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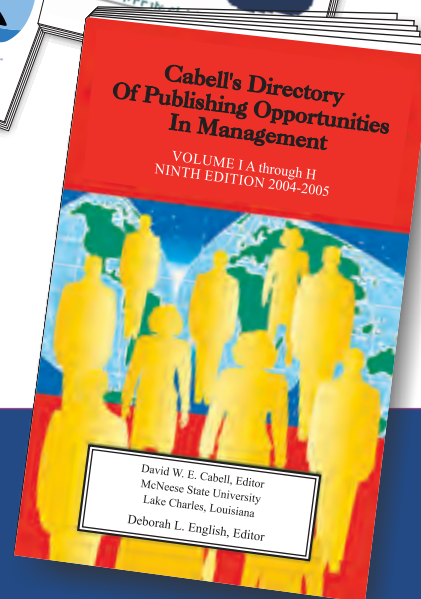
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ARTICLES

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47 Feedback Trading by Institutional Investors in Indian Stock Market: An Analysis of Foreign and Domestic Institutional Investors

Dr. Kavita

The author has observed that the fund flow from Institutional investors are considerably influenced by the lagged returns of Sensex, implying that they have a tendency to follow recent market behaviour.

12 Effect of Technology Trust, Self Efficacy and Technology Anxiety on Intention to Use Self Service Technology: A Study of e-ticketing Service of Indian Railways

Ms. Anureet Kaur

The author has discussed the impact of three variables i.e. Trust in Technology, Technology Anxiety and Self Efficacy in the usage of self service technology on the adoption of online ticket reservation in Indian Railways.



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55 Stock Market Anomalies: An Empirical Study in Indian Context

Dr. Harshita

The author has tried to test the presence of five market anomalies in the Indian stock market to corroborate the findings with the primary survey of practitioners and regulators.

20 GST in India and Australia – A comparison

Dr. Geoffrey A. Tickell

The paper provides a background to the political process undertaken to implement the GST in India and It also compares India's GST with Australia's GST.



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26 Organizational Retrenchment & Downsizing Strategy: Panacea or Pain

Dr. Anju Batra

The author has highlighted the disruptive strategic interventions in the organizations & their resultant impact on the firm's internal architecture.



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36 A Study of HRM Strategies with Special Reference to Managerial Effectiveness, Work Motivation, and Employee Engagement in Indian Insurance Companies

Dr. Urvashi Ghai Khosla

The authors through this papersuggest that there exists a relationship between managerial effectiveness, motivation and employee engagement in the Indian Insurance Companies.



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Ph.D ABSTRACT

From The Editor's Desk

It is our immense pleasure to present to our readers the 31st Issue of DIAS Technology Review. Stock markets are the harbinger of economic growth as their movements indicate the pulse of an economy. Any macroeconomic incident occurring anywhere affects global stock markets as a whole and steers portfolio investors to reframe their investment strategies. The spread and contagion of an economic event changes the investment prognosis, leading to either shift of capital or the flight of capital from one country to another. Similar happened when the financial crisis of 2008-2009 took place. **In the research article The Integration of Indian and US Stock Market Returns Before, During and After the Financial Crisis**, authors have examined the relative strength of Indian stock market with indices of US stock markets. They have identified the significant risk reduction benefits available to investors creating portfolios with US Stocks and Indian Stocks. They have also explored the spillover effects of this financial crisis by studying the relationship between SENSEX, S&P 500 and NASDAQ, which exhibited steep decline with prominent levels of risk in all the markets.

The Fourth Industrial Revolution offers smart technology of interrelated computing devices, mechanical and digital machines provided with an ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. The increased automation, improved communication and self-monitoring technology facilitate access of services, at any time and at any place augmenting customers' satisfaction. But whether the users are ready to adopt and adapt the technology is still debatable. The author in her study **Effect of Technology Trust, Self Efficacy and Technology Anxiety on Intention to Use Self Service Technology: A Study of e-ticketing Service of Indian Railways** has investigated the relationship between the factors namely technology trust, technology anxiety and self efficacy and the willingness of Indian adults for using e-ticketing facility, in the process of getting railway ticket reservations. The privacy and security of personal information while making transactions online, reduces technology anxiety and builds technology trust, which helps in motivating the consumers to use this channel.

To make a common undivided market and stronger economy, the cascading effect of tax on the cost of goods and services should be reduced. For this purpose a comprehensive value added Tax on the supply of Goods and services (GST) replacing all the indirect taxes, has been introduced in India. Unlike most nations India has five distinct tax rates on products and a dual-tax regime. In the research paper **GST in India and Australia – A comparison**, the author has investigated the political process undertaken to implement the GST in India. The article also compares India's GST with Australia's GST, which has only one GST rate of 10%. The author construes that currently India's GST too complex and simplification similar to Australia's, is required for its general acceptance.

The environmental uncertainty and ambiguity at every juncture of business today, is making organizations perplexed. A compulsion of strategic changes for designing compatible internal architecture has emerged before the firms to attain better organizational performance. In an empirical study **Organizational Retrenchment & Downsizing Strategy: Panacea or Pain**, the author quizzes whether retrenchment and downsizing is a right strategy for achieving organizational goals in Information Technology industry in India. The author has attempted to find out how recurrent lay-offs in IT organizations in India are influencing their financial performance as well as the citizenship behavior related to employees' performance. Not only operational strategies, but effective human resource management is also an important determinant for organizational growth path. Appropriate policies for managing, motivating and retaining the employees help in boosting work motivation, the core of organizational performance. In the research article **A Study of HRM Strategies with Special Reference to Managerial Effectiveness, Work Motivation and Employee Engagement in Indian Insurance Companies**, the author has delved deeper to ascertain the relationship between a dynamic work force culture, a suitable motivation system for encouragement/rewarding employees and a positive mindset leading to commitment of employees in Indian insurance companies. The empirical study made on 325 employees confirms that managerial effectiveness and employee engagement are continuous process. The research provides significant insights to the insurance companies in India to reassess their HRM practices instead of just human resource mapping.

In the Indian securities market institutional investments play a prominent role. The research article **Feedback Trading by Institutional Investors in Indian Stock Market: An Analysis of Foreign and Domestic Institutional Investors**, investigates the trading behavior of foreign institutional investors (FIIs) and domestic institutional investors (DIIs) in relation to Indian stock market returns as signified by SEBI. The author found FIIs acting as positive feedback traders and DIIs acting as contrarian investors. A positive response of the investments by DIIs has been explored towards monthly returns of Sensex, whereas the FIIs response depends upon momentum trading activities and gets significantly influenced by the investment decisions of Domestic Institutional Investors.

Presence of various market anomalies in stock markets substantiate the stock market findings with the primary survey of practitioners and regulators. In the Doctoral Abstract **Stock Market Anomalies: An Empirical Study in Indian Context** the researcher has tested the interplay and relevance of five market anomalies namely, size, calendar, value, liquidity and standardized unexpected earning in Indian stock markets.

In our endeavor of enlightening our cherished readers with latest knowledge, we are convinced that this new edition of DIAS Technology Review will, as usual prove enticing and informative.

Regards,



Dr. Anju Batra



ABOUT THE CONTRIBUTORS



Dr. Mukesh Chaudhary

Dr. Mukesh Chaudhary has extensive experience in teaching graduate and undergraduate courses in the areas of investments, financial management, derivative securities, banking and financial institutions, and financial theory. His primary areas of research include market microstructure, options and futures markets, banking and institutions, investments and portfolio analysis. He has co-authored a number of research papers which examine the impact of macroeconomic news announcements on various interest-rate futures contracts. In his doctoral dissertation, Dr. Chaudhry investigated the market-based measures of risk and contingent claims activity at U.S. commercial banks. The analysis allowed him to infer regarding market's perception of whether banks in the aggregate, use these instruments to hedge or to speculate.

His papers have been published in a number of peer-reviewed academic journals. Some of the journals where he has published research papers are: Journal of International Money and Finance, Journal of Banking and Finance (lead article), Financial Review, Journal of Financial Research, Journal of Derivatives, Journal of Empirical Finance, Journal of Real Estate Finance and Economics, Journal of Business, Finance, and Accounting, and Financial Practice and Education. He has won a number of awards for his teaching and research. Dr. Chaudhry's co-authored paper titled "Stationarity and Co-integration in Systems with Three National Real Estate Indices" tied for the Homer Hoyt Advanced Studies Institute Manuscript prize for the "best" study published in the Journal of Real Estate Research in 1998. In addition, he received The Lewis College of Business outstanding researcher award at Marshall University (2001) and the outstanding faculty award by College of Business Student Advisory Council, Indiana University of Pennsylvania (2002).

Email: chaudhry@iup.edu



Dr. Rajendra Garg

Dr. Rajendra Garg is a Professor of Marketing at Eberly College of Business and Information Technology, Indiana University of Pennsylvania. He received his Ph.D. in Marketing from University of Massachusetts, Amherst. His primary research area is in the field of Affective and Attitudinal response to Advertising using varying types of affective cues under different cultural contexts. Recently, he has focused his work on E-Business/E-Commerce as a tool for globalization. His recent work has been published in journals, such as, Benchmarking: An International Journal, International Journal of Commerce and Management, Journal of E-Business and Services Marketing Quarterly. He has received several prestigious awards/scholarships from professional organizations including Senior Fulbright Scholarship to China for teaching/research. Recently, he was awarded Fulbright Senior Specialists grant to guide curriculum development in E-Commerce in China. During the three years, he co-authored two books, Bridging Digital Divide; and Enterprise Systems and Business Process Management: Global Best Practices; both of these were published by McMillan. He has given numerous presentations in the area of E-Business and Globalization of Markets in many other countries as well. He served as Editor of the Journal of E-Business for 5 years, and currently serves as Editor for the Journal of Digital Business. He has held several prestigious positions in professional organizations, such as, Program Chair for the International Digital Business Academy. He is currently serving as President of the Global Digital Business Society.

Email: Garg@Iup.Edu



Ms. Anureet Kaur

Ms. Anureet Kaur is a Research Scholar in University School of Management Studies of GGS Indraprastha University, Delhi. She has over 10 years of rich experience in imparting education to Management students in Institutes of repute. She has presented Research papers in International and National Conferences. She is at present working as an Assistant Professor at G.D. Goenka University and was earlier associated with GDGWI, Lancaster University teaching courses in the area of Marketing for the Award of Lancaster Degree. Earlier to this assignment, she has worked with NIILM School of Business. She is UGC NET Certified and holds a Management Degree from GGS Indraprastha University and Bachelor Degree in Economics from Delhi University.

Email: anureet.kaur@gdgoenka.ac.in



Dr. Geoffrey Tickell

Dr. Geoffrey Tickell is a Professor of Accounting at Indiana University of Pennsylvania (IUP). He joined IUP in 2006 after a successful career as a Professor of Accounting in Australia. His Ph.D is from Monash University (2000). In his time at IUP, he has published 12 articles focusing on the areas of Accounting Education, Government Accounting and Corporate Social Responsibility.

Email: Geoffrey.tickell@iup.edu

Dr. Anju Batra is presently working as Senior Asst. Professor at Delhi Institute of Advanced studies, GGSIP university, Delhi, India. She is doctorate in Economics and has Ph. D. in Management from M.D. University, Rohtak. She has 21 years of teaching and research experience. She has got thirty-one research papers published in various national/ international refereed journals and has also co-authored eight books. Her areas of interest include Economics, International Business, Strategy and Operations management.

Email: anjubatra216@gmail.com



Dr. Anju Batra

Dr. Urvashi Ghai Khosla is presently working as an Assistant Professor in the Department of Management at Delhi Institute of Advanced Studies, Delhi, India. She holds a Doctorate Degree from Dayalbagh Educational Institute, Agra and also holds the Doctrate in Naturopathy in Diploma & Diploma in Yoga (N.D.D.Y.) from Gandhi National Academy of Naturopathy, New Delhi. Her area of interest is in Finance. She has 7.5years of Teaching & Research experience. She has presented papers in National and International Conferences / Seminars and has published papers in various refereed journals.

Email: Dr.urvashighai@gmail.com



Dr. Urvashi Ghai Khosla

Dr. Kavita is a Post Graduate in Commerce (Hons. In Finance). She is awarded with the Degree of Doctor of Philosophy (2018) in Commerce (Finance) from Punjabi University, Patiala. She has worked as a Senior Research Fellow in Punjabi University for two years. She holds and experience of 06 years in Teaching and has been taking subjects related to Accounts, Research, Finance and Management to undergraduate and postgraduate students. Having authored numerous papers & research presentation in her area of specialization, she holds a good command over Finance and Research.

Email: Kavitasharma930@gmail.com



Dr. Kavita

Dr. Harshita is currently working as Assistant Professor at FORE School of Management, New Delhi. She is certificate holder of CFA Institute's Investment Foundations program and is awardee of Junior Research Fellowship from The UGC. Her Alma Maters are IIT Delhi (Ph.D., Finance), Shri Ram College of Commerce, University of Delhi(M.Com.) and Daulat Ram College, University of Delhi (B.Com. (Hons.)). She has published journal articles with publishers of international repute and has presented papers at prestigious institutes and societies. One of her publications has bagged Emerald Literati Award for Outstanding Paper. During her doctoral study, she received financial assistance from the Research Promotional Fund at IIT Delhi for paper presentation at an international conference. Areas of her interest include International Finance, Risk Management, and Asset Pricing.

Email: harshita@dmsiitd.org



Dr. Harshita

The Integration of Indian and Us Stock Market Returns Before, During and After the Financial Crisis

* Dr. Mukesh K Chaudhry,
** Dr. Rajendra Garg



Abstract

There are significant risk reduction benefits that are available if investors create portfolios that include both US and Indian Stocks. However, during financial crisis the correlation between Indian and US stock indices is high implying that risk reduction benefits vanished when there was market turmoil. In other words, due to contagion effect all markets displayed steep declines with elevated levels of risk.

Keywords: Return, Risk, Diversification, Global Financial Crisis, Contagion, Correlations

* Professor Indiana University of Pennsylvania, U.S.A

** Professor Eberly College of Business and Information Technology, Indiana University of Pennsylvania, U.S.A

INTRODUCTION

The financial markets all over the world, especially Indian SENSEX, are slowly opening their equity markets to direct as well as indirect foreign investors. Indirect investors include portfolio investors as well as other agencies. This type of increased globalization and development has made the countries prone to international crisis as the risk of the flight of capital increases. Therefore, the focus on return on investments and risk increases as investors look for country specific news and events and resultant shift of capital from one country to another (Angkinand et al. 2010). Some authors such as Frank and Hesse (2009) studied "spillover" effects of the crisis from developed markets to the emerging markets highlighting safety concerns of the international investors in transferring money from the emerging nations.

The linkage between the US stock markets (Standard and Poor's Index and NASDAQ) and Indian Stock Market (SENSEX) is broadly explained by Dhankar and Kumar (2006) as a Market risk rather than a non-market risk where a change in the US Federal interest rate can cause upswing or downswing in the Indian stock market. The non-market risk, on the other hand, is considered as specific to each stock. Sharp and Cooper's (1972) classification of risk-return classes based on New York Stock Exchange common stocks is used as a fundamental classification method to define market and non-market risk.

Dhankar and Kumar (2006) explored the relationship between specific stocks trading in the Indian stock market (non-market risk) as a result of changes in the US stock market and how investors could utilize diversification to reduce non-market risk. The results of Dhankar and Kumar (2006) signify that portfolio non-market risk declines with diversification. Their study reports high positive correlation between portfolio return and risk. Kulsherestha and Mittal (2015) recently provided solid evidence to suggest the volatility in the Indian Financial Market before, during and after the Global Finance Crisis of 2008. However, no further studies have been done so far to assess the return-risk (market risk) between the US and Indian Financial markets before, during and after the global financial markets and, especially, how the diversification strategy to balance return-risk can be explained if the volatility in the market exists.

