations on Occupational Fraud and Abuse," ACFE. Available at [www.acfe.com](http://www.acfe.com).
- Barra, R.N. (2010), "The Impact of Internal Controls and Penalties on Fraud," Journal of Information Systems, vol. 24, no. 1, pp. 1-21.
- Bawaneh, S.S. (2011), "Forensic Accountants in the Digital Age," Interdisciplinary Journal of Contemporary Research in Business, Vol. 3, no. 3, July, pp. 75-86.
- Black, W. K. 2010. "Epidemics of Control Fraud lead to Recurrent, Intensifying Bubbles and Crises," Working Paper, University of Missouri-Kansas City, SSRN-id 1590447.
- Jones, M. (2011), 'Creative Accounting, Fraud and International Accounting Standards,' John Wiley & Sons, London.

- KPMG (2012), "KPMG India Fraud Survey 2012," available at [www.kpmginstitutes.com](http://www.kpmginstitutes.com).
- Ekeigwe, C. (2011), "Fraud Risk Management," a paper presented at the Institute of Chartered Accountants on Nigeria Forensic Certification Training Program held on August 11-12, 2010 at Sharon Ultimate, Abuja.
- Efiog, E.J. (2012), "Forensic Accounting Education : An Exploration of Level of Awareness in Developing Economies," International Journal of business and management, Vol. 7, No. 4, pp. 26-34.
- zkul, F.U. and Pamukcu, A. (2012), "Fraud Detection and Forensic Accounting," Emerging Fraud, Springer-Verlag Berlin Heidelberg, Vol. 35, pp. 19-41.
- Orumwense, J. (2013), "Implementing the Use of Auditing Skills to Identify and Avert Situations Which Could Lead to Frauds Being Perpetrated," International Journal of Finance and Accounting, Vol. 2, no. 1, pp. 19-23.

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# A Study of Relationship between Job Satisfaction and Talent Retention in Higher Educational Institutions of India

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t** In order to maintain high standard of education it is necessary to have well qualified and experienced faculties in these institutions. With the mushrooming of higher educational institutions in India it has becomes very difficult to retain faculty members in these institutions. A large number of educational institutes do not make effort or very less effort are made by these institutes to retain good performers and this is the main reason for deterioration of quality education in India. The present study was conducted to study what factors are necessary to retain talent in higher educational institutes and the relationship between talent retention and job satisfaction. The locale of the study was higher educational institutions in Delhi NCR region affiliated to Dr. A. P. J. Abdul Technical University, Lucknow and situated around Delhi and NCR. The sample size was 321. In this study it was found that the major factors that play role in talent retention are compensation, facilities, image of institute, relationship, work environment and work recognition. The relationship between talent retention and job satisfaction was found to be positive and significant which shows that high job satisfaction leads to greater probability of employee retention in the organization.

*Key Words: Talent Retention, Job Satisfaction, Compensation, Work Recognition, Work Environment*

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## Introduction

In order to maintain high standard of education it is necessary to have well qualified and experienced faculties in these institutions. With the mushrooming of higher educational institutions in India it has becomes very difficult to retain faculty members in these institutions. For any institution faculty members are pillars of the institutions. Hence it is very necessary to retain well qualified and experienced faculty members at any cost. Teachers' Retention is becoming very difficult these days and it is one of the biggest challenges faced by Higher Education Institutes (HEI) in India.

A large number of educational institutes do not bother about retention strategies to be adopted to retain these institutes however it is found that no

effort or very less efforts are made by these institutes to retain good performers and this is the main reason for deterioration of quality education in India.

Employee retention means a process in which employees are encouraged to have long term relationship with the institution. Employee retention is beneficial for both employee as well as organization because cost employing a new employee is much higher and it is also helpful for the success of the organization. Employee retention is also beneficial for organization's competitive advantage because it affects organization's efficiency, productivity and sustainability. It is responsibility of the employer to retain its good performing employees. Employee retention depends upon many factors like compensation, organizational support, relationship with colleagues and boss, growth etc. Intelligent employers always realize the importance of retaining the best talent.

The relationship between job satisfaction and employee retention is researched by many researchers in the field of management. Besides employee retention employee job satisfaction is also significant for organization's performance. Employees stay or leave organizations for many reasons the reasons may be personal or professional. Employees who are satisfied and happy with their jobs are more dedicated and work for organization's growth. If employees are satisfied at their job then they will stick and work for the organization and talent retention becomes easy. Employees that are satisfied with their job will stay with the organization.

### **Need of the study**

From the above discussion it is clear that job satisfaction talent retention significantly, but does this relationship also exists in case of faculty retention in higher education therefore the purpose of this study is to study the relationship between faculty retention and their job satisfaction in higher education institutes. The present research paper made an effort to find out

factors responsible for faculty retention in higher educational institutions in India and find out the relationship between job satisfaction and faculty retention.