This study, therefore, aims to study the relationship between the US Financial markets of S&P and NASDAQ with Sensex on risk and return factors before, during and after the global financial markets and how international investors may use the diversification strategy during these three (before, during and after global financial crisis) periods. As a result of our analysis, we provide implications for international investors' diversification strategy as well as guidance for the future.



LITERATURE REVIEW

Researchers have always been interested in studying the risk-return relationship in different markets and have used Sharp and Cooper's (1972) classification method to define market and non-market risk. Previous empirical studies on the relationship between macro-economic factors and stock return can be divided into two broad categories. The

first category involves studies that focused on the impact of macroeconomic factors on stock prices. The second category involves those studies that focused on the relationship between stock market volatility and volatility in the macroeconomic indicators. Even though many studies have focused on the first category and looked at the impact on individual stocks prices (such as Singh 2015; Singh and Singh 2016), there are not many studies that have dealt with the second category. Since this study attempts to explore the relationship between volatility between markets (second category), a discussion of the literature relating to this category is presented below.

In the era of global financial integration, investors prefer cross border investment to diversify their portfolio. If the stock markets of certain countries are co-integrated for a long time, then the benefits of diversification are minimal. The US and Indian financial markets have recently been integrated and have yet shown period independence. Patel (2013) described this phenomenon as dynamic interdependence among Asian equity markets. Even though many Asian countries' financial markets have been fully integrated with the US financial markets, Indian stock market (SENSEX) has shown remarkable independence and has largely been insulated (Patel 2013).

Kumar and Mukhopadyay (2002) examined the relationship between the US and Indian stock markets and found causality and spillover effect running from the US to Indian stock market. Lamba (2004) analyzed the dynamic relationship among India, Pakistan, Sri Lanka, France, Germany, US, UK and Japan from 2000 to 2003 and found that developed equity markets influenced Indian market. However, Indian stock market did not influence either the other Asian markets or the developed markets. However, Lamba (2004) had analyzed the relationship after the events of Asian Financial Crisis of 1997 and September 11, 2001 disastrous event in New York. For Pakistan and Sri Lanka, Lamba (2004) found that these markets are relatively isolated from the major developed markets during the entire sample period of July 1997 - February 2003. The reason for this isolation appears to be due to completely different fundamentals between these countries and there is no major trade relationships between these economies. Mukherjee and Mishra (2007) investigated interdependence of markets of 23 countries of the world including India and found high market integration. In another study, strong evidence of co-integration was found among countries in the same region (Raj and Dhal 2009). Marimuthu (2010) found bidirectional causality between Malaysian and Indian stock markets. However, Joshi (2011) concluded that the US market dominated all Asian markets. Joshi (2011) had investigated the long run relationship between stock markets of US, Brazil, Mexico, China and India and found that co-integration existed among the markets. Siddiqui (2008) similarly explored the relationship between European stock markets and Indian stock market and found that no European stock market played any dominant role for Indian stock market. Impact of the financial crisis during 2004 to 2011 was assessed by Singh and Makkar (2016) on the volatility of Indian commercial banks' stock prices and found that there was a significant difference in the volatility before and after the financial crisis. The study concluded that the news of financial

crisis in the international markets increased the volatility of Indian commercial banks' stock prices. However, Singh and Makkar (2016) focused on the volatility/risk of banking stocks alone and the broad stock indices. Clearly, impact on Indian stock market has been studied by many authors in a variety of studies by many authors, but nobody has looked at these relationships at the time of crisis and beyond from a broader perspective of returns volatility and correlation between the Indian and the US stock market indices.

Therefore, this study attempts to focus on Indian and the US stock markets correlation, returns and risk specifically before, during and after the global financial crisis and how it has evolved into guiding investors in their diversification strategy. This study examines how the relationship between the US and Indian stock market indices has evolved over time before, during and after the financial crisis. This will be a useful exercise for portfolio managers and the investors who are planning to increase their presence in the Indian stock market.



M ETHODOLOGY

The data was collected from Bloomsburg Professional Service. The data was collected from the year 1997 to 2017 for SENSEX, S&P500 and NASDAQ Stock indices. The data is presented in Table 1 for Return and Risk indices. Following models are used to calculate return, risk or standard deviation of returns and the correlation coefficients between SENSEX, S&P 500 and Nasdaq Indices.

$$R_t = \ln(P_t/P_{t-1})$$

Equation no.1

Where, R_t is the yearly return, P_t is the end of the year price and P_{t-1} is the price at the beginning of the year.

$$\sigma_t = \sqrt{\frac{1}{N-1} * \sum (R_t - E(R_t))^2}$$

Equation no.2

Where, σ_t is the standard deviation of returns R_t is the monthly return and $E(R_t)$ is the monthly average return. To compute the correlation coefficient, following equation has been used:

$$\rho_{x,y} = \frac{\sum (x - E(x))(y - E(y))}{\sqrt{\sum (x - E(x))^2 \sum (y - E(y))^2}}$$

Equation no.3

Where, $\rho_{x,y}$ is the correlation coefficient between SENSEX and S&P 500, SENSEX and NASDAQ and S&P 500 and NASDAQ.

The data has been divided using following time periods:

Before Financial Crisis	July 31, 1997 to July 31, 2008
During Financial Crisis	August 31, 2008 to March 31, 2009
After (Post) Financial Crisis	April 30, 2009 to October 31, 2017

The above models (1), (2) and (3) are commonly used statistical tests by most researchers.



RESULTS

The results are presented in Tables 1 and 2. In Table 1, annual returns and risk or standard deviation of return has been shown for the period from 1997 to 2017. This time-period covers dot com era decline in the market followed by financial crisis of 2008/2009. The markets recovered significantly in the period following the financial crisis. This can also be seen from the annual returns and risk which shows that all three indices, namely, SENSEX, S&P 500 and NASDAQ declined sharply during 2001, 2002, 2003 periods (Dot Com decline). The risk for this period was also significantly elevated. Similar decline occurred in 2008 when SENSEX returns declined by about 46% versus about 34% decline for both S&P 500 and NASDAQ indices. However, there is no clear-cut relationship between SENSEX and the US indices following financial crisis.

When the correlation coefficients are calculated between SENSEX against S&P 500 and NASDAQ indices, from Table 2, it is clear that there is a low level of correlation between these markets for the overall period. As shown in Table 2, this correlation is about 0.12 between SENSEX and both US indices. On the other hand, as expected, the correlation between the two US indices (S&P 500 and NASDAQ) is very high at 0.845. However, during financial crisis the correlation coefficient went up significantly between SENSEX and US indices indicating that contagion effect of steep declines in the US markets are felt globally including the Indian market that witnessed a much bigger decline than the US indices. Especially in 2015 the Indian stock markets were negative while the US indices were positive for three reasons: one, it was found that banks had large non-performing assets and bad loans; two, Federal Reserve statements about raising interest rates contributed to reduced flow of funds to Indian markets; and three, the oil price increased crashed the Indian market returns (Parekh, 2016). Fundamental factors between Indian market and the US market are quite different as the Indian market is more inward looking and has relatively very small share of global export of goods and services implying that this market is less dependent on the US market. This is unlike other emerging markets such as, China which is an export-oriented economy. Hence, Indian market should have been insulated from the global financial crisis unlike other emerging markets. The insulation of the Indian market is also evident from the correlation coefficients for the period after financial crisis. In fact, the correlation coefficient between SENSEX and S&P 500 index stood at -0.215 and SENSEX and NASDAQ stood at -0.244 signifying that still large diversification benefits are possible if a portfolio is created where Indian equities are combined with the US equities. As the markets become more mature, open and globalized, these diversification benefits may decline over time.



CONCLUSION

From the results it is evident that significant risk reduction benefits are available if investors create portfolios that include both the US and Indian Stocks. However, during financial crisis the correlation between Indian and US stock indices is high implying that risk reduction benefits vanished when there was market turmoil. In other words, due to

contagion effect all markets displayed steep declines with elevated levels of risk. This research also deals with important investment issues that are relevant not only today but will

continue to be of primary concern in the future. The result of this work should help in developing models for price discovery and provide a framework for investor decision-making.

REFERENCES

- i. Angkinand, A.P, J.R. Barth and H. Kim (2010), "Spillover Effects from the U.S. Financial Crisis: Some Time-series Evidence from National Stock Returns" In G Benton (Eds). *The financial and Economic Crises: An International Perspective*, Cheltenham, UK:Edward Elgar, Pp. 24-52.
- ii. Dhankar, Raj S. and Rakesh Kumar (2006), "Risk-Return Relationship and Effect of Diversification on Non-Market Risk: Application of Market Index Model in Indian Stock Market", *Journal of Financial Management and Analysis*, Vol. 19, No. 2, Pp. 22-31.
- iii. Frank, Nathaneil and Heiko Hesse (2009), "Financial Spillovers to Emerging Markets During the Global Financial Crisis", *Finance a UV•R-Czech Journal of Economics and Finance*, Vol. 59, No. 6, PP.507-521. Retrieved from [Http://core.ac.uk/download/pdf/6605059.pdf](http://core.ac.uk/download/pdf/6605059.pdf).
- iv. Joshi, P. (2011), "Market Integration and Efficiency of Indian Stock Markets: A Study of NSE", NSE Paper No. 198, pp. 1-29.
- v. Kulshrestha Praveen and Aakriti Mittal (2015), "Volatility in the Indian Financial Market Before, During and After the Financial Global Crisis", *Journal of Accounting and Finance*, Vol. 15, No. 3, Pp. 141-153.
- vi. Kumar and Mukhopadhyay (2002), "A Case of US and India", NSE Paper No. 39. Pp. 1-28.
- vii. Lamba, A.S. (2004), "An Analysis of the Dynamic Relationships between South Asian and Developed Equity Markets", NSE Paper No. 83, pp. 1-29.
- viii. Marimuthu, M (2010), "The Co-Movements of the Regional Stock Markets and Some Implications on Risk Diversification", *The IUP Journal of Applied Economics*, Vol. 9, No. 2, pp. 61-80.
- ix. Mukherjee, K and R.K. Mishra (2007), "International Stock Market Integration and Its Economic Determinants: A Study of Indian and World Equity Markets", *Vikalpa*, Vol. 32, No. 5, pp.5-22.
- x. Parekh, Varun (2016), "Top 3 Reasons Why The Indian Stock Market Crashed ", https://www.huffingtonpost.in/varun-parekh/top-three-reasons-why-the_b_9210142.html
- xi. Patel, Samveg (2013), "Dynamic Interdependence among Asian Equity Markets: Empirical Evidence from India", *Journal of Management Research*, Vo. 13, No. 4 (October-December), PP.219-228.
- xii. Raj, J. and S.C. Dhal (2009), "Is India's Stock Market Integrated with Global and Major Regional Markets?", *The ICFAI Journal of Applied Finance*, Vol. 15, No. 2, Pp5-37.
- xiii. Sharpe, W.F and G.M. Cooper (1972), "Risk-Return Classes of New York Stock Exchange Common Stocks, 1931-1967", *Financial Analysis Journal*.
- xiv. Siddiqui, S. (2008), "Exploring Integration between Selected European Stock Market Indexes and Sensex", *Pranjana*, Vol. 11, No. 2, Pp. 79-90.
- xv. Singh, Gurmeet (2015), "The Impact of Macroeconomic Fundamentals on Stock Prices Revisited: A Study of Indian Stock Market", *Journal of International Economics*, Vol. 6, Issue 2 (July-December), pp. 78-93.
- xvi. Singh, sAmanjot and Manjit Singh (2016), "Investigating Impact of US, Europe, Frontier and BRIC Stock Markets on Indian Financial Stress Index", *Journal of Banking and Financial Economics*, Vo. 2, No. 6, PP.23-44.
- xvii. Singh, Shevta and Anita Makkar (2016), "Impact of Financial Crisis on the Volatility of Indian Commercial Banks' Stock Prices", *Finance India*, June 2016, Vol. 30, Issue 2, pp.577-588.

Table 1
Yearly Return and Risk of SENSEX, S&P500, and NASDAQ Stock Indices

Year	SENSEX		SPY		NASDAQ	
	Return	Risk	Return	Risk	Return	Risk
1997	-25.11	21.30	9.64	18.21	8.90	19.58
1998	-8.47	28.98	25.40	22.23	35.40	32.54
1999	60.96	29.68	14.82	12.99	62.39	27.52
2000	-20.57	26.03	-5.32	17.01	-37.30	45.64
2001	-22.04	25.80	-15.95	20.05	-29.66	46.92
2002	-8.76	20.80	-15.95	20.05	-29.66	46.92
2003	73.45	23.57	29.94	11.11	51.67	12.89
2004	15.68	23.81	7.14	7.24	5.29	14.56
2005	47.75	21.88	5.67	7.76	6.93	13.79
2006	35.88	19.61	10.80	5.69	4.75	12.18
2007	36.41	27.34	2.09	9.69	7.64	12.18
2008	-46.39	38.61	-34.48	22.36	-34.01	28.20
2009	83.97	33.43	35.02	22.54	53.69	20.98
2010	11.55	19.36	17.11	19.26	23.54	23.03
2011	-3.53	22.41	-2.21	15.77	-3.52	15.99
2012	12.07	13.99	8.67	10.63	7.31	14.80
2013	8.76	13.61	23.38	8.47	32.92	8.12
2014	38.18	11.24	15.50	8.07	15.40	10.29
2015	-14.89	10.30	2.45	13.51	8.03	15.17
2016	20.23	15.57	15.39	10.14	18.00	14.39
2017	14.61	10.37	12.21	3.78	16.90	4.79

Table 2
Correlation Coefficient between SENSEX, S&P500, and NASDAQ Stock Indices

	SENSEX	SPY	NASDAQ
Overall Period (6/30/97 – 10/31/17)			
SENSEX		0.122	0.124
SPY	0.122		0.845
NASDAQ	0.124	0.845	
Before Financial Crisis			
SENSEX		0.133	0.127
SPY	0.133		0.823
NASDAQ	0.127	0.823	
During Financial Crisis			
SENSEX		0.454	0.528
SPY	0.454		0.963
NASDAQ	0.528	0.963	
After Financial Crisis			
SENSEX		-0.215	-0.244
SPY	-0.215		0.944
NASDAQ	-0.244	0.944	

Effect of Technology Trust, Self Efficacy and Technology Anxiety on Intention to Use Self Service Technology: A Study of e-ticketing Service of Indian Railways

*Anureet Kaur



Abstract

With the development of technology, there has been an increase in the business being conducted over the internet. The internet has become indispensable as a transaction medium. This can be observed in retail settings where it is an integral part of self-service technologies which are being used to give additional services to the customers. The Indian Railways have a self-service technology in the form of e-ticketing or online ticket reservation. Although the advantages of this self-service technology is fairly evident, its adoption by Indian travellers is far from universal. This study aims at understanding the impact of trust in technology, technology anxiety and self efficacy on the adoption of e-ticketing services of the Indian Railways. Primary data for the study has been collected from Indian consumers above 16 years of age. The study finds that trust in technology, technology anxiety and self efficacy do impact the intention of a consumer to use e-ticketing. Managerial implications of the findings are discussed. The findings of this study and its implications are relevant for academicians, researchers and self-service providers.

Keywords: Technology Trust, Technology Anxiety, Self Efficacy, E-ticketing

*Assistant Professor, GD Goenka University, Sohna, India

INTRODUCTION

Due to rapid developments in technology, a plethora of improved products and services has been introduced to consumers globally. The growth of information and communication technologies can aid firms in increasing their competitiveness and providing better service experiences to their customers. Technology can be used by both service providers and customers during the service process. Dabholkar (1994) proposed that there are three ways in which a company can use technology when providing service: (a) Employees who are not “contact” personnel use technology behind the scenes to increase the overall efficiency of operations (b) “Contact” employees (whether face to face or by telephone) use technology to provide faster, fuller service to customers and (c) Customers use technology to perform services for themselves. Technology can be employed by customers to provide service for themselves, such as ATMs. By using such types of innovations, customers can access services at any time and at any place they want without the complications of interpersonal exchanges (Bitner et al. 2002). Such services are referred to as Self Service Technologies i.e SSTs. Self-service technologies are defined as technological interfaces that allow customers to act as a producer and a consumer of services without direct communication with an organization's employees (Meuter, Ostrom, Bitner & Roundtree, 2003). The increase in the use of various self-service technology platforms has led to an increase in the involvement of customers in the service delivery process. This kind of a direct relationship with customers requires service providers to pay more attention to understand what a customer desires from service delivery so that they can achieve high levels of customer satisfaction. In most cases of service delivery, satisfaction is seen as being the major determinant of subsequent loyalty. (Anderson and Sullivan, 1993; Szymanski and Henard, 2001; Fassnacht and Köse, 2007; Blattberg et al., 2009). The knowledge about what attracts customers towards new technologies and how to retain the customers and increase the satisfaction levels of the customers is still in its developmental stage. For marketers to have greater acceptance for their new technologies and increase their usage among target customers, it is important for them to understand the factors influencing adoption of these technologies and also have insights in to what factors contribute to customer satisfaction.

SST includes a wide range of technologies such as vending machines, automatic teller machines (ATMs), online automated phone systems, information kiosks, grocery store self-checkout systems, Internet banking, paying bills by mobile phone, airline check-in via internet, check in booths at airports, interactive phone/voice systems, internet shopping, self ticket purchasing on the internet etc. (Eriksson and Nilsson, 2007; Liljander et al., 2006; Lin and Hsieh, 2007). Most of the SSTs are provided using kiosks (eg. ATM, self checkout systems at the hotels etc.), vending machines (eg. ticket vending machines at metro stations) and using the internet platform (eg. Online banking, online booking etc.)

India is a developing economy where, in recent years, consumers are gaining increasing access to modern technology at a rapid pace. One of the developments has been the penetration of internet facilities. According to a report

published jointly by the Internet and Mobile Association of India (IAMAI) & Kantar IMRB, the number of internet users has reached 500 million by June 2018 and the overall internet penetration is 35% of total population as on December 2017 (IAMAI, 2018). Online retail sales in India are expected to touch \$32.70 billion, however, India's growth rate in e-commerce is yet to catch up with countries such as China and Indonesia in the Asia Pacific market. (eMarketer, 2018)

Online reservation of tickets or e-ticketing is a form of selfservice technology whereby customers can reserve a seat in a database system and payment is made through the Internet. Online passenger reservation system is an important service of Indian Railways. It allows railways to easily access and transact with their customers directly and have a closer relationship with them. According to Ministry of State for Railways, the national transporter earned Rs. 19,209.28 crore in online booking and Rs. 28,468.81 crore in offline booking in 2016-2017. (Indian Railways, 2016).

According to above statistics although a gradual growth of online purchasing is apparent, but there is still huge scope for improvement. If more customers will opt for e-ticketing it would be cost effective for the Railways as well. This opens up interesting areas of academic research from the perspectives of sellers as well as buyers. For any transaction which is conducted online, there are at least two parties involved. The selling side wants to attract maximum consumers to purchase online and be satisfied and become loyal customers. The buyers consider the benefits of online transactions such as usefulness and ease of browsing, convenience of placing orders and payments. The adoption of e-ticketing depends on the assessment of the technology by the consumers.

Many people in India still prefer shopping from physical stores or malls as online purchasing to be complex and somewhat risky process. The availability of high-speed internet connectivity and the costs thereof are still an in many parts of the country. These are amongst the reasons that are likely to be impacting the Indian consumer's adoption of self-service technologies such as the railway's e-ticketing services. However, there are also likely to be certain consumer-related factors that play a role in consumer willingness to try out new and unfamiliar options. Besides consumer demographics certain personality related or psychographic factors may be impacting consumer's attitude and willingness to adopt these alternatives. Understanding the factors will give better understanding about consumer buying behaviour. This will aid online retailers to gain acceptability for online modes and to better promote their products.

In this context it is important to understand the drivers as well as the inhibitors that impact Indian consumers in adopting e-ticketing. This paper is an attempt to understand the impact of three variables i.e. Trust in Technology, Technology Anxiety and Self Efficacy in the usage of self service technology on the adoption of online ticket reservation in Indian Railways.



LITERATURE REVIEW

In order to understand the adoption behaviour of technology related services, researchers have tried to identify, analyse and

understand its various antecedents. However, the knowledge about the critical success factors for a self service technology is still evolving and needs to be explored more. This section provides an overview of the extant literature on the subject.

Technology Trust

Technology trust is defined as the willingness of a customer to be vulnerable to a technology based on how predictable and reliable is the technology and what is the expectation about the utility of the technology to the customer. (McKnight, Choudhury, &Kacmar, 2002). Trust has also been defined by Chong,(2012) as “whether users are willing to become vulnerable to the service providers after considering their characteristics (e.g. security, brand name).”

In the absence of technology trust, customers will avoid or hesitate to use the option of self service technology especially when the alternate methods of transaction involving human contact are available. (Oh et al., 2013). Technology trust has been found to be a key construct in consumers' overall evaluation of any Self Service Technology. (Johnson, Bardhi and Dunn,2008)

If the level of predictability, reliability, and utility of new technology is high and the consumer trusts the technology, the likeliness of its use by him increases. (McKnight, & Chervany, 2002). Trust has been identified as one of the important barriers in research studies related to self service technology (Dimitriadis & Kyrezis, 2010; Benamati et al., 2010). In their study of Malaysian consumers Wei et al. (2009) found that trust with regard to security and privacy is an important determinant of consumer decisions to adopt m-commerce. Lack of clear regulations, preference of face-to face interactions, and potential information that can be accessed by the vendors were some issues resulting in users not trusting m-commerce. (Chong et al., 2010; Wei et al., 2009).

When a new innovative service is introduced, customers may be fearful about using it for banking transactions. Trust is an important element which affects consumers' decisions to adopt technologies such as online purchases. [Holsapple&Sasidharan,2005; Lin,2011; Luo et al. 2010; Gefen, Karahanna& Straub,2003].

The main concern regarding doing any online transaction is the wireless transaction security and customer fear of distributing personal data. If customers have trust in the technology then their fears of risks and uncertainty of monetary transactions using internet are reduced (Corritore; Chong et al. 2010; Luarn and Lin ,2005).

Trust of the customers need to be formed and retained in the long term, and understanding the risks perceived by the customers helps service providers in identifying the barriers of adoption and addressing them. (Hanafizadeh et. Al., 2014)

In this research, Trust focuses on the trust placed on e-ticketing option of Indian Railways. The aim is to examine whether users are willing to take the risks of trusting online ticket booking with its uncertainties such as security and

privacy risks, and lack of face-to face interactions with service providers.

Technology Anxiety

Technology anxiety focuses on the state of mind of the user pertaining to their ability and willingness to use technology-related tools. As defined by Meuter et al (2003), technology anxiety is a negative response reflecting apprehension or fear of technology. Research indicates that technology anxiety arises from the inability in effectively managing or controlling the technology and the anxiety experienced by an individual when confronted with the decision to use the new technology. (Igbaria& Parasuraman, 1989; Oyedele& Simpson, 2007; Beckers, Wicherts, & Schmidt, 2007).

Considerable innovations in service delivery processes have been introduced in the form of Self Service Technologies. In order to have less resistance towards the technology related services, customers need to have knowledge, skills and above all liking for the new technologies. According to Meuter et al, (2003), when a choice is available, customers will not use a SST option unless they perceive an advantage for using it and feel comfortable with the technology. The study also concluded that technological anxiety had a negative relationship with overall satisfaction, word of mouth, and repeat usage intentions. Many other studies have also demonstrated that technology anxiety decreases perceived ease of use and intention to use self service technologies. (Venkatesh, 2000; Venkatesh and Bala, 2008).

Also, technology anxiety may contribute to role ambiguity, decreased motivation levels, and a reduced self-perception of ability to use SSTs (Meuter et al., 2005). Therefore high levels of technology anxiety also causes avoidance of the technology (Parasuraman, 2000; Parasuraman & Colby, 2001).

Self Efficacy

Self-efficacy is the judgment of one's ability to organize and execute given types of performances” (Bandura, 1997, p. 21). In the context of the acceptance of self service technologies, self-efficacy refers to the degree to which a person believes that she/he is able to use a technology to accomplish a particular task. (Katija& Britta 2014).

In the area of Information Systems it is important to understand self efficacy so as to better analyse the individual consumer responses and behavioural intentions towards information technology and related services. (Luo et al, 2010). Earlier studies have proven that self efficacy is an important determinant of the attitude of consumers towards the technology. (Davis 1986; Meuter et. al. 2005; Kim et al., 2012). When consumers have more confidence in their ability to use Self Service Technologies, he/she will more likely adopt that technology. (Xiaoren et al 2013).

This research is an attempt to understand whether the consumers believe that they have the ability to use online ticket reservation for Railways. We can thus expect that the higher the users' self-efficacy, the better is their acceptance and use of e-ticketing.



OBJECTIVES OF THE STUDY

The following are the specific objectives of the study:

1. To study the intention to use e-ticketing for railways ticket reservation amongst Indian adults.
2. To examine the relationship between technology trust, technology anxiety and self efficacy and intention to use e-ticketing for railways ticket reservation amongst Indian adults.



HYPOTHESES

Based on the literature review the following hypotheses were taken up for examination in the study:

H₁ : Technology trust has a direct and positive effect on intention to use of e-ticketing service.

H₂ : Self Efficacy has a direct and positive effect on intention to use e-ticketing service.

H₃ : Self Efficacy has a direct and negative effect on intention to use e-ticketing service.



CONCEPTUAL MODEL FOR THE STUDY

Figure 1 presents the conceptual model representing the relationship between intention to use e-ticketing and the hypothesized antecedents.

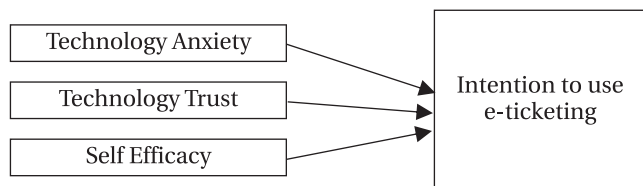


Figure No.01



RESEARCH METHODOLOGY

To test the conceptual model, a survey was created to capture the customer evaluations of the SST. A survey consisting of 15 items was developed to measure the impact of technology trust, technology anxiety and self efficacy towards intention to use the SST. Measures for trust were adapted from Chong, et al (2012). Measures for Self Efficacy and Technology Anxiety were adapted from Meuter et al. (2005) and Intention to use from Oliver and Swan(1989) . The variables were measured on a five-point Likert type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). In addition, the questionnaire sought to collect information on the following respondent demographics: age, annual household income, education and gender.

The specific SST used for this study was online ticket reservation or e-ticketing of Indian Railways. Primary data for the study was collected, using the structured questionnaire, from 125 adults above the age of 16 years. The data was collected through personally administering the survey

instrument. Convenience sampling was used to draw the sample.

The sample comprised respondents above the age of 16 years. As presented in Table 1, there is an almost equal representation of males (48%) and females (52%). in the sample. Of the total respondents 33.6 percent were graduates and 18.4 percent had completed Class 12 and 46.4 percent were post graduates. A fairly large segment of the sample (40.8%) is employed in Private Service.

Table1: Respondent Profile

Age	%	Household Income	%
16-25 Years	30.4	Below 1 Lac	3.2
26-35 Years	20.8	01-05 Lac	16.8
36-45 Years	24.0	05-15 Lac	22.4
46-55 Years	8.0	15-25 Lac	21.6
56-65 Years	12.8	25-05 Lac	20.8
Over 65 Years	4.0	Above 35 Lac	15.2
Education		Occupation	
Class 12	18.4	Business	8.0
Graduate	33.6	Private Service	40.8
Post Graduate	46.4	Government Service	5.6
Completed Ph.D	1.6	Professional	8.8

n=125



FINDINGS AND ANALYSIS

Data analysis was conducted with Structural Equation Modelling using IBM-Amos Version-18. A two stage approach (Anderson & Gerbing, 1988) was used i.e. first estimating the measurement model to get the standardized regression weights and then estimating the structural model. In the first stage Confirmatory Factor Analysis (CFA) was done on the data. The data was checked for construct validity, reliability as well as for the model fit. All the 15 items were used in the CFA to obtain a model fit. The results of the confirmatory factor analysis indicate that each item loaded on its respective underlying concept and all loadings were significant. 14 items loaded very well with scores lying between 0.79 and 0.97. Item 3 of Technology Trust construct had low factor loading and was deleted from the model. The path loadings for the proposed measurement model are shown in Table 2. Cronbach's alfa score for each construct is above 0.7 showing high construct reliability. (Fornell and Larcker, 1981)

The CFA results on convergent and discriminant validity are provided in the Table 3. There is strong convergent validity as all the items loaded on their corresponding latent factors with standardised scores or loadings for each factor above 0.5 and significant at p values < 0.001 as shown in Table 2. Also the average variance extracted for each construct is > 0.5. (Fornell and Larcker (1981); Bagozzi and Yi (1988); Hair et al (2010). The discriminant validity was also met as the square root of the average variance extracted is more than the inter-construct correlation. (Chin (1998); Farrell (2010); Hair et al (2010).

Table 2: Construct Reliabilities and Item Loadings.

Construct/Items	Reliability /Item Loadings
Technology Anxiety	.939
I feel apprehensive about booking Railway tickets online.	.921
Technological terms sound like confusing jargon to me.	.946
I have avoided technology because it is unfamiliar to me.	.837
I hesitate to use most forms of technology for fear of making mistakes I cannot correct.	.873
Label: Self Efficacy	.945
I am fully capable of booking railway tickets online.	.940
I am confident in my ability to book railway tickets online.	.930
Using online railway ticket reservation service is well within the scope of my abilities	.950
My past experiences increase my confidence that I will be able to use online railway ticket reservation service.	.799
Technology Trust	.932
Payments made through online ticket reservation service will be processed securely	.862
Transactions via online reservation are secured.	.948
Privacy (personal information will be kept confidential) on e-ticketing is well protected.	.829
Intention to use Online ticket reservation	.975
Its very likely I will use Online ticket reservation option.	.978
Its possible that I will reserve the tickets online when travelling by Railways.	.956
Its very probable that I will use Online Ticket reservation service when travelling by Railways.	.960

Table 3 Construct Validity

	CR	AVE	MSV	Max R(H)	Self Efficacy	Technology Anxiety	Technology Trust	Intention to use
Self Efficacy	0.950	0.826	0.619	0.963	0.909			
Technology Anxiety	0.941	0.800	0.453	0.954	-0.673	0.894		
Technology Trust	0.912	0.776	0.619	0.933	0.787	-0.628	0.881	
Intention to use	0.976	0.931	0.444	0.978	0.666	-0.581	0.648	0.965

The results of fit assessment of the proposed measurement model show acceptable fit with Goodness of fit (GFI)= 0.798 ; Incremental fit index (IFI)= .903 ; Tucker Lewis index (TLI)=0.88; Comparative fit index (CFI)=0.903 ; Normed χ^2 (CMIN/DF)= 4.08 ; Root mean square error of approximation (RMSEA)= 0.158 ; Root mean square residual (RMR)= 0.041 .