### **Review of Literature**

Findings from the HR Council's 2008 survey of nonprofit sector employees suggest some connections between job satisfaction and employee retention. These findings shed light on retention challenges and strategies and offer some clues about when retention might be a challenge and what it could take to make sure more employees are more satisfied with their jobs. This research work saw reflections of job satisfaction in indicators of employee retention: whether employees expect to resign from their jobs in the coming year; whether or not they are currently looking for a new job; and their commitment to the organization they work for. The characteristics and circumstances of employees who are more likely to be less than satisfied can serve as a kind of early warning system for retention challenges that could be emerging in your organization, or that could be on the horizon.

Recardo, S. B. (2014) in his research paper titled "The effect of job satisfaction to employee retention" concluded that job satisfaction improves employee retention. Job satisfaction is a reliable and relevant predictor of employee retention. When employers engage in practices that support good working relationships and benefits, job satisfaction improves because workers tend to believe that the company is using their skills and appreciating their service and commitment. In turn, higher job satisfaction generally results in higher levels of employee retention.

Rathnakar, G. and Pal, P. P. (2015) in their research paper titled "Retention of Faculties in Technical Educational Institutes and Reason for Attrition- A Study" revealed that - The important retention strategies are salaries, recognition, flexible work arrangements, work life balance,

employee engagement, health and safety communication, work place diversity, formal wellness programs, inclusion and employee development. Retention ensures the critical/core employee stays with the organization and get associated with the organization for a longer duration of the carrier. To retain employees it is necessary to design employee engagement policy. Employees need to be involved and show interest in their work. They should find meaning in what they do and have faith that the organization should treat everyone fairly whether it is in terms of salary, role or growth opportunities.

Pabla, M. S. (2015) in his research paper titled "Teachers Retention in Higher Educational Institutes" concluded that employee attrition is a symptom and not a problem. It is a result of deeper issues that have not been addressed or resolved some of them could be low morale, no career path, lack of recognition, poor employee - management relationship, inadequate compensation, indifferent work culture or working atmosphere, lack of interactions between superiors and subordinates, lack of employee's participation etc. The crux of the problem lies in the careless attitude of the top management by not following monetary & non-monetary incentives to retain the good performers.

Tripathi R. and Singh, V. P. (2017) in their research paper titled "A Study on Employee Retention in Education Sector in India (with special reference to Noida Region)" concluded that - the job satisfaction level and working conditions in the education sector for employee retention are quite good. Career opportunities, superior support, rewards and recognition are considered to be the most important factors for the job satisfaction level in this sector, which, are quite high. The study revealed that job satisfaction, salary, promotion is important among the academics who took part in this study.

There are intrinsic, as well as extrinsic, factors that affect the academic retention process. Amongst other elements, salary disparities were also identified as one of the main reasons causing academics to leave their profession this is because the academic staffs see job satisfaction as the most important aspect; job satisfaction was regarded as an intrinsic element that motivates staff to stay within their job.

### **Objectives of the Study**

1. To study the factors responsible for faculty retention in higher education institutions of India
2. The study the relationship between faculty retention and job satisfaction.

### **Hypothesis**

1. There is no significant relation between faculty retention and job satisfaction.

### **Research Methodology**

**Locale of the Study:** The present research work was conducted in Higher Educational Institutions in Delhi NCR region affiliated to Dr. A.P.J. Abdul Technical University, Lucknow and situated around Delhi and NCR.

**Sampling Unit:** The sampling unit for the present research work was faculty members from MBA departments of Engineering Colleges.

**Sampling Method:** Convenient sampling method was used to collect data.

**Sample Size:** Total 500 questionnaires were administered to the faculty members and finally 321 responses received completed in all respects.

**Data:** The main source of data for the resent research work was primary. To collect primary data a self designed questionnaire was used consisting of three sections. In section one personal information of responding faculty was sought like gender, age, education, marital status etc. Second section consists of items related to factors responsible for faculty retention and third section consists of items related to job satisfaction.

**Reliability of the Questionnaire:** A self designed questionnaire was used to collect primary data. A Pilot study was done on 60 responses and reliability of the questionnaire was calculated using Cronbach's alpha method. The overall reliability of the questionnaire came out to be 0.934.

**Statistical tools and techniques used for analysis:** Besides mean, standard deviation the main tool used for the analysis was Karl Pearson's coefficient of correlation. Software used for analysis of data analysis was Microsoft Excel 2007 and Statistical Package for Social Science (SPSS) Version 19.

#### Data Analysis Results

The analysis of collected data is given below in the following tables and charts.

**Table 1:**  
**Distribution of Respondents According to Age**

Age	N	%
up to 30	97	30.22
31 - 40	169	52.65
41 - 50	46	14.33
51 - 60	9	2.80
<b>Total</b>	<b>321</b>	<b>100.00</b>

Table 1 shows distribution of respondents according to age. Table reveals that maximum respondents belongs to younger age group up to 40 years (82.87%). 30.22% were up to 30 years and 52.65% were between 31 to 40 years.