GFI is almost equal to the minimum value of 0.8 which represents a good fit (Williams & Hazer, 1986), and RMSEA is slightly above the maximum limit of 0.08 (Browne & Cudeck, 1989). TLI and CFI should be >0.9 which show the incremental fit. CMIN/Df statistic recommended acceptable ratios range

from 5 (Wheaton, Muthen, Alwin and Summers, 1977) to 2 (Byrne, 1989) which shows a good parsimonious fit of the model.

The second stage was the assessment of the structural model by path analysis. Given that the proposed structural model was confirmed and is valid the tests of the hypotheses can be analysed. In regard to the dependent variable of intention to use, all three antecedent variables had significant relationship to intention to use supporting Hypotheses 1-3. All three hypotheses are accepted, the summary of which is given in table 4.

Table 4: Summary of results

Hypotheses	Standardised parameter estimate	P-value	Result
Technology Anxiety → Intention to use	-.202	1045<0.05	Supported
Technology Trust → Intention to use	.392	.024<0.05	Supported
Self Efficacy → Intention to use	.405	.011<0.05	Supported
Model fit statistics	CMIN/DF=3.5; RMR=.03; GFI=.78; NFI=.894; TLI=.897; CFI=.921; RMSEA=.14		



DISCUSSION AND MANAGERIAL IMPLICATIONS:

The results of the study have important theoretical as well as practical implications. As the service delivery sector is increasingly adopting different types of self service technologies, it has become imperative for both the academic researchers and the marketers to understand and analyse consumer behaviour in this area.

This research provides important insights by identifying the factors that impact the adoption of self service technology, in this case, e- ticketing. The results indicate that technology trust, technology anxiety and self efficacy in usage of technology based options have significant impact on the intention to use e-ticketing. This result can give some useful guidance to the service providers in their strategy to encourage consumer adoption of various self-service technologies.

As the empirical results support the role of technology trust, technology anxiety and self efficacy as significant predictors of intention to use e-ticketing, marketers of SSTs, including the railways should address these areas to formulate strategies aimed at motivating their customers to adopt new channels of service purchase and delivery. Marketing strategies using various personal and mass media tools can help in motivating the consumers to use this channel.

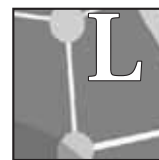
The findings that technology trust is a determinant of adoption of e-ticketing suggest that trust needs to be addressed by the service providers. Consumers usually have concerns regarding security of personal information when conducting transactions online. One possible way is by stressing the security features related to keeping the personal information safe during e-ticketing so that anxiety among potential customers is reduced. The service providers need to assure customers that their processes incorporate all the requisite safeguards for ensuring the privacy and security of their customers.

Self-efficacy in usage of this technology has also been found to be an important determinant of adoption of e-ticketing. One way to increase the confidence and capability of the consumers is by uploading demo videos on their website that give step-by-step guidance and can give them more confidence. Also, educating customers in general about the information technology related to internet transactions would aid in creating trust among current as well as prospective customers and will also increase their sense of self efficacy towards this technology. This has to be coupled with strategies to popularise e-ticketing by the railways by stressing the usefulness of this self service technology over the alternative channel of physical ticket counters.

This research indicates a significant relationship between intention to use e-ticketing and level of technology anxiety. The results show that Technology Anxiety negatively influences usage of this technology. As Table 1 indicates, about 75 percent of the respondents to this study are in the age group of 16 yrs to 45 yrs which can be considered as an active part of the population and of the total sample. Further, 33 percent of the respondents are graduates and 46.4 percent of them are postgraduates. These results have significant implications for researchers and point to the need for further investigation regarding the reasons for technology anxiety since the majority of respondents are educated and below the age of 45 years who might be expected to have relatively lower levels of technology anxiety.

This study provides certain pointers to the service providers for specifically technology based self services. The results indicate that some consumers feel apprehensive about using technology, technological terms are confusing to them and they are also apprehensive about making mistakes while using new technology. Firms should devise various strategies to reduce the impact of possible technology anxiety on consumer adoption of new technology. Some ways to do this could be through employing friendly service interface and simple and easy to understand language. It can be accompanied with training videos for customers and regular feedback from them. Some viable suggestions by the consumers can be implemented.

The Railways authority needs to look into the expectations of the users from online reservation and strategize to build trust and reduce anxiety among consumers so as to have a quicker diffusion of online reservation amongst all consumer segments.



LIMITATIONS

The research results are obtained from a limited sample where the majority of the respondents were fairly well educated and belonging to households with medium to high income. Therefore, caution must be exercised in attempting to generalize the findings of this study.

Future studies can investigate more variables related to technology and consumers which can be studied to get a more comprehensive analysis of consumer behaviour with reference to technology adoption and use. This study is about only one self service technology i.e. e-ticketing. The scope of the study of self service technology use can be extended by including various other technologies from other sectors as well. Also, it is a study employing cross-sectional data. To understand the evolution of technology acceptance, a longitudinal study can be done.

Alexander, MJ (1972). "Management Information Channels: A Systems Model", *Journal of Business Communication*, 9(4), PP. 5-11.

REFERENCES

- i. Anderson, E.W., Sullivan, MW (1993). "The antecedents and consequences of customer satisfaction for firms", *Mark. Sci.* 12 (Spring), 125e143.
- ii. Anderson, JC, & Gerbing, DW (1988). "Structural equation modelling in practice: a review and recommended two-step approach", *Psychological Bulletin*, 103(3), 411-423.

- iii. Bagozzi, RP & Yi, Y (1988). "On the evaluation of structural equation models", *Journal of the academy of marketing science*, 16(1), 74-94.
- iv. Bandura, A (1977). "Self-efficacy: toward a unifying theory of behavioral change", *Psychological Review*, Vol. 84 No. 2, pp. 191-215.
- v. Beckers, J, Wicherts, J, & Schmidt, H (2007). "Computer anxiety: "Trait" or "state"? *Computers in Human Behavior*, 23, 2851-2862.
- vi. Benamati, J, Fuller, M, Serva, M, & Baroudi, J (2010). "Clarifying the integrating of trust and TAM in e-commerce environments: Implications for systems design and management", *IEEE Transactions on Engineering Management*, 57, 380-393.
- vii. Bitner Mary Jo, Ostrom Amy L., Meuter Matthew L. And Clancy J. Anthony (2002). "Implementing Successful Self-Service Technologies", *The Academy of Management Executive*, Vol. 16, No. 4, pp.96-109
- viii. Blattberg, R.C., Malthouse, EC, Neslin, SA (2009). "Customer lifetime value: empirical generalizations and some conceptual questions", *J. Interact. Mark.* 23, 157e168.
- ix. Browne, M.W., & Cudeck, R. (1989). "Single sample cross validation indices for covariance structures", *Multivariate Behavioural Research*, 24(4), 445-455.
- x. Byrne, B. (1989). *A Primer of LISREL: Basic applications and programming for confirmatory factor analytic models*. New York: Springer.
- xi. Chin, WW (1998). "Issues and opinion on structural equation modelling", *MIS Quarterly*, 22(1), 7-16.
- xii. Chong A. Y. L., Chan, F. T. S., & Ooi, K. B. (2012). "Predicting Consumer decisions to adopt Mobile Commerce. Cross country empirical examination between China and Malaysia", *Decision Support Systems*, 53(1), 34-43.
- xiii. Chong A.Y.L., Darmawan, N., Ooi, K.B., Lin, B. (2010). "Adoption of 3G services among Malaysian consumers: an empirical analysis", *International Journal of Mobile Communications* 8, 129-149.
- xiv. Corritore, C. L., Kracher, B., & Wiedenbeck, S. (2003). "On-line trust: Concepts, evolving themes, a model", *International Journal of Human-Computer Studies*, 58(6), 737-758.
- xv. Dabholkar, Pratibha A. (1994). "Incorporating Choice into an Attitudinal Framework: Analyzing Models of Mental Comparison Processes", *Journal of Consumer Research*, 21 (June), 100-118
- xvi. Davis, Fred D. (1986). "Technology Acceptance Model for Empirically testing New End User Information Systems; Theory and Results. Doctoral dissertation", Sloan School of Management, Massachusetts Institute of Technology.
- xvii. Dimitriadis, S., & Kyrezis, N. (2010). "Linking trust to use intention for technology-enabled bank channels: The role of trusting intentions", *Psychology & Marketing*, 27, 799-820.
- xviii. eMarketeer (2018) Online retail sales in India seen growing to \$32.7 billion this year: Report. Live Mint [Online] Available: <https://www.livemint.com/Industry/7ahYCSvi9A99lznYTi0VFP/Online-retail-sales-in-India-seen-growing-to-327-billion-t.html> [28 September 2018]
- xix. Eriksson K., Nilsson D. (2007). "Determinants of the continued use of self-service technology: The case of Internet banking", *Technovation* 27, 159-167.
- xx. Fassnacht, M., Köse, I., (2007). "Consequences of web-based service quality: uncovering a multi-faceted chain of effects", *J. Interact. Mark.* 21 (3), 35e54.
- xxi. Fornell, C. & Larcker, D. F. (1981). "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, 18(1), 39-50.
- xxii. Gefen D, Karahanna E and Straub DW (2003). "Trust and TAM in online shopping: An integrated model", *MIS Quarterly* 27(1): 51-90.
- xxiii. Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (6th edition). Upper Saddle River, NJ: Prentice Hall.
- xxiv. Hanafizadeh, P., Behboudi, M., Koshksaray, A. A., & Tabar, M. J. S. (2014). "Mobile-banking adoption by Iranian bank clients", *Telematics and Informatics*, 31(1), 62-78.
- xxv. Holsapple, C.W., Sasidharan, S. (2005). "The dynamics of trust in B2C e-commerce: a research model and agenda", *Information Systems and E-Business Management*, 3, 377-403.
- xxvi. IAMAI (2018) Internet users in India expected to reach 500 million by June: IAMAI. *The Economic Times* [Online] Available: <https://economictimes.indiatimes.com/tech/internet/internet-users-in-india-expected-to-reach-500-million-by-june-iamai/articleshow/63000198.cms> [28 September 2018]
- xxvii. Igbaria, M., & Parasuraman, S. (1989). "A path analytic study of individual characteristics, computer anxiety and attitudes toward microcomputers", *Journal of Management*, 15, 373-388.
- xxviii. Indian Railways (2016) Earnings through Railway ticket sales up by over Rs 2,000 crore in 2016-2017. *Economic Times*. Available https://economictimes.indiatimes.com/articleshow/62351381.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst [28 September 2018]
- xxix. Johnson Devon S., Bardhi Fleura, and Dunn Dan T. (2008) "Understanding How Technology Paradoxes Affect Customer Satisfaction with Self-Service Technology: The Role of Performance Ambiguity and Trust in Technology", *Psychology & Marketing*, Vol. 25(5): 416-443.
- xxx. Katja Gelbrich, Britta Sattler, (2014). "Anxiety, crowding, and time pressure in public self-service technology acceptance", *Journal of Services Marketing*, Vol. 28 Issue: 1, pp.82-94.
- xxxi. Kim, J., Christodoulidou, N. & Brewer, P. (2012). "Impact of Individual Differences and Consumers' Readiness on Likelihood of Using Self-Service Technologies at Hospitality Settings", *Journal of Hospitality & Tourism Research* Vol. 36, No. 1, February 2012, 85-114.
- xxxii. Liljander Veronica, Gillberg Filippa, Gummerus Johanna, Riel Allard van (2006). "Technology readiness and the evaluation and adoption of self-service technologies", *Journal of Retailing and Consumer Services* 13, 177-191
- xxxiii. Lin, J.C. and Hsieh P.L. (2007). "The influence of Technology readiness on Satisfaction and Behavioural Intentions towards Self Service Technologies", *Computers in Human Behaviour*, Vol. 23 No. 3 pp. 1597-615

- xxxiv. Lin Jiun-Sheng Chris, Hsieh Pei-Ling (2011). "Assessing the Self-service Technology Encounters: Development and Validation of SSTQUAL Scale", *Journal of Retailing* 87 (2) 194–206.
- xxxv. Luarn, P., & Lin, H. H. (2005). "Towards an understanding of the behavioral intention to use mobile banking", *Computers in Human Behavior*, 21(6), 873–891.
- xxxvi. Luo Xin ,Li Han , Zhang Jie , Shim J.P. (2010). "Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services", *Decision Support Systems* 49 222–234.
- xxxvii. McKnight, D., & Chervany, N. L. (2002). "What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology", *International Journal of Electronic Commerce*, 6(2), 35-59.
- xxxviii. Meuter Matthew L., Ostromb Amy L., Bitner Mary Jo, Roundtree Robert (2003). "The influence of technology anxiety on consumer use and experiences with self-service technologies", *Journal of Business Research* 56 899–906
- xxxix. Meuter Matthew L. , Bitner Mary Jo , Ostrom Amy L. and Brown Stephen W. (2005). "Choosing among Alternative Service Delivery Modes: An Investigation of Customer Trial of Self-Service Technologies", *Journal of Marketing*, Vol. 69, No. 2 pp. 61-83
- xl. Meuter Matthew L., Ostromb Amy L. , Bitner Mary Jo, Roundtree Robert (2003). "The influence of technology anxiety on consumer use and experiences with self-service technologies", *Journal of Business Research* 56 899–906
- xli. Oh, H., Jeong M., Lee, S. and Warnick, R. (2013). "Attitudinal and Situational Determinants of Self-Service Technology Use", *Journal of Hospitality & Tourism Research*. Vol. XX, No. X, pp 1–30.
- xlii. Oliver, R.L. and Swan, J.E. (1989), "Consumer perceptions of interpersonal equity and satisfaction in transactions: a field survey approach", *Journal of Marketing*, Vol. 53 No. 2, pp. 21-35.
- xliii. Oyedele, A., & Simpson, P. (2007). "An empirical investigation of consumer control factors on intention to use selected self-service technologies", *International Journal of Service Industry Management*, 18, 287-306.
- xliv. Parasuraman A. (2000). "Technology Readiness Index (TRI) A Multiple-Item Scale to Measure Readiness to Embrace New Technologies", *Journal of Service Research*, Volume 2, No. 4, 307-320.
- xlv. Parsuraman and C. L. Colby (2001). *Techno-Ready Marketing: How and Why Your Customers Adopt Technology*. New York: Free Press.
- xlvi. Szymanski, D.M., Henard, D.H., (2001). "Customer satisfaction: a meta-analysis of the empirical evidence", *J. Acad. Mark. Sci.* 29 (1), 16e35.
- xlvii. Venkatesh, V. (2000), "Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model", *Information Systems Research*, Vol. 11 No. 4, pp. 342-365.
- xlviii. Venkatesh, V. and Bala, H. (2008), "Technology acceptance model 3 and a research agenda on interventions", *Decision Sciences*, Vol. 39 No. 2, pp. 273-315.
- xlix. Wei, T.W., Marthandan, G., Chong, A.Y.L., Ooi, K.B. & Arumugam, S. (2009). "What drives Malaysian m-commerce adoption? An empirical analysis", *Industrial Management & Data Systems*, 109(3), 370-388.
- i. Wheaton, B., Muthen, B., Alwin, D., & Summers, G.F (1977). "Assessing reliability and stability in panel models", In D. Heise (Ed.), *Sociological Methodology*. San Francisco, CA: Jossey-Bass.
- ii. Williams, L.J. & Hazer, J. (1986). "Antecedents and consequences of satisfaction and commitment in turnover models: a re-analysis using latent variable structural equation methods", *Journal of Applied Psychology*, 71(2), 219–231.
- iii. Xiaoren, Z., Xiangdong, C., Ling, D. (2013), "Comparative Study of Self Service Technology Adoption based on Product Function", *Information Technology Journal* 12(12):2350-2357.

GST in India and Australia-A Comparison

**Geoffrey A. Tickell*



Abstract

This paper discusses the Goods and Services Tax (GST) that became effective in India on July 1, 2017. It is notable that, unlike most nations with a GST, India has five (was six) distinct tax rates on products and a dual-tax regime. This paper provides a background to the political process undertaken to implement the GST in India. It also compares India's GST with Australia's GST; a tax introduced in Australia on July 1, 2000, also after considerable political persuasion and deal making. Unlike India, Australia has only one GST rate, that of 10%. This paper argues that India's GST is currently too complex and that simplification, similar to Australia's, is needed for acceptance by its population.

** Professor, Indiana University of Pennsylvania, USA*

INTRODUCTION

“Tax reform is a thankless and politically risky task that involves standing up to vested interests in order to achieve long-term goals”, (Eccleston, 2013, p. 103).

After intensive discussions, several committees, lengthy negotiations and two postponements, a comprehensive Goods and Services Tax (GST) finally came into effect in India on July 1, 2017 . Introduced with the slogan, “one nation, one tax, one market” , India’s GST replaced a cascading array of state determined indirect sales taxes, including value-added taxes (VAT), on goods, as well as service taxes levied by the central government. Many commentators regard the introduction of a GST to India as one of its biggest reforms since it gained independence in 1947 .

Unlike most nations, India’s GST has multiple rates rather than one single tax rate . On July 1, 2017, India’s GST had seven rates (including zero for exempt items) but on November 10, 2017 (less than 6 months after its introduction), the GST Council reduced the number to five by eliminating the 31% and 43% rates and moving items taxed at those rates into the 28% bracket. The 28% rate is for “luxury and sinful items” . By far, the most common rate is 18%. Table 1 shows examples of tax rates on a range of goods and services.

Table 1: Examples of India’s GST tax rates (ranked lowest to highest)

Product	Rate
Food grains, fresh meat, eggs, books, cereals, milk, education, healthcare	Exempt
Fishing nets, used clothing, economy class air ticket, basic hotel accommodation, goods transportation, coffee, tea, spices, stamps	5%
Condensed milk, printing ink, butter, cheese, cellphones	12%
Chocolates, fork lifts, rubber tubes, telecom services, business class air tickets, moderate hotel accommodation, restaurant services	18%
Cigars, gambling, luxury hotel accommodation, cinema tickets, automobiles, paint, sunscreen, luxury hotel accommodation	28%

Source: ET Online, 2018.

Note: The rate of GST on hotel accommodation and restaurant meals depends upon the price charged with the rate increasing to the next bracket each time the price moves into a new threshold.

On July 1, 2017, India became the 166th nation to introduce a GST. France was the first in 1954. Table 2 lists other GST countries with their corresponding tax rate . You will note from Table 2 that, unlike India, most countries only have the one tax rate.

Table 2: GST rates in a sample of other countries (in alphabetical order)

Nation	GST Rate (%)	Year Introduced
Australia	10	2000
Brazil	10	2017
Canada (Dual System)	5+5	1991
China	17	1994
Denmark	25	2000
France	20	1954
Germany	19	1991
Hong Kong	10	2006
Japan	8	1989
Malaysia	6	2015
New Zealand	15	1986
Pakistan	17	1990
Singapore	7	1994
South Korea	10	1985
Sweden	25	1969

Source: (S. Gupta, Sarita, Singh Munindra, Komal, & Kumawat, 2017; Lourdunathan & Xavier, 2017).

It is worth noting that the USA does not have a GST; instead most states levy a single-rate sales tax on goods, with the rate and the type of goods exempted varying between states.

It is apparent by studying the VAT rate on particular products prior to the introduction of the GST that India adopted a five-rate regime instead of one because they felt it to be prudent to closely match the VAT rate (i.e., the before the GST rate) with the new GST rate. This might have been for political survival as well as to closely match the amount of revenue collected from the GST with that previously collected from the VAT. Table 3 shows a sample of products with the “Before GST rate” and the “GST rate”. It is worth noting that the correlation of the before and after rates is almost 100%.

Table 3: The tax rate on a selection of goods before and after India introduced the GST

Items	Before GST(%)	GST rate (%)
Cereals, Milk, printed books,	0	0
James, jellies, juice, ketchup	12	12
Pasta, toilet paper, Telecom	18	18
Spectacle lenses, bicycles	18.5	18
Instant coffee, razors, toothpaste, sugar, refrigerators, furniture, perfumes, shampoo, paint, ceramic tiles, pianos, revolvers, make-up	26	28

Source: BQ Desk (2017).

Introduced into Australia on July 1, 2000, Australia's GST is a broad-based consumption tax. It replaced six sales tax brackets ranging from 12% to 45% (Groenewegan, 1983). The Federal Government levies the one rate of 10% on all goods and services, except exempt items (e.g., basic food items). The GST is subsumed in the advertised price of the good or service. The amount of GST collected is shown separately on the receipt. For exempt items, the receipt shows a code of NGST. All businesses with a turnover of \$75,000 AUD or higher must register with the Australian Tax Office for GST collection (ATO, 2018). For tax remitting purposes, businesses in Australia submit a monthly Business Activity Statement (BAS) showing the GST collected from their customers. They attach a check for the GST collected that month and send it to the Australian Taxation Office (ATO). To encourage investment on capital items, businesses can claim a rebate against the GST collected for the amount they spent on capital items (SMH, 2018).

The political journey of the GST in India and Australia

India: India's 1949 Constitution created a federation of states and one central government. This sharing of power requires lengthy negotiations between the states and the central government any time legislation affecting the states is proposed. GST negotiations necessitated a dual model of tax collection (Govind, 2011), similar to that of Canada, which also has a dual-GST model (i.e., with Federal and Provincial rates). GST is collected in the state where the item is sold with the central government collecting 50% and the state government collecting the other 50%. For example, 18% hotel laundry bill in Bengaluru is split between the Central (9% CGT) and the state of Karnataka (9% SGT). Both amounts are shown on the receipt.

The political journey of India's GST started in 2000 when the NDA government formed an empowered committee to design a GST model under the chairmanship of Asim Das Gupta (Nath, 2017). In 2004, the proposal gathered momentum under the Kelkar Task Force (Y. Garg & Gupta, 2017). In 2006, the Finance Minister, P. Chidambaram, announced a target date for implementation of the GST as 1st April 2010 (Sankar R., 2017). In 2008, an empowered committee submitted a report titled "A Model and Roadmap for Goods and Services Tax in India" (Sankar, 2017). In late 2009, the Committee sought public opinion. In 2010, the Finance Minister, Pranab Mukherjee, stated that the GST would become effective on April 1, 2011. This deadline was extended to April 2012 (Adhana, 2015). Postponements continued in 2012 and 2014. In May 2014, under the new government of Prime Minister Modi, the new bill was introduced into parliament and was passed in May 2015. Implementation delays continued until 2016 when, finally, the Finance Minister, Arun Jaitley, stated that the GST bill would be implemented through the One Hundred and Twenty-Second Amendment Act (2016) from July 1, 2017 (Adhana, 2015; S. Gupta et al., 2017).

Initial resistance to the GST came from states who felt that their tax revenue would decline due to the tax being collected in the destination state rather than the state of origin, as occurred with the previous value-added tax system (Vinay Kumar, 2016). Clearly, with the move from a VAT to a GST, the predominately industrial states felt that they would lose tax revenue to the more populous states. To ease their fear of

losing tax revenue, the Central Government has guaranteed no loss of income to individual states resulting from the introduction of the GST for the first five years (Sehrawat & Dhanda, 2015).

India's GST is intended to replace all indirect taxes including octroi, sales taxes, entry tax, stamp duty, license fees, turnover tax, etc. (N. Gupta, 2014). Businesses with an annual turnover exceeding 1.5 crore (where 1 crore equals 10 million rupees) are required to register for GST (BQ Desk, 2018; Rao & Chakraborty, 2010).

Australia: The thought of reforming the indirect tax system in Australia to include services first came in 1974 (Eccleston, 2013). In that proposal by Australia's Treasury Department, it was called a consumption tax. A Draft White Paper in 1985 advocated for a consumption tax to be introduced. This was the first time that taxing services was considered by an Australian government. However, the idea was unpopular with the trade union movement and welfare lobby groups due to it being a regressive tax and hurting those on a low-income. Due to the unpopularity of a consumption tax, the government abandoned the policy during the 1980's.

Discussion of a new type of indirect tax to replace the many sales taxes did not surface in the media again until 1992 when the Opposition (Liberal) Party in Australia included a GST in its policy agenda during the election campaign (Blount, 2000). The leader of the Liberal Party, John Hewson, encountered difficulty in selling the policy to the electorate and consequently lost the March 1993 election (Eccleston, 2013). The incumbent (ALP) government was returned to power, most likely due to the unpopularity of the GST as well as a promise to reduce personal income tax rates. In fact, soon after being re-elected, the government was required to increase the rate of sales tax on many goods to pay for the loss of revenue from the income tax cuts. During the 1996 election campaign, no mention of a GST was made by either of the two major parties. They were aware of the unpopularity of a GST with Australia's voters. After the election, the new (Liberal) government placed a GST back on its policy agenda. The introduction of a GST became a prominent issue for the Liberal government in the election campaign of 1998. It seemed that the electorate was slowly warming to the idea because the Liberal Party was returned to government, albeit with a slim majority, in 1998 (Crosby, 2000).

Importantly, with the Australian government's narrow majority in the lower house (the House of Representatives) and the balance of power being held by minor parties in the upper house (the Senate), the government looked to the Australian Democrats (a minor party) to support the GST legislation. In return for their votes, the Australian Democrats demanded that basic food items (e.g., milk, bread, vegetable, fruit) be exempt from the GST (Blount, 2000). After a lengthy bargaining process, the Liberal Government, led by Prime Minister John Howard, obtained the necessary votes from the Australian Democrats for the legislation to pass both houses of parliament. Unfortunately for the Australian Democrats, it seems that a large proportion of Australia's voting public blamed them for the GST. This unpopularity resulted in the Australian Democrats not winning any seats in the 2004 or 2007 half-senate elections. In fact, today, the Australian

Democrats, as a political party, no longer exists (Economou & Ghazarian, 2008).

The Australian Federal Government levies, administers and collects the GST. States do not levy a GST. The tax rate of 10% is consistent across all states. Exemptions are also applied consistently across the nation. All non-exempt products have 10% added to the cost of the product; the retail price includes the GST and the tax collected is clearly shown on the customers receipt. The money collected by the Federal Government is then remitted back to the six states and two territories in Australia, although not necessarily at the full amount collected from each state. From the time the GST was introduced, some states (e.g., Tasmania) have consistently received more than 100% of the GST receipts while others (e.g., Victoria) have always received less. This “Robin Hood” arrangement is based on a principle known as horizontal fiscal equalization (Australian Government, 2012) Table 3 outlines the percentage returns of the GST pool to each state and territory, in 5-year intervals.

Table 4: GST distributions for select years (in five-year intervals).

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2000-01	0.91	0.87	1.02	0.98	1.18	1.51	1.11	4.16
2005-06	0.87	0.88	1.04	1.03	1.20	1.56	1.14	4.27
2010-11	0.95	0.94	0.91	0.68	1.28	1.62	1.15	5.07
2015-16*	0.99	0.91	1.05	0.38	1.20	1.76	1.28	5.28

*Treasury estimate

Source: (Australian Government, 2012; Weight, 2014)

It is notable that Western Australia's share of the GST pool has become less and less each time the federal government distributes the GST receipts. This is due to the Western Australian government collecting substantial receipts from exporting iron ore and minerals to China. As shown in Table 2, Western Australia's share of the GST pool has fallen from 103% in 2005-2006 to 38% in 2015-16.



REASONS FOR INTRODUCING A GST IN INDIA

There are several acknowledged reasons for the introduction of the GST in India. In no particular order they are:

1. To eliminate the tax-on-a-tax event that occurs as a result of a series of cascading value-added taxes on products. Unlike a VAT, the GST allows for set-offs through a tax credit mechanism whereby the GST paid by the seller is offset from the GST collected from their customers. Given that the final user is the only customer paying the GST, the tax-on-a-tax is eliminated. Sunitha and Chandra (2017) explain the problem of a VAT through the following illustration. “Suppose a truck is moving stuff from Delhi to Chennai. It will go through around 8 states. It pays a variety of taxes during that time ... By the time the truck reaches the destination in a couple of weeks, a huge amount of cost is indirectly added to the consumers. Each source of tax creates complexity, corruption and delay” (p. 56).

2. With one tax for the entire nation, it is expected that the compliance costs will decrease and compliance rates will increase.
3. The GST has broadened the tax base thereby increasing the revenue collected by governments. For example, from July 1 2017, states for the first time are able to collect indirect taxes from the service sector. Prior to the introduction of the GST, only the central government was permitted to levy a tax on services.
4. Local production will receive a significant advantage from the change. Instead of all local goods incurring a VAT, as occurred prior to 2017, only goods and services sold in India will incur the GST. Exports will no longer incur indirect taxes making them more price-competitive overseas. The flip side of this is that imports will now incur the GST, therefore making them more expensive in the domestic market.
5. An increase in direct foreign investment is likely to occur given the simplified and unified GST.
6. There is a general feeling that the GST will significantly reduce tax evasion. Some commentators regard this to be the primary motivation behind the introduction of the GST. The black market, as it is often called, was measured at around 20% of the total tax revenue prior to the introduction of the GST. It is expected that the GST will considerably reduce the number of unreported transactions (so as to avoid paying tax), especially in the restaurant sector.
7. Primary producers are likely to benefit from the introduction of the GST because most agricultural commodities are now exempt.

Overall, there is a strong feeling among economists, politicians and commentators that the introduction of a GST in India will increase economic growth, increase government revenue, and improve employment opportunities for that nation. There is a general consensus that economic growth in India will increase by a further one to two per cent as a result of the GST.



ACCEPTANCE OF THE GST BY THE AUSTRALIAN CONSUMER

There is evidence to suggest that the Australian public has slowly grown to accept the GST. Today, consumers view the GST to be a normal part of their everyday life (Tax Foundation, 2017). In the case of many goods (e.g., home furnishings), the retail price of a product stayed about the same after July 1, 2000 due to the sales tax being replaced by the GST as well as retailers absorbing the GST. In contrast, the price paid by clients using the services sector (e.g., dentists, lawyers, accountants, real estate agents), increased the full 10%.

At regular intervals, there are suggestions by politicians, economists and the media to increase the GST to 15%, but so far all Australian governments have resisted this. There is a general belief that a political backlash would occur against any government that proposed to increase the GST rate. Given the narrow majority of seats held by the government (regardless of which party is in power), talk of an increase in the GST rate

would cause that political party to not win the next general election.