**Table 2: Distribution of Respondents According to Gender**

Gender	N	%
Male	211	65.73
Female	110	34.27
<b>Total</b>	<b>321</b>	<b>100.00</b>

Table 2 shows ratio of male and female faculty members. There were almost 66% male members and rest 34.27% female faculty members.

**Table 3: Distribution of Respondents According to Designation**

Designation	N	%
Assistant Professor	225	70.09
Associate Professor	46	14.33
Professor	30	9.35
Others	20	6.23
<b>Total</b>	<b>321</b>	<b>99.00</b>

Table 3 shows distribution of respondents according to designation. There were 70.09% assistant professor, 14.33% associate professors, 9.35% professors and rest 6.23% were from other designations.

#### Retention factors

Total forty seven statements of retention given to respondents were then clustered in to six retention factors viz. Compensation, facilities, image of institute, relationship, work environment, work recognition. The data related to these factors reveals satisfaction of faculty members with regard to these factors or in other words to what extent these factors play role in their stay in the organization or institution.

**Table 4: Retention Factors**

Retention Factors	Mean	SD	Rank
Compensation	3.20	0.76	5
Facilities	3.48	0.87	3
Image of Institute	3.30	0.83	4
Relationship	3.67	0.86	1
Work Environment	3.64	0.80	2
Work Recognition	3.08	0.59	6

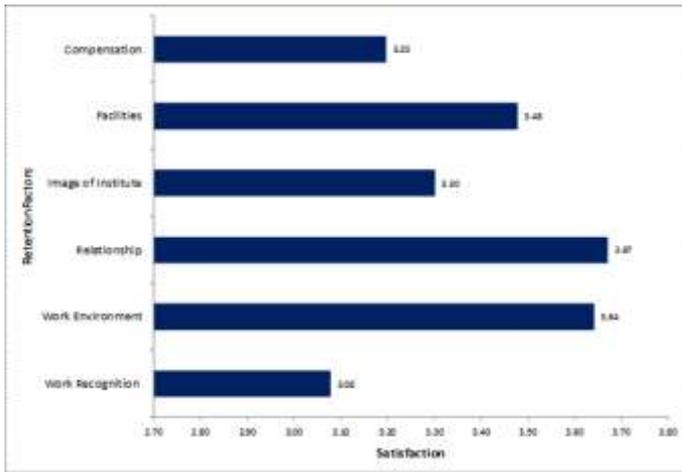


Fig. 1: Retention factors and satisfaction

Table 4 shows satisfaction of employee with different retention factors. The mean scores show that faculty members were satisfied with peer relationships, second with work environment and third with facilities provided by the institutes. Faculty members were comparatively less satisfied with work recognition, compensation.

**Talent Retention**

Further the probability of retention of the employees was measured giving them questions about it. Table given below show mean score and standard deviation of these questions which shows probability of faculty members to retain in the institute.

**Table 5: Talent Retention**

N	Mean	SD
321	3.33	0.67

**Job Satisfaction**

The overall job satisfaction was measured by statements given to rate to respondents like satisfaction with HR policies of the institution, monetary and non-monetary benefits given to them, satisfaction with growth and career opportunities available and overall working experience. The overall job satisfaction scores (given in the table below) reveals respondents were satisfied above average level.

**Table 6: Job Satisfaction**

N	Mean	SD
321	3.47	0.87

**Relationship between retention and job satisfaction**

**Table 7: Correlation between talent retention and job satisfaction**

N	r	Result
321	0.393	***( $p < 0.001$ )

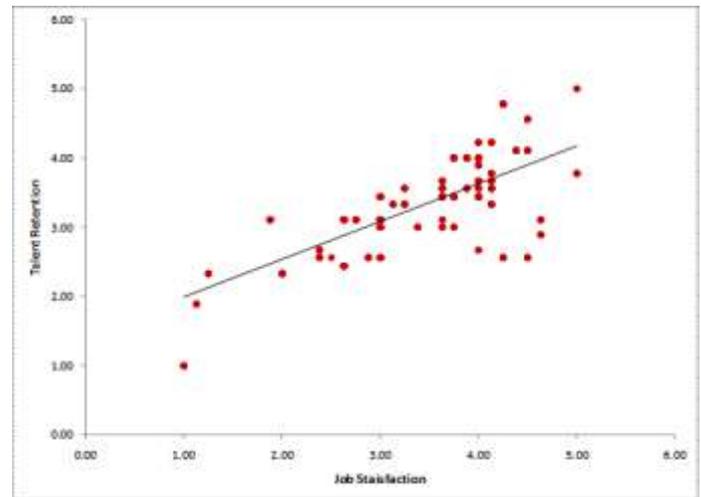


Table 7 shows correlation between talent retention and job satisfaction. Correlation was calculated using Karl Pearson's coefficient of correlation method the value of this coefficient is 0.393 at 0.1% level of significance and our null hypothesis that there is no significant relationship between talent retention and job satisfaction is rejected. This results shows that talent retention and job satisfaction are positively correlated. This result shows that if employee gets satisfaction in job their probability of retaining in the institute will also increase.

**Conclusion**

The present research work was conducted in Higher Educational Institutions in Delhi NCR region affiliated to Dr. A. P. J. Abdul Technical University, Lucknow and situated around Delhi and NCR. The sample size was 321. This research paper studies relationship between talent retention and job satisfaction. This paper also unearthed factors responsible for retention of employees. The six factors responsible for retention of employees were compensation, facilities, image of institute, relationship, work environment and work recognition. Probability

of retaining in the institution and overall job satisfaction were also measured which was found to be positive and significant. This positive significant relationship reveals that high job satisfaction leads to greater probability of employee retention in the organization.

### References

- HR Council Canada (2008) Trends & Issues : Job satisfaction and employee retention; Web link: [http:// www. hrcouncil.ca / documents/LMI\\_satisfaction\\_retention.pdf](http://www.hrcouncil.ca/documents/LMI_satisfaction_retention.pdf)
- Kubler, J. and DeLuca, C. (2006); "Trends in academic recruitment and retention: A Commonwealth perspective"; Published by The Association of Common wealth Universities, Woburn House, London WC1H 9HF, United Kingdom
- Selesho, J. M. and Naile, I. (2014); Academic Staff Retention as A Human Resource Factor: University Perspective; International Business & Economics Research Journal - March/April 2014 Volume 13, Number 2.
- Ricardo, B. S (2014), "The effect of job satisfaction to employee retention"; 10.13140/rg.2.2.27677.72161. Web link: [https:// www.researchgate.net/publication/315653880\\_the\\_effect\\_of\\_job\\_satisfaction\\_to\\_employee\\_retention](https://www.researchgate.net/publication/315653880_the_effect_of_job_satisfaction_to_employee_retention)
- Sharma R. K. and Chaturvedi, S. K. (2017); Factors leads to attrition and retention of academic staff at higher educational institutes in Uttar Pradesh, International Journal of Applied Research 2017; 3(4): 01-07.
- Rao, A. G. S. (2017); "Talent Management An ongoing issue with Higher Educational Institutions in India", International Journal of Engineering Technology Science and Research, IJETSR, [www.ijetsr.com](http://www.ijetsr.com), ISSN 2394 - 3386, Volume 4, Issue 7, July 2017
- Tripathi, R. and Singh, V. P. (2017), "A Study on Employee Retention in Education Sector in India (with special reference to Noida Region)", International Journal of Research in Management & Business Studies (IJRMBS 2017) Vol. 4 Issue 4 Oct. - Dec. 2017 ISSN : 2348-6503 (Online), ISSN : 2348-893X (Print)

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## Students' Section

# Emotional Intelligence: Communication Effectiveness mediates the Relationship between Stress Management and Job Satisfaction

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Stress management remains a key topic of concern among managers and employees worldwide. The most significant contribution of this research is the discovery the stress management related to communication effectiveness, and on the other hand, communication effectiveness related to job satisfaction within organizations. Communication effectiveness is a crucial factor for organization's performance and growth and plays an important role in stress management, and job satisfaction of today's competitive organizations. According to literature on business area and logical arguments we proposed that communication effectiveness can moderators the link between stress management with job satisfaction. The respondents consists of 50 respondents from public and private banks. Stress management of emotional intelligence has a positive relationship with communication effectiveness and also communication effectiveness plays a key role in job satisfaction.

**Keywords:** *Emotional Intelligence, Stress Management, Communication Effectiveness, Job Satisfaction, secondary data.*

### Introduction

In this complex situation organization both public and private sector have to manage change in an effective way. Emotional Intelligence plays a critical role in helping the managers and employees to cope with this dynamic change in the business environment. Application of emotional intelligence supports the managers and employees to recognize and understand emotions and using emotional intelligence to manage oneself and his/her relationship with others. The organizations must coach their employees in developing their interpersonal skills and coach them to perform effectively on the job with other employees in the organization. Management of emotional intelligence by the team members will help in developing interpersonal skills of the team members. Organization's to be successful, need to develop employee's emotional intelligence skills to work effectively in the organization. The most

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important dimension of Bar-On EQ-I is stress management. The researcher in this paper studied relationship between stress management and communication effectiveness. Stress management refers to a set of programs or techniques intended to help people deal more effectively with stress. Many of these programs are oriented toward job- or workplace-related stress in that burnout is a frequent result of long-term occupational stress. On the other hand, Communication plays a key role in the management of professional organizations and their achievement of development. Communication effectiveness has long been held to be a success factor for managers. Effective communication can add value to organizations. Fisher states that communication effectiveness is a vital factor in the workplace, in relationships, and in everyday life. Communication effectiveness in organizations can unite the managers, workers, decision making, and improve teamwork. Stress management transformed progressively from a mere notion into a dominant theory in many research areas within which its effects on human behaviour were analysed. Recently, Stress management received much interest in effective communication. Results of these studies indicated that Stress management played a pivotal role in human communication. The need to establish the relationship between Stress management and effective communication was recognized. This manuscript describes Stress management of managers and employees have a direct role to improve communication effectiveness. However, the empirical evidence is scant, and no study has examined the interaction effect of managers' stress management and employees' stress management on communication effectiveness. As such, the goals of this study are to examine the impact of manager and employees' stress management and communication effectiveness on job satisfaction.