There is clear evidence that the GST has reduced the number of and the dollar amount of black-market transactions in Australia . Moreover, this increasing rate of compliance with the GST is steadily increasing as Australia's consumers move away from cash to a debit or credit card when paying for a transaction. It is understood that cash-based transactions need not be recorded in the accounting system whereas debit and credit card transactions require it for a receipt and collection. This trend might transfer to India thereby also reducing the number of black-market transactions in India.



CONCLUDING REMARKS

It is anticipated that India's GST will bring in more revenue for both the central and respective state governments, as it did in Australia, New Zealand and Canada , although it is too soon to be conclusive. However, India's GST is far more complex than Australia's straightforward one-tax rate version. India's range of tax rates is a complicating factor. According to the World Bank, “the key to India's GST success would be to reduce the number of different rates” . Knowing and then calculating the GST amount in advance will not be easy for India's everyday consumer. In 2009, Ahmad and Podder argued that, “ideally, the tax should be levied comprehensively

on all goods and services at a single rate to achieve the objectives of simplicity and economic neutrality” (p. 19). Despite this argument, India adopted a range of rates with the rate for most items being 18%. Maybe this outcome was a political trade-off between revenue collection and acceptance by consumers, given that the GST rates and the VAT rates are similar for many products. It seems that, for most products, the 2017 VAT rate became the 2017 GST rate, give or take a few percentage points. This decision differs from the majority of countries (e.g., Australia, New Zealand, Singapore and Japan), which ignored the current sales tax rates when introducing their GST and implemented one single rate for all products .

Using Australia's experience as a guide, it takes considerable time for consumers to understand and then accept a GST. One single tax rate enables quicker understanding and higher acceptance of a GST than does a multitude of rates. If the government of India wants to simplify the GST for its retailers and consumers, and as a consequence, increase acceptance of the GST, then the number of rates should be reduced. The GST Council in its 23rd meeting on November 10, 2017, did indeed recommend widespread changes to the GST by reducing the number of slabs to five (E.T., 2018). In line with research conducted by Shamsuddin, Ruslan, Halim, Zahari and Fazi (2014) and Ahmad, Ismail and Halim (2016) in Malaysia, the relative acceptance-rate of the GST by a nation's population is an area for possible future research.

References

- i. ABC. (2015). GST hike would raise \$130b - Modelling shows. Retrieved from <https://www.abc.net.au/news/2015-11-02/gst-hike-would-raise-130b-modelling-shows/6903782>
- ii. Adhana, D. K. (2015). Goods and services tax (GST): A panacea for Indian economy. *International Journal of Engineering and Management Research*, 5(4), 332-338.
- iii. Ahmad, E., & Poddar, S. (2009). GST reforms and intergovernmental considerations in India. Asia Research Centre Working Paper 26, 1-42. ATO. (2018). Registering for GST. Retrieved from <https://www.ato.gov.au/Business/GST/Registering-for-GST/>
- iv. Australian Government. (2012). GST distribution review - interim report. Retrieved from <http://www.gstdistributionreview.gov.au/content/Content.aspx?doc=reports/interimmarch2012/Chapter8.htm>
- v. Bedi, B., & Sharma, K. (2017). Moving to goods and service tax in India: Impact on India's growth. *International Journal of Engineering Research & Management Technology*, 4(3), 120-128.
- vi. Bennis, M. (2014). ATO cracks down on blackmarket which is costing taxpayers 22B a year. Retrieved from <https://www.dailytelegraph.com.au/news/nsw/ato-cracks-down-on-black-market-which-is-costing-taxpayers-22b-a-year/news-story/a872e58e75ace4e380c0ffda9356d826>
- vii. Beri, Y. (2011). Problems and prospects of goods and services tax (GST) in India. *Economic Affairs*, 56(4), 353-357.
- viii. Blount, S. (2000). Public opinion and tax aversion in Australia. *Journal of Sociology*, 36(3), 275-290.
- ix. Bolton, T., & Dollery, B. (2005). An empirical note on the comparative macroeconomic effects of the GST in Australia, Canada and New Zealand. *The Economic Society of Australia*, 24(1), 50-60.
- x. BQ Desk. (2018). India's GST among the most complex, has the second highest tax rate. Retrieved from <https://www.bloombergquint.com/gst/2018/03/15/indias-gst-among-the-most-complex-has-the-highest-tax-rate>
- xi. BQ Desk. (2017). Tax rates before and after GST, retrieved from <https://www.bloombergquint.com/gst/tax-rates-before-and-after-gst#gs.F=33qT8>.
- xii. Crosby, L. (2000). The Liberal Party. In M. Simms & J. Warhurst (Eds.), *Howard's Agenda: The 1998 Australian Election* (pp. 64-70). St. Lucia, Queensland: University Press.
- xiii. Daru, M. U. (2016). A critical appraisal of GST in India. *International Journal of Research in IT & Management*, 6(5), 109-114.
- xiv. Dash, A. (2017). Positive and negative impact of GST on Indian Economy. *International Journal of Management and Applied Science*, 3(5), 158-160.
- xv. Debnath, P. (2016). Implementation of goods and services tax (GST) in India and its control over tax collection. *Journal of Commerce & Trade*, XI(1), 28-35.
- xvi. Eccleston, R. (2013). The tax reform agenda in Australia. *Australian Journal of Public Administration*, 72(2), 103-113.
- xvii. Economou, N., & Ghazarian, Z. (2008, 6-9 July 2008). *Vale the Australian Democrats: Organisational failure and electoral decline*. Paper presented at the Australian Political Studies Association Conference, Hilton Hotel, Brisbane.
- xviii. ET Online. (2018, January 19, 2018). Confused about revised GST rates? Here's a quick guide. Retrieved from <https://economictimes.indiatimes.com/news/economy/policy/a-quick-guide-to-india-gst-rates-in-2017/articleshow/58743715.cms>

- xix. Garg, G. (2014). Basic concepts and features of goods and service tax in India. *International Journal of Scientific Research and Management*, 2 (2), 542-549.
- xx. Garg, Y., & Gupta, J. (2017). An *exploratory study on evolution & implementation of GST in India*. Paper presented at the 3rd International Conference on innovative trends in Science, Engineering and Management, New Delhi.
- xxi. Govind, S. P. (2011). Goods and services tax: Will the proposed indirect tax reform change business and tax dynamics in India? *NUJS Law Review*, October-December.
- xxii. Gowda, M. R., N, M., Ravi, M. V., & Kumar, N. Issues and challenges in the implemation of goods and services tax (GST) in India.
- xxiii. Groenewegan, P. (1983). Australian Wholesale Tax in Perspective, Australian Tax Research Foundation.
- xxiv. Gupta, N. (2014). Goods and Services Tax: It's Impact on the Indian Economy. *International Research Journal of Commerce Arts and Science*, 5(3), 126-133.
- xxv. Gupta, S., Sarita, Singh Munindra, K., Komal, & Kumawat, C. H. (2017). Good and Service Tax: An international comparative analysis. *International Journal of Research in Finance and Marketing*, 7(5), 29-38.
- xxvi. Kour, M., Chaudhary, K., Singh, S., & Kaur, B. (2016). A study on impact of GST after its implementation. *International Journal of Innovative Studies in Sociology and Humanities*, 1(2), 17-24.
- xxvii. Kumar, V. (2016). GST - A boon or a bane for India. *International Journal for Innovative Research in Multidisciplinary Field*, 2(9), 315-319.
- xxviii. Kumar, V. (2016). GST: Positive and negative effects on common man in India. *Journal of Commerce and Trade*, XI (2), 113-117.
- xxix. Lourdunathan, E., & Xavier, P. (2017). A study on implementation of goods and services tax (GST) in India: Prospects and challenges. *International Journal of Applied Research*, 3(1), 626-629.
- xxx. Matheen, A., Kumar, K. S. S., Hina, Q. U., & Sharmila, V. (2017). Impact of GST on Indian Financial System. *International Journal of Scientific Research in Science and Technology*, 3(8), 1152-1156.
- xxxi. Nath, B. (2017). Goods and services tax: A milestone in Indian economy. *International Journal of Applied Research*, 3 (3), 699-702.
- xxxii. Palkesh, A. (2016). How will GST introduced by Government of India lead to curbing of black money in India? Retrieved from <https://www.quora.com/How-will-GST-introduced-by-Government-of-India-lead-to-curbing-of-black-money-in-India>
- xxxiii. Rao, R. K., & Chakraborty, P. (2010). Goods and Services Tax in India: An Assessment of the Base. *Economic Political Weekly*, 45(1), 49-54.
- xxxiv. Rizwana, H. (2016). GST and Indian economy. *International Academic Journal of Economics*, 3(9), 1-6.
- xxxv. Rupa, R. (2017). GST in India: An overview. *International Education & Research Journal (IERJ)*, 3 (2), 88-89.
- xxxvi. Sankar, R. (2017). GST: Impact and implications on various industries in Indian Economy. *Journal of Internet Banking and Commerce*.
- xxxvii. Sehrawat, M., & Dhanda, U. (2015). GST in India: A key tax reform. *International Journal of Research*, 3 (12), 133-141.
- xxxviii. SMH. (2018). How financing a car affects claiming GST. Retrieved from <https://www.smh.com.au/business/small-business/how-financing-a-car-affects-claiming-gst-20171211-h02br1.html>
- xxxix. The World Bank. (2018). India development update: Continue domestic reforms and encourage investments. Retrieved from <http://www.worldbank.org/content/dam/Worldbank/document/SAR/india/in-report-india-development-update-october-2013.pdf>
- xl. Victoria, P. O. (2000). Inquiry into the Impact of the Goods and Services Tax on Small and Medium Sized Businesses in Victoria. Retrieved from <https://www.parliament.vic.gov.au/archive/edic/inquiries/GST/ReportOne.htm>
- xli. Weight, D. (2014). Commonwealth payments to the states. Retrieved from https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/BudgetReview201314/ComPayments



Organizational Retrenchment & Downsizing Strategy: Panacea or Pain

**Dr. Anju Batra*

Abstract

The business world is enduring change of myriad forms, almost every minute of the day. As the competition is amplifying at domestic as well as global level, each industry or business is confronting with obstacles and ambiguity at every juncture. Modern organizations are striving hard in deciphering how to manage the change within internal or external environment appropriately. Disruptive strategic changes are being opted and implemented by the organizations as a norm today, to get a compatible internal architecture and gear up their performance. The present study quizzes whether retrenchment and downsizing is a right strategy for achieving organizational goals in Information Technology industry in India? An empirical investigation has been attempted to find out how recurrent lay-offs in IT organizations in India are influencing their financial performance as well as employees' performance. The financial performance has been probed with financial ratios namely ROA and ROS. With the help of Exploratory Factor analysis technique, the factors representing employee citizenship behavior and performance have been recognized and a correlational study has been made amongst these factors.

KeyWords: *Disruptive strategic changes, retrenchment, downsizing, recurrent lay-offs, organizational citizenship behavior*

**Assistant Professor (Senior) , Delhi Institute of Advanced Studies Delhi, Rohini, India*

INTRODUCTION

The business world is enduring change of myriad forms, almost every minute of the day with growing competition at domestic as well as global level. Each industry or business is confronting with obstacles and ambiguity at every juncture. Modern organizations are striving hard in deciphering how to manage the change within internal or external environment appropriately. Disruptive strategic changes are being opted and implemented by the organizations as a norm today, to get a compatible internal architecture and gear up their performance. The Information Technology industry of India which heralded practically a virtual monopoly position in global markets for its exclusive proprietary technology, is also being defied by all-encompassing winds of change.

India's information and technology services came into existence in the year 1967 with the establishment of TCS of Tata Groups in Mumbai. In the 1990s, when economic reforms were introduced, this industry was making exports of nearly \$100 million with around 5,000 employees. But its influence and applications have reached beyond the perceptions over the years. Now it is enjoying the stature of one of the largest global IT capitals, booking aggregated revenues of US\$ 160 billion approximately in the year 2017 and around 2.8 million employees working in this sector. According to latest NASSCOM reports, the sector has export revenue standing at US\$99 billion and domestic revenue at US\$48 billion approximately. In fact IT industry, one of the top two industries in India has been instrumental in transforming its image on the global map from a decelerating economy to an innovative global catalyst by representing hotshot technology solutions and services. IT and IT-enabled services have been stimulating economic growth in India affecting multifaceted parameters like increased exports, employment opportunities, urbanization, regional development, diversity and improved standard of living of employees.

Due to greater talent pool, innovative technology and low cost manufacturing, IT sector could mark larger global footprints and relish competitive advantages over rivals. But, off late changing regulatory and legislative norms, state-of-the-art products of new players, new business models and distribution patterns are affecting international as well as domestic demand. The industry is in doldrums and organizations are looking out different ways for sustainability in the changing scenario. The benefit which the IT bigwigs used to cherish to attain geographical proximity to customers as well as substantial capital flow is being pushed to the corners due to increasing stakeholders' expectations. The factors contributing as game Changers can be named as year 2008 Global recession, crisis in Euro Zone, Brexit problem, Chinese economic slowdown as well as the protectionist efforts and policies of Donald Trump in America. These all affected the existing demand patterns. Along with it new entrants in global market offering innovative products and attractive distribution plans threatened Indian organizations and forced them to ponder over reassessment of their business models for a sustainable business.

Downsizing and retrenchment have become common news in India these days and the IT sector has experienced more

layoffs in comparison to employees in any other industry. As per recent news seven of the biggest IT firms are planning to sack at least 56,000 engineers this year, which is a number almost twice the employees laid off by the companies last year. Executive search firm Head Hunters India also predicts that the job cuts in IT sector will be between 1.75 lakh and 2 lakh annually, for next three years. In May last year, the then Union labour minister Bandaru Dattatreya has confirmed fears of the 'jobless growth' by stating that 'the economic growth is not translating into rise in employment opportunities.

RiseSmart, a global talent mobility solutions company, which approves India's IT sector as one of the biggest employment creator globally; has also commented that hiring has "plummeted" recently and the menace of job layoffs is hitting both big and small IT companies.

For the disruptive organizational structures of IT companies, there are ample reasons, namely –

1. Most of the IT companies have observed sluggish growth and dipping profits. NASSCOM's growth forecast for the industry for the year 2017 was 8.6 % at constant prices, but hardly any firm could achieve it. As a result organizations are hard pressed for cost cutting and retrenchment strategy is being adopted.
2. Radical changes in traditional technology that is cloud computing artificial intelligence machine learning and robotics displaced people led models. The need for huge Army of IT professionals is being reduced. This also decreased employee requirement and resulted into layoffs
3. The protectionist policies of American government as per US President Trump's dictate that minimum income requirement for HIB Visa has to be raised from existing limit of dollar 60,000 to dollar 130,000 and the insistence to 'go for more localization' has created havoc to Indian IT companies. It is making HIB visa holder Indians bag-pack to return back home.
4. The upcoming corporate governance issues in various IT companies nowadays and their repercussions are shaking the trust of stakeholders. It is affecting capital flow and is one of the reasons of poor performance and profitability. This is also forcing firms to restructure for cost cutting.
5. Global Economic downturn and sluggish demand is again landing Indian IT companies with fewer big ticket projects. Other emerging Global players with cutting edge technology are giving neck to neck competition. In a situation of lesser work and projects there is more pressure on the margins and balance sheets. Companies are forced to sit back and devise strategies to restructure & recuperate.

As the competition is intensifying in almost every business and industry, the rules of game are changing in IT sector as well. The competitive advantage which organizations initially used to enjoy are vanishing. Firms are exploring 'exclusive' organizational capability' – the way to realize explicit strategic objectives, be it innovation, low-cost

manufacturing, sustainability or market leadership. Organizational structures are dismantling and long-life employer-employee relationships are losing their significance. Cutting edge technologies are not only lowering entry barriers, but widening exit doors as well since IT firms are embracing retrenchment and downsizing as a 'strategy of choice'.