### **Stress Management**

One of Bar-On EQ-I component is the stress management component. It is defined by two subcomponents in specific: "stress tolerance (ability to withstand adverse events through positive, active coping) and impulse control (ability to resist or delay an impulse, drive, or temptation to act)". Research points out that emotionally intelligent individuals manage more productively because they "accurately perceive and appraise their emotional states, know how and when to express their feelings, and can effectively regulate their mood states". Managing office is not an easy occupation. One of the difficulties in working in the public education system is dealing with individuals that are undergoing various, simultaneous neuro-physiologic, body, and emotional changes. Managing is considered and labelled to be a stressful occupation. Managers are expected to regulate their mood with caution so as not to damage the interpersonal relationships they develop with others in the academic setting. A foundation of stress on the job implicates the inadequate relationships between group members, including subordinates, colleagues, and employees. This is marked by little trust, little supportive, and little interest in listening and trying to deal with problems that comfort organizational members. Data most frequently reported source of work-related stress.

### **Communication Effectiveness**

Communication effectiveness is an essential part of human interaction. The benefits of effective communication are many and obvious as they enhance all aspects of our personal and professional lives. Ineffective or misunderstood communications in our personal lives may give rise to problems or embarrassment but in our professional lives the results of misunderstandings may have much more serious results. According to Campbell communicative effectiveness is deliberate behaviour aimed at augmenting the result of an interpersonal

meeting. Similarly, the expression "communication effectiveness" is often replaced by, "effective communication". A high level of communication effectiveness leads to a high degree of similarities of understandings between the sender and the receiver. In this case, the communication effectiveness of the group managers has positive correlation with maximizing understanding or minimizing misunderstanding of group workers with job satisfaction.

### **Job Satisfaction**

Job satisfaction is vital in the day to day life, which is far past the studies and literature related to research. Job satisfaction can be defined as an encouraging emotional condition as a result from the features and characteristics of a work environment. Organizations produce noteworthy effects on their employees and a number of those effects are indicated in how people feel about their jobs.

### **Relationship Between Stress Management And Communication Effectiveness**

One of Bar-On EQ-I component is the stress management component. Stress management has a high relationship with communication effectiveness. Stress management is defined by two sub-components: "stress tolerance (ability to withstand adverse events through positive) and impulse control (ability to resist or delay an impulse, drive, or temptation to act)". Research points out that emotionally intelligence people handle more effectively because they "accurately perceive and appraise their emotional states, know how and when to express their feelings, and can effectively regulate their mood states". One of the difficulties in working in the public education system is communicating with individuals and employees that are undergoing diverse, simultaneous neuropsychological, body, and emotional changes and this work is considered to be a stressful occupation. Managers are expected to control their mood with caution so as not to damage the

interpersonal relationships they improve with others in the educational environment. Infrastructure of stress on the job shows the insufficient communication between group individuals, including managers and employees. It is marked by little belief, little supportive, and little desire in listening to and trying to communicate with troubles that confront organizational individuals. Information recommend that negative communication with employees, workers, clients, colleagues, and managers are the most often informed source of work-related stress. In summary in current paper, communication effectiveness view of stress management and job satisfaction. The view holds that stress management and job satisfaction are outcomes of the communicative process. It follows that to improve manager effectiveness requires a significant emphasis on communication effectiveness since according to this view; it is through communication effectiveness that stress management and job satisfaction occur.

### **Goals and Methods**

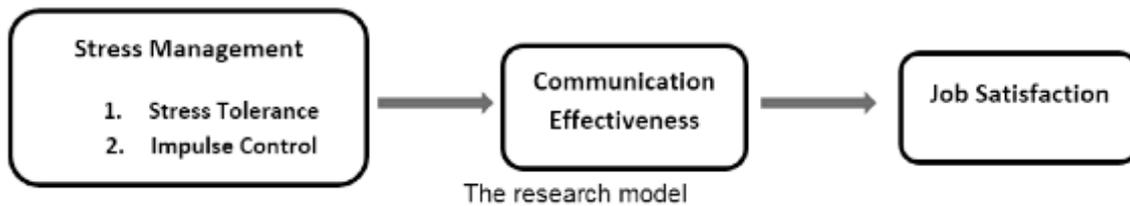
The goal of the research was to determine the impact of stress management through communication effectiveness on job satisfaction. The research was based on a questionnaire study, which is a quite common form of investigation in this behaviour and business field and also provide opportunities for determining whether stress management and communications effectiveness have an impact on job satisfaction.

### **Research Model**

The model for this paper is composed of three key constructs including stress management, communications effectiveness, and job satisfaction. Based upon the studies and researches, it can be concluded that communication effectiveness affected by many factors. To name a few factors, relationship with motivation, job satisfaction, leadership, emotional intelligence, organizational culture can influence communication effectiveness. For this study, we

have focused on emotional intelligence due to some reasons that we have mentioned previously. By reviewing much literature, it was found that emotional intelligence brought about a positive effect on communication effectiveness. Based on the existing literature-as stated there is a positive relationship between stress management with communication effectiveness

serving as a mediator of this relationship. Also, communication effectiveness has a positive relationship with job satisfaction. Thus, we can propose that communication effectiveness mediators the link between stress management and job satisfaction. Good communication is factor that has been found to affect job satisfaction.



From the model, the following hypothesis is derived:

Response	Sector				Chi-Square	df	Result
	Public		Private				
	N	%	N	%			
Have Pressure	45	90.00	41	82.00	1.329	1	NS
Work is evenly distributed	5	10.00	9	18.00			
<b>Total</b>	<b>50</b>	<b>100.00</b>	<b>50</b>	<b>100.00</b>			

High level of work pressure in public as well as private organizations. The chi square test result shows significant association between work stress and type of bank in which employee works ( $\chi^2=1.329, p<0.05$ ). Significant association shows that employees are burdened and stressed with work pressure in public as well as in private sectors. On observation, there is direct relation between stress management, communication and job satisfaction.

Stress is on the increase across the western world. Recent surveys done in the US by the American Psychological Association indicate that about 43% of adults suffer adverse health effects due to stress, [1] and that between 75-90% of visits to a doctor are stress-related. A similar story is playing out across the developed world. Here are some statistics from the UK: 70% of managers think work-related stress has an adverse effect on their home lives and therefore impacts on their

work-life balance. [2] In the UK there are nearly 170,000 claims for stress-related illness and injury every year: 27,000 people take time off work each day as a result of stress. [3] (The situation is even worse in the US, where the Workers' Compensation Scheme, an insurance scheme for work-related health problems, is regularly inundated with stress related claims. Massive payouts are becoming more and more common.) The British Heart Foundation has indicated that stressful jobs increase the risk of coronary heart disease by more than 50% in men and by more than 70% in women compared to less stressful jobs. [4] Although workplace-induced stress affects employees first and foremost, employers are beginning to realize how hard the consequences can hit their bottom line. The rise in legal claims is just one reason for this. In the UK, for instance, the Health & Safety Executive calculated that in 1998 alone, 90 million working

days were lost due to stress-related illness.

H1: Stress management will have a significant relationship with communications effectiveness and job satisfaction.

### Outcomes and Discussion

Stress management is independent variables in this research, communications effectiveness is a mediator variable and job satisfaction in the Organisations is considered as the dependent variable. The present research is an applicable one with interrelationship. The researcher tries to investigate a connection between variables. The purpose of this applied study and correlation in this research is the assessment of this connection between variables and making on these predictions the researcher looks for a probable relation between Stress management, communications effectiveness, and job satisfaction in Organisations.

### Conclusion

Over results have shown there is a significant and positive relationship between independent variable stress management (i.e. stress tolerance and impulse control), and communication effectiveness with dependent variable (job satisfaction). From the results of the study, we can conclude that the organisations should pay much attention to stress management, and communications effectiveness as they could lead to maintain job satisfaction. We encourage future research to replicate our findings in wider samples in organizations. It is important to note that prior researches have ignored the link between stress management, communication effectiveness and job satisfaction that the current study was developed with the intention of filling the research gap.

### References

- A. L., Day, & S. A. Carroll, (2004). "Using an ability-based measure of emotional intelligence to predict individual performance,

group performance, and group citizenship behaviours", *Personality and Individual Differences*, vol. 36(6), pp. 1443-1458.