CONCEPTUALIZATION AND LITERATURE REVIEW

Retrenchment means 'reduction of workforce' which in legal and industrial terms denotes discharge of surplus labour force. As per the

Industrial Dispute Act, 1947, a business firm can retrench employees for any reason except a disciplinary action leading to termination. The act of trimming the labor force should be grounded on the LIFO, (Last In First Out) principle wherein low-ranking employees are separated from the business-organization permanently, Tripathi (2014). According to Rama-Rao (2010), in his study on the effects of dismissal and retrenchment on staff, retrenchment is a procedure adopted by the employer to assess the business needs with an intention of limiting losses or increasing profits and thus reducing its employees. It is an unanticipated and involuntary loss of employment, which has bearings on organizations as well as the employees, in opinion of Chandra D. (2015)

According to Freeman and Cameron (1993), downsizing is a plan of action adopted by the management in an organization to achieve desired goals of better productivity and competitiveness. It is a deliberate act of laying off employees while targeting improved organizational efficiency and effectiveness.

Johnson, (1996) also delineated downsizing as a change process to combat various organizational problems and also named it as 'all-purpose panacea'. Generally downsizing is meant as an act of reducing headcount or the size of workforce by the employers when costs are escalating or there is recessionary trend in the market. Firms also have a strategy to chuck out a percentage of low performers every year as a regular practice to maintain efficient, competitive and worthwhile labour force as they think that 'fear is the best motivator'.

Freeman and Cameron, (1993); Tushman and Romanelli, (1985) were of the opinion that downsizing has different nomenclature like rightsizing, layoffs, de-hiring or consolidating but the available literature mentions often two types of changes in the organizations namely - convergence downsizing and reorientation downsizing. Johnson (1996) and Kalimo R., et.all (2003) also termed downsizing an intentionally instituted set of activities focusing more on financial efficiency goals than human effectiveness goals. McKinley, Zhao and Rust,(2000) justified the economic rationale behind layoffs stating that the management actions related to downsizing are appropriate with a perspective to enhance economic performance and increase future productivity of the firm.

Bruton et al., (1996) also shared the similar view that an organization opts for downsizing strategy to improve its

internal dynamics. In fact, it is a reactive response to recuperate the financial health of a firm and its impact depends upon the approach, or the metrics to evaluate the outcome of downsizing. McKinley et al., (1998) also furthered the view that even though convergent downsizing may be instrumental in cost reduction, it still remains unclear whether it is an effective strategy or not, because as per Cameron (1994) the ambiguity and insecurity about losing or keeping their positions intact creates anxiety among employees and it may affect their performance. Along with it, if individuals with critical skills leave organization, it becomes difficult to ascertain what influence this may make on the organizational efficiency. The convergent downsizing may cause decreased levels of motivation, employee trust in the organization and its managers amongst surviving individuals.

For fine-tuning with external environment and internal needs, the strategic step of layoffs and retrenchment taken by any organization, wobbles its internal dynamics especially, citizenship behavior of its employees. Chadwick et al., (2004) made a study on large urban hospitals and found that downsizing does not lead to better organizational performance generally, because employee morale and behavior during layoffs is unswervingly related to the success of downsizing and the financial performance.

Marjorie A. Stassen, Martha Reavley and Denise Ghanam, (2005) tried to pinpoint the perceived impact of organizational downsizing on quality management practices. They found that employees in downsized organizations displayed significantly lower employee-level quality management practices of employee commitment, empowerment and job security, which resulted in poor performance.

Kent V. Rondeau and Terry H. Wagar (2006) in their study on 285 hospitals in Canada tried to find out how organizational restructuring and downsizing have differential impacts on organizational performance. The hospitals undergoing noteworthy organizational restructuring through downsizing were performing better than hospitals that heavily downsized without organizational restructuring. DeMeuse et al. (2004) in a study on Fortune 100 firms concluded slimming the organization size by laying off 10% or more of their workforce affected adversely the financial variables like Profit margin and ROA. Gandolfi, (2008) was also of the similar opinion in his study that firms slashing the number of employees generally under-performed than other firms not engaged in downsizing. On the contrary another longitudinal study of 258 Korean firms made by Yu and Park (2006) found that downsizers outperformed non downsizers on various metrics like Asset turnover and increase in stock price.

The downsizing strategy formulation and implementation captures an explicit tension between the organizational control of decision to downsize & uncertainty about its outcome; as well as an implicit tension between the potential impact of downsizing on retained workforce and impending benefit to the organization (Kurebwa J. 2011). There are behavioral as well as cultural consequences of downsizing on the surviving members of the organization. Certain dysfunctional symptoms in employees' behavior like increasing level of conflict and threat-rigidity reactions; as well as decreasing levels of trust, morale and communication may

prove disadvantageous for the organization. Some other behavioural consequences namely lesser organizational commitment, absenteeism and turnover are also associated with this strategic move of the firms (Allen et al., 2001; Cascio, 1993; Hallier and Lyon, 1996; Lewin and Johnston, 2000). The poor financial performance experienced by some organizations due to downsizing can be linked to such behavioural and cultural issues reflecting the citizenship behavior of its employees.

Bhattacharya & Chatterjee (2005) observed in their research that downsizing segregates relationships and destroys a firm's existing networks. The survivors show negative reactions due to loss of companions; but positive reactions anticipating better opportunities for promotion and career within the organization due to lesser competitors. Despite the fact that there is scarcity of research on the impact of downsizing on organizational economic performance, headcount reduction is regarded as strategic process necessary for long-term organizational improvements.

It is difficult to represent a single, integrated picture of downsizing and organizational performance relationship because performance is the consequence of employees' behavior towards efficient and effective duty performance within and outside the organization (Romle, Talib and Shahuri, 2016). The attitude and behavior of workers at work place, i.e. organizational citizenship behavior reflects their commitment ensuring performance (Paul, Bamel and Garg, 2016). Whereas the relationship between downsizing and performance is uncertain, a relationship between organizational citizenship behaviour and organizational performance can be explored to comprehend the downsizing-performance relationship (Batra, 2017).

Organ (1988) proposed Organizational Citizenship Behavior, proposing its five aspects namely: altruism, courtesy, conscientiousness, civic virtue, and sportsmanship. Three out of these five traits i.e. sportsmanship, civic virtue and conscientiousness describe well the managerial traits. (Bell & Minguk, 2002 & Hui, Lee, & Rousseau, 2004 & Lam, Hui, & Law, 1999). The industrious employees who go beyond the minimum requirements of their job description, exhibit efficiency and decrease inter-group conflicts affect organizational performance, according to Mackenzie et al. (2009). Williams and Anderson (1991) further differentiated behaviors and coined them as OCBI, directed towards individuals and OCBO, behaviors directed towards the organization. Practically Sportsmanship, Conscientiousness and Civic virtue reflect OCBO, which affects organizational performance. Various research studies reveal that convergent downsizing has been used as precursor or antecedent to study the consequences, i.e. organizational performance which again has been studied as financial performance through Return on Assets ratio and Return on sales ratio.

At times a mediator variable is used which represents a mechanism through which an independent variable influences the dependent variable and generally it is an attribute or an intrinsic characteristic of individuals (Holmbeck, 1997; Peyrot, 1996). Such moderating effects are normally introduced when independent and dependent variables have a weak relationship. In this study mediator i.e.

OCB explains how or why a relationship exists between the independent variable, i.e. convergent downsizing and dependent variable, organizational performance.

Convergent downsizing- It is an activity related to lay-offs or reducing headcount by the organizations with an objective of curtailment in costs. It is also linked with designation correction of employees, cut in their variable pay, reduction in benefit expenditures and facilities or salary freezes etc. In fact organizations under convergent downsizing aim at working more efficiently by reducing their operating costs and tend to serve the same markets with the same goods or services.

Reorientation downsizing- It is the organizational metamorphosis through redesigning in organizational structure, work flows and changes in technology or top management control systems. It recommends a modification in organization's strategic focus with respect to products, processes, technologies and markets. According to McCure convergent downsizing proposes the organization to do the same things, though more proficiently; on the contrary reorientation suggests for renovated direction, novel product lines and markets to be served for achievement of organizational goals of improved productivity and profitability.

Organizational Citizenship Behaviour-O -The elements of Organizational Citizenship Behaviour-O are Sportsmanship, Conscientiousness and Civic virtue.

Sportsmanship designates employees' willingness to tolerate difficulties at the workplace, refraining from unnecessary criticisms and complaints. Conscientiousness can be talked about as adherence of workplace rules, genuine acceptance and compliance to the rules, regulations and procedures of the organization (Moss, 2016). Civic virtue denotes the active participation and constructive involvement in organizational life, such as meetings, events and functions etc. in the organization. These behavioral patterns are instrumental in exceeding minimum required levels of attendance, housekeeping, punctuality and productivity of employees (Paul, Bamel and Garg, 2016).



OBJECTIVES AND RESEARCH METHODOLOGY

The present study has been attempted with the following objectives.

- To study the effect of convergent downsizing taking place in IT industry on its financial performance.
- To find out the constructs related to organizational citizenship behavior (OCB)
- To ascertain the relationship between identified (OCB) constructs and organizational performance in IT industry

In this exploratory research eight companies of IT sector namely Tata Consultancy Services Ltd (TCS), Wipro Ltd., Accenture, Cognizant, International Business Machines Corp. (IBM), HCL Technologies and Oracle have been taken up to get an overview of IT industry. Every move or strategy of these companies leaves a mark on IT industry, as these are the major

hiring companies of graduates and postgraduates of engineering background in India. Due to changing external environment and internal constraints, large number of employees are being handed over 'pink slips' declaring sudden lay-offs. It is making an effect on organizational citizenship behavior of survivors.

In this research the constructs associated with organizational citizenship behaviour which affect employees' performance as well as organizational performance have been explored and the relationship between identified constructs and employee performance has been analyzed. The study has been made in two parts- the first half contemplates the conceptual framework from literature and articles of various experts/ researchers. The second half investigates research findings based on both primary as well as secondary data. The secondary data has been sorted out from different sources like study books, journals, magazines, newspapers, published and unpublished business reports as well as company's website and annual reports. Similarly, primary data has been collected by structured questionnaires which were distributed amongst employees of above mentioned firms to get an idea about their attitude indicating citizenship behaviour resulting in

performance. Stratified random sampling has been used to deal with the heterogeneity of population and information has been collected mainly from middle level employees & junior level engineers. The researcher could get only 213 complete questionnaire out of 275 distributed to respondents and got 77.45% response rate. Out of them 88.68% were males and 11.31% were female employees. 49.03% employees were in the age group of 25-30 years, 28.47% in the age group of 30-35 years and 22.18% were above 35 years of age.

Performance has been taken as dependent variable and citizenship behavior parameters namely sportsmanship, civic virtue, conscientiousness and altruism along with convergent downsizing have been picked as independent variables. To ascertain the factor constructs and variables factor analysis has been made. The reliability and validity of the constructs has been tested through Cronbach's Alpha, AVE, and the Square Root of AVE. For checking sampling adequacy the Kaiser-Meyer-Olkin principle has been used and .702 KMO value validates the presence of adequate inter-correlation in the data set making it suitable for factor analysis. The factors with eigen value > 1 have been selected.

Table 1 - Factor Analysis

1. Convergent DS	Items	Item Loadings					
There is decrease in employment by retrenchment and lay offs	DS1	0.828					
Employees are getting raise in salary on regularly	DS2	0.813					
There are promotions in departments	DS3	0.794					
2. Civic Virtue							
I accept change without any resistance	CIV 1	0.973					
I do not complain about insignificant things at work place.	CIV 2	0.977					
I try to avoid problems with my team-members.	CIV 3	0.899					
I undertake additional tasks at work	CIV 4	0.781					
3. Sportsmanship							
I am passionate about my work	SPO1		0.948				
I cheer my team members when they feel low	SPO2		0.897				
I try to resolve issues between supervisors and my colleagues.	SPO3		0.994				
4. Conscientiousness							
I reach to my work every day on time	CON1			0.810			
I am eager to perform my duties at job promptly	CON2			0.768			
I take initiative for new assignments	CON3			0.513			
4. Altruism							
I am creating healthy and cheerful atmosphere at workplace	ALT1				0.437		
I am concerned about co-workers welfare	ALT2				0.492		
6. Performance							
I follow rules of the firm while completing the task assigned	PER1						0.602
I love to perform my job promptly	PER2						0.882
I have received commendation from superiors for my good work	PER3						0.715

Source: Author's Findings

Table 2 - Correlation among Constructs

	Conv. DS	Civic Virtue	Sportsman-ship	Conscientio-usness	Altruism	Performance
Conv. DS	1					
Civic Virtue	-0.393	1				
Sportsmanship	-0.414	0.709	1			
Conscientiousness	-0.302	0.645**	0.698**	1		
Altruism	-0.293	0.482	0.519*	0.371	1	
Performance	-0.271	0.831**	0.718**	0.727**	0.437	1
** Correlation is significant at the 0.01 level (2-tailed)						

Table 3 - Total Variance Explained

	Component			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Eigenvalues	%of Variance	Cumulative%	Total	%of Variance	Cumulative%	Total	%of Variance	Cumulative%
1	17.033	49.146	49.146	17.033	49.146	49.146	14.78	42.227	42.227
2	5.406	25.447	74.113	5.406	15.447	64.113	4.847	13.18 5	56.077
3	3.528	10.108	84.193	3.528	10.108	74.193	4.058	11.594	67.671
4	1.856	5.372	89.675	1.856	5.302	88.675	3.241	9.261	87.531
5	151	3.61	93.2	0.913	2.18	90.58			
6	1.806	5.161	98.836	1.806					

Rotation Method: Varimax with Kaiser Normalization

Table 4 -Constructs' Cronbach Alpha and AVEs

Construct	Cronbach's Alpha	AVE	Square Root of AVE
Convergent DS	.815	.727	.854
Civic virtue	.865	.783	.886
Sportsmanship	.714	.684	.827
Conscientiousness	.702	.633	.741
Altruism	.691	.587	.501
Performance	.726	.673	.819

Source: Author's Findings

To check the reliability of constructs factor loading for each variable has been made and then Cronbach's alpha has been applied. The Cronbach's alpha coefficient for almost all the items is either above .7 or around .7, the reliability is acceptable. Two inter-locking propositions convergent validity and discriminant validity both are considered as subcategories of construct validity. Convergent validity shows a correspondence or convergence between similar constructs, whereas discriminant validity measures the constructs that

theoretically should not be related to each other. The correlation coefficient is used to estimate the degree to which any two measures are related. In general, the convergent correlations should be as high as possible and discriminant ones should be as low as possible. Average variance explained, and square root of AVE points out adequacy of convergent and discriminate validity in the data set. It has been observed AVE for all the constructs is greater than 0.5, which is the threshold limit. Hence, there is acceptable validity between the constructs.

Table 5- Descriptive Statistics

	No. of Items	N	Mean	Std. Deviation	Skewness	Kurtosis
Convergent DS	3	213	2.94	0.74	0.58	-0.634
Civic virtue	4	213	3.13	0.95	0.62	-0.742
Sportsmanship	3	213	3.75	0.91	0.85	-1.441
Conscientiousness	3	213	1.52	0.63	0.49	-0.301
Altruism	2	213	1.39	0.51	0.62	-0.191
Employee performance	3	213	2.68	0.85	0.57	-0.453

Source: Author's Findings

The research methodology in this paper also includes the multiple regression analysis which labels the relationship between a dependent variable and several independent variables.