- B., Wall. (2008). "Working Relationships Using Emotional Intelligence to Enhance your Effectiveness with Other" (1st Ed.), USA: Davies Black Publishing.
- D. G. Campbell, (1989). "An empirical comparison of three theories of decent ring", *Dissertation Abstracts International*, vol. 50 (12), 3792-4320, (UMI No. 9012890).
- D., Singh. (2001). "Emotional Intelligence at work" (1st Ed.). New Delhi: Response Books.
- G., Matthews, M., Zeinder, & R.D Roberts, (2002). "Emotional Intelligence: Science and myth", Cambridge, MA: A Bradford Book.
- H. Fisher, (1999). "The first sex: The natural talents of women and how they are changing the world", New York: Ballantine Books.
- H.K., Wong, & R.T. Wong, (1998). "The first days of school: how to be an affective teacher", Mountain View, CA: Harry K. Wong Publications, Inc.
- H. Thamhain, (1992). "Engineering management: Managing effectively in technology-based organizations", New York: John Wiley & Sons.
- J. Arches, "Social structure, burnout, and job satisfaction". *Social Work*, 36, 193-272, 1991.
- M.C., Wang, G.D., Haertel, & H.J. Walberg, (1994). "Educational resilience in inner cities". In Margaret C. Wang, & Edmund W. Gordon (Eds.), *Educational Resilience in Inner-City America Challenges and Prospects*. Hillsdale, NJ: Lawrence Earlbaum.
- M.L., Knapp, & G.R. Miller, (1994). "Handbook of interpersonal communication", (2nd Ed.), Thousand Oaks, California: Sage Publications, Inc. [12] P.E. Spector, "Job Satisfaction", Sage, Thousand Oaks, CA. 1997.

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## Students' Section

# Investment Pattern and Consumer Awareness about Mutual Fund in Udaipur District (with special reference to SBI Mutual Funds)

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A mutual fund is the most suitable investment for the common person as it offers an opportunity to invest in a diversified, professionally managed portfolio at a relatively low cost and low risk. There are wide varieties of mutual funds schemes that cater to investor needs and meet out their long term financial future goals.

Nowadays people are understanding the concept of mutual fund or try to get some facts about mutual fund due to the heavy advertisement in print media as well as digital media. Indian families are now open to take calculated risk for getting high return and accepting mutual fund as investment source. Mutual funds are also giving numerous benefits like tax saving, long term goal planning etc. So now trend is shifting from more conservative investment sources to the sources with high returns like mutual funds and money market.

**Keywords:** *Accounting Frauds, Forensic Accounting And Forensic Accountants, Professional Accounting Practitioners, White collar crimes.*

### Introduction

SBI mutual fund is India's largest bank sponsored mutual fund and set up on 26 June 1987. It is a joint venture between SBI and AMUNDI (FRANCE) one of the world largest leading fund management companies.

A mutual fund is a trust that pools the savings of many investors who share a common financial goal and investments may be in shares, debt securities, money-market securities or a combination of these. These securities are professionally managed. A mutual fund is the most suitable investment to scope for common people as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively lower cost.

### Review of Literature

**Jack Treynor (1965)** developed a methodology for performance evaluation of a mutual fund that is referred to as reward to volatility measure, which is defined as average excess return on the portfolio.

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**Michael C. Jensen (1967)** conducted an empirical of mutual funds in the period of 1954-64 for 115 mutual funds.

**Fama (1972)** developed a methodology for evaluating investment performance of managed portfolios and suggested that the overall performance could be broken down into several companies.

**Grinblatt and Titman (1989)** conclude that some mutual funds consistently realize abnormal return by systematically picking stocks that realize positive excess returns.

**S. Narayan Rao (2003)** evaluated performance of Indian MF's in a bear market through relative performance index, risk return analysis, treynor's ratio, sharpe's ratio, jensen's measure and fama's measure.

**Research Methodology**

**Objective of study**

- To identify the level of awareness of the investors of mutual fund.
- To know the consumer patterns for investment.
- To identify the risk capacity of investors.
- To analyze their preferred time duration for investment.

**Hypothesis**

**Ho :** There is no significant relationship between the age and the level of satisfaction of the investors.

**Ha :** There is a significant relationship between the age and the level of satisfaction of the investors.

**Research Design**

**Area of the study**

Udaipur, Rajasthan

**Research Design**

In this study Exploratory Research Design is adopted.

**Sampling Methods**

By using convenience sampling.

**Sample Size**

100 respondents were selected.

**Source of data collection**

The Primary Data is collected from the walk-in customers of State Bank of India.

The secondary data is collected from company fact sheets and internet etc.

For getting primary information from the selected sample a structured questionnaire has been prepared which includes 10 close ended questions.

**Descriptive Responses of Respondents**

Particulars	Classification Criteria	Number	Percentage
Gender	Male	65	65%
	Female	35	35%
Age Group	18 -25 yrs	41	41%
	26 -35 yrs	40	40%
	above 35 yrs	19	19%
Investment preference	Bank R.D.'s and F.D.'s	30	30%
	Mutual funds	15	15%
	Post Office	8	8%
	Stock Market	6	6%
	Gold/Silver	17	17%
	Real Estate	16	16%
	PPF	6	6%
	Govt. securities & bonds	2	2%

Factor for investment	liquidity	12	12%
	low risk	28	28%
	high return	20	20%
	company reputation	9	9%
	safety	31	31%
Awareness	Yes	38	38%
	No	62	62%
Preferred time duration	less than 1 yr	29	29%
	1-3 yrs	35	35%
	4-6 yrs	18	18%
	6-10 yrs	10	10%
	more than 10 yrs	8	8%
Priorities of investment	Diversification	15	15%
	better return & safety	28	28%
	professionally managed	8	8%
	Tax benefit	13	13%
	Capital appreciation	13	13%
	liquidity	10	10%
	transparency	8	8%
	lighter on wallet	5	5%
Investment strategy	lump sum	17	17%
	SIP	63	63%
	depends on financial conditions	20	20%
If not invested	lack of knowledge	39	39%
	higher risk	13	13%
	no trust over mf	11	11%
	related to share mkt.	24	24%

**Chi-Square Test**  
**Age and the level of Satisfaction**

Age Group	Level of Satisfaction				Total
	Dissatisfied	Neutral	Satisfied	Highly Satisfied	
18 -25	5	10	24	1	40
26 -35	0	12	23	5	40
above 35	0	6	10	4	20
<b>Total</b>	<b>5</b>	<b>28</b>	<b>57</b>	<b>10</b>	<b>100</b>

**Ho** - There is no significant relationship between age and the level of satisfaction of investors.

**Ha** - There is a significant relationship between age and the level of satisfaction of investors.

<u>Observe</u>	<u>Expected</u>	<u>O - E</u>	<u>(O - E) <sup>2</sup></u>	<u>(O - E) <sup>2</sup>/E</u>
5	2	3	9	4.5
0	2	-2	4	2
0	1	-1	1	1
10	11.2	-1.2	1.44	0.12
12	11.2	0.8	0.64	0.057
6	5.6	0.4	0.16	0.02
24	22.8	1.2	1.44	0.06
23	22.8	0.2	0.04	0.001
10	11.4	-1.4	1.96	0.171
1	4	-3	9	2.25
5	4	1	1	0.25
4	2	2	4	2
<b>Total</b>				<b>12.429</b>

Calculated value : 12.429  
 Degree of freedom : 6  
 Table value : 12.592

From the above analysis it was inferred that calculated value is less than table value i.e. null hypothesis is accepted, so there is no significant relationship between age and the level of satisfaction of investors.

**Facts and Findings**

- It is found that most of the people are investing their money in mutual funds for good return. The other reason for investing in mutual fund is tax benefits, safety, liquidity & capital appreciation.
- The primary choice of investment is Bank Fixed Deposits. Mutual fund investment is standing on second position.
- Investors prefer 1 to 3 years term for investment.
- Many people still don't have the knowledge about mutual funds.

- It is found that Systematic Investment Plan (SIP) is preferred over One Time Investment option.
- The investors who have invested in SBI mutual fund are satisfied with the services being provided to them.

**Conclusions**

- Mutual Funds are good source of returns for majority of households and it is particularly useful for the people who are at the age of retirement. However, average investors are still restricting their choices to convention options like gold and FD's when the market is flooded with countless investment opportunities ,with mutual funds. This is because of lack of
- It was observed that many of people have fear of Mutual Fund. They think their money will not be secure in Mutual Fund. They need the knowledge of Mutual Fund and its related terms. Many of people do not have invested in mutual fund due to lack of awareness

although they have money to invest. Brand plays important role for the investment. People invest in those Companies where they have faith or they are well known with them. There are many AMCs in Udaipur but only some are performing well due to Brand awareness. SBIMF, HDFC, etc. are well-known investment in mutual fund. They can change investors mind from one investment option to others. Companies have to conduct educational and orientation program so that the investors will enhance the knowledge for making more prudent investment decisions.?

### Suggestions

1. Even though the mutual funds are good source of income, people lack awareness and information towards mutual fund. So the mutual fund awareness must be increase among the investors to encourage them to invest in mutual funds.
2. Provide complete information relating to mutual funds. Even among the investors the investors who invest in mutual funds are unclear about how they function and how to manage them. So proper information must be provided to investors to increase the loyalty among the investors.
3. Before making any investment Financial Advisors should first enquire about the risk tolerance of the investors/customers, their

need and time (how long they want to invest). By considering these three things they can take the customers into consideration.

4. Mutual Fund Company needs to give the training of the Individual Financial Advisors about the Fund/Scheme and its objective, because they are the main source to influence the investors.
5. Systematic Investment Plan (SIP) is one the innovative products launched by Assets Management companies. SIP is easy for monthly salaried person as it provides the facility of do the investment in EMI.
6. Advertising campaigns must be conducted to increase awareness among the investors.

### References

- Khan M.Y. : Indian Financial System
- Vasant Desai : Financial Market & Financial Services
- Bhalla V.K. : Management of Financial Services
- Pandey I. M. : Financial Management
- Internet
  - ✓ [www.sbimf.com](http://www.sbimf.com)
  - ✓ [www.investopedia.com](http://www.investopedia.com)
  - ✓ [www.mutualfundsindia.com](http://www.mutualfundsindia.com)
  - ✓ [www.google.com](http://www.google.com)
  - ✓ [www.moneycontrol.com](http://www.moneycontrol.com)

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