The necessary data for analysis has been presented and regression equation has been obtained. Then R² coefficient, which indicates the percent of how much of the total variance is explained by the independent variables, has been calculated. F test and Student's t test corresponding with n-

(k+1) degrees of freedom have been deliberated to explore that which hypothesis can be accepted in the study.

Based on the nonstandard coefficients the regression equation has been derived:

$$y = 1444.434 + 0.982x_1 + 39.806x_2 + 2.032x_3 + 5.991x_4 + 0.910x_5$$

Here x_1 = convergent downsizing, x_2 = sportsmanship, x_3 = civic virtue, x_4 = conscientiousness, x_5 = altruism.

Table 6 - Estimation of standard deviation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.999a	.998	.996	2168.975

a. Predictors: (Constant), convergent downsizing, sportsmanship, civic virtue, conscientiousness and altruism.

R² coefficient indicates that total variance is explained by the

independent variable is 99.80%.

Table 7 reflects the analysis of variance for multiple regression.

Table 7- Variation analysis - ANOVA_b

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	1.087E10	5	2.174E9	462.098	.000a
	Residual	18817814.997	4	4704453.749		
	Total	1.089E10	9			

- a. Predictors: (Constant), convergent downsizing, sportsmanship, civic virtue, conscientiousness and altruism.
- b. Dependent Variable: performance

For testing the validity of multiple regression model hypothesis testing is required which examines, if all of the independent variables have regression coefficients equal with zero or not, i.e. explained variance is not occurring randomly. So, null and alternate hypotheses have been formulated.

Null Hypothesis:

HO₁: There is no significant effect of convergent downsizing on organizational citizenship behavior. i.e. $\beta_1 = 0$

HO₂: There is no significant effect of sportsmanship on

organizational citizenship behavior, i.e. $\beta_2 = 0$

HO₃: There is no significant effect of civic virtue on organizational citizenship behavior, i.e. $\beta_3 = 0$

HO₄: There is no significant effect of conscientiousness on organizational citizenship behavior, i.e. $\beta_4 = 0$

HO₅: There is no significant effect of altruism on organizational citizenship behavior, i.e. $\beta_5 = 0$

Alternate Hypothesis: H1 = All β coefficients are not equal to 0

H1₁: There is significant effect of convergent downsizing on organizational citizenship behavior.

H1₂: There is significant effect of sportsmanship on organizational citizenship behavior.

H1₃: There is significant effect of civic virtue on organizational citizenship behavior.

H1₄: There is significant effect of conscientiousness on organizational citizenship behavior.

H1₅: There is significant effect of altruism on organizational citizenship behavior.

To test the null hypothesis, F test analysis is required for variance identified in the ANOVA table. The calculated F value is 462.098 at the significance level of 0.05. The critical F value with 5 degrees of freedom at numerator and 4 at denominator is 6.256. The comparison of F values concludes that all

regression coefficients are not equal to zero and alternate hypothesis is required to be studied.

The regression model depicts the substantial effect of three factors namely sportsmanship, conscientiousness and civic virtue. It has been observed that two of the variables, convergent downsizing and altruism are not significant predictors for the dependent variable and excluding these, further error deviation regression model has to be devised for analyzing performance, i.e. OCB.

Since financial report card of the organizations is another measure to scrutinize their performance; the Return on assets ratio and Return on sales ratio have been studied right from year 2008 to 2017 to assess the financial performance of the IT industry. From financial data available on the websites of IT companies under study, the industry average has been calculated. It has been observed that there is no significant rising trend in both ROA as well as ROS since 2008 to 2017, rather these are wavering marginally.

Table 8 - Financial Ratios: ROA

Year	TCS	Accenture	Cognizant	IBM	HCL	Intel	Oracle	Wipro	Industry Average
2008-09	40.51%	21.57%	13.51%	12.07%	18.10%	7.51%	22.14%	22.92%	19.78%
2009-10	42.28%	22.71%	18.52%	12.90%	13.58%	19.72%	19.18%	25.67%	21.82%
2010-11	40.10%	22.06%	17.51%	13.46%	14.23%	19.27%	20.25%	29.91%	20.09%
2011-12	39.46%	23.23%	17.48%	13.53%	21.70%	14.16%	18.62%	27.40%	20.16%
2012-13	32.51%	25.72%	16.68%	13.52%	28.48%	11.05%	18.07%	30.07%	21.09%
2013-14	35.45%	23.99%	14.62%	10.54%	33.91%	13.02%	17.72%	29.53%	21.29%
2014-15	31.09%	24.37%	13.24%	11.57%	30.90%	11.93%	27.81%	29.40%	22.30%
2015-16	28.50%	23.34%	11.37%	10.11%	21.68%	9.61%	29.74%	13.45%	19.58%
2016-17	29.37%	24.79%	13.86%	11.63%	25.57%	10.32%	29.18%	11.89%	20.03%

Source: Company's Annual Reports

Table 9- Financial Ratios: ROS

Year	TCS	Accenture	Cognizant	IBM	HCL	Intel	Oracle	Wipro	Industry Average
2008-09	24.28%	11.41%	18.86%	14.02%	25.05%	12.44%	27.61%	18.40%	19.01%
2009-10	26.75%	12.62%	18.77%	14.85%	22.20%	26.28%	36.36%	20.43%	22.28%
2010-11	27.98%	12.69%	18.57%	14.83%	18.53%	23.97%	36.08%	20.24%	21.61%
2011-12	27.65%	14.15%	18.53%	15.89%	25.64%	20.38%	40.82%	18.92%	22.74%
2012-13	26.93%	14.57%	18.97%	16.52%	35.24%	18.03%	51.22%	18.78%	25.03%
2013-14	29.10%	14.33%	18.37%	12.96%	43.12%	20.95%	54.78%	20.68%	25.78%
2014-15	23.97%	14.29%	17.25%	16.14%	41.95%	20.63%	48.30%	20.67%	24.66%
2015-16	23.37%	14.63%	16.97%	14.86%	40.05%	17.37%	43.05%	18.76%	23.63%
2016-17	25.71%	15.73%	17.89%	14.97%	40.82%	19.01%	39.69%	16.94%	23.30%

Source: Company's Annual Reports



CONCLUSION:

Most of the IT companies, especially eight companies namely Tata Consultancy Services Ltd (TCS), Wipro Ltd., Accenture, Cognizant, International Business Machines Corp. (IBM), HCL Technologies and Oracle tried to combat with internal inefficiencies of productivity and profitability through retrenchment and downsizing, but this strategy could not help much in recuperating their financial health. The objective of attaining operational efficiency through cost cutting for a thriving business in IT industry is far below the expectations as industry has witnessed a very sluggish growth. ROA as well as ROS both have nose-dived, whenever sizable layoffs have been made. The observation is analogous with the study made by DeMeuse et al., (2004) and McClure, (2009).

The organizational performance is aftermath of employees' productivity which again is an outcome of their attitude and behaviour. Employee retrenchment from 2008 till 2017 in selected companies has affected value added per employee, as a slowly rising trend has been noticed in the industry. This reflection is dissimilar to various studies made by Hallier and Lyon, (1996), Lewin and Johnston, (2000) and Allen et al., (2001), but falls in line with the observations made by Bhattacharya & Chatterjee, (2005) and Batra (2017) indicating that downsizing stimulates employees to work harder, to avail better career opportunities within the organization due to

lesser competition; or perhaps 'fear of losing job is the best motivator'.

The transformation in employees' behaviour in response to implementation of convergence downsizing strategy in the organizations significantly affect the organizational citizenship behaviour (OCB) parameters namely sportsmanship, conscientiousness and civic virtue, are similar to opinions of MacKenzie et al., (2009) and (Moss, 2016). These variables are prominent constructs which predict organizational performance, exhibiting strong positive correlation with performance of organizations. These deductions made in this study are backed by the observation made by Coleman & Borman, (2000) & Hoffman, Blair, Meriac, & Woehr, (2007).

In fact, the consequences of behavioral changes in employees in terms of OCB count a lot, whenever organizations opt and implement a strategic change. It impacts the employee productivity as well as determines the organizational performance. Even the most efficient employee in the organization may get demotivated due to situational changes caused by retrenchment. On the contrary an average performing worker may excel, out of fear of job loss and uncertainty for future. The retrenchment and downsizing strategy is a double-edged sword and organizations should be meticulous and extra cautious while opting for this.

References

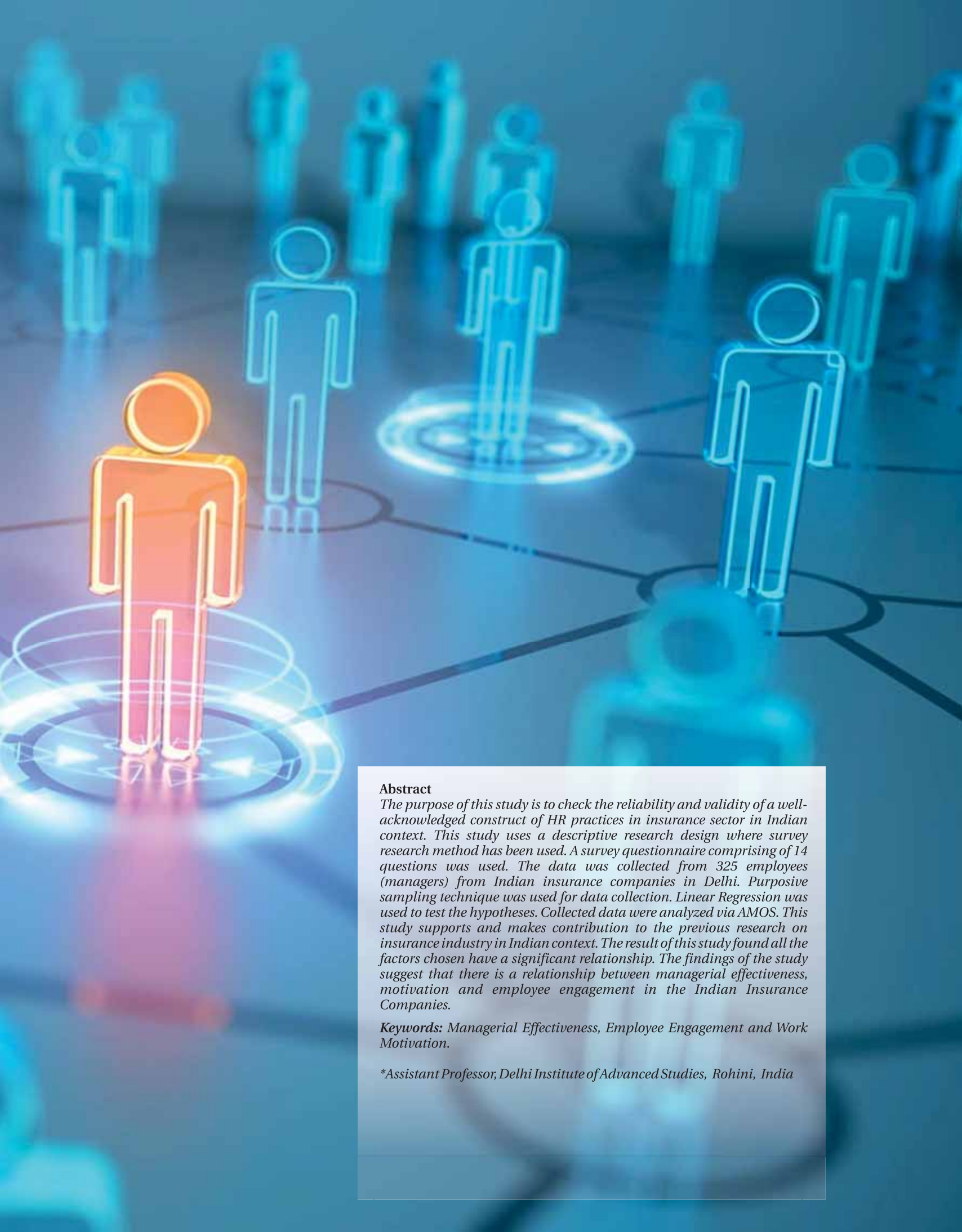
i.	Allen, T. D., Freeman, D.M., Russell, J.E.A., Reizenstein, R.C. and Rentz, J.O. (2001). 'Survivor Reactions to Downsizing: Does Time Ease The Pain?' <i>Journal of Occup and Organizational Psychology</i> , 74,145-64.
ii.	Appelbaum, S.H., Henson, D. and Knee, K. (1999). 'Downsizing Failures: An Examination Of Convergent/ Reorientation And Antecedents-Processes-C Management Decision, 37(6), 473-90.
iii.	Appelbaum, S.H., Simpson, R. and Shapiro, B.T. (1987). 'The Tough 1lest of Organizational Downsizing'. <i>Organizational Dynamics</i> , 16(2), 86-79.
iv.	Armstrong-Stassen, M. (2002). 'Designated Redundant but Escaping Lay-Off: A Special Group of Lay-Off Survivors'. <i>Journal of Occupational and Organic Psychology</i> , 75, L13.
v.	Batra, Anju B. (2017), 'The Influence of Organizational Downsizing on Organizational Performance', <i>DIAS Technology Review-The International Journal of Business & IT</i> , Vol. 13(2), 22-31
vi.	Bhattacharyya Sanghamitra and Chatterjee Leena (2005), 'Organizational Downsizing: From Concepts to Practices', <i>Vikalpa</i> , Vol.30(3), 65-78
vii.	Bruton, G.D., Keels, J.K. and Shook, C.L. (1996). 'Downsizing the Firm: Answering the Strategic Questions'. <i>Academy of Management Executive</i> , 10(2), 38-45.
viii.	Bullon, Fernando Muñoz and Bueno, María José Sánchez. (2008), 'Downsizing implementation and financial performance' <i>Universidad Carlos III De Madrid, Working Papers 08-29, Business Economic Series) 06</i>
ix.	Cameron, K.S., Kim, M.U. and Whetten, D.A. (1987). 'Organizational Effects of Decline and Turbulence'. <i>Administrative Science Quarterly</i> , 32,222-40.
x.	Cameron, K.S. (1994). 'Strategies for Successful Organizational Downsizing'. <i>Human Resources Management</i> , 33(2), 189-211.
xi.	Carswell, P.J. (2005). 'The Financial Impact of Organizational Downsizing Practices—The New Zealand Experience'. <i>Asia Pacific Journal of Management</i> , 22(1), 56-78
xii.	Cascio, W.F. (1993). 'Downsizing: What Do We Know? What Have We Learned?' <i>Academy of Management Executive</i> , 7(1), 95-104.
xiii.	Cascio, W.F., Young, C.E. and Morris, J.R. (1997). 'Financial Consequences of Employment-Change Decisions in Major U.S. corporations'. <i>Academy of Mana Review</i> , 40(5), 1175-89.
xiv.	Chadwick, C., Hunter, L.W. and Walston, S.L. (2004). 'Effects of Downsizing Practices on the Performance of Hospitals', <i>Strategic Management Journal</i> , 25(5), 27-48
xv.	Chalos, P and Chen, C.J.R (2002). 'Employee downsizing Strategies: Market Reaction and Post Announcement Financial Performance'. <i>Journal of Business Fina Accounting</i> , 29(June/July), 847-70.
xvi.	Daniel, E, Lohrke, E.T., Fornaciari, C.J. and Turner, R.A. Jr. (2004). 'Slack Resources And Firm Performance: A Me ta-Analysis'. <i>Journal of Business Research</i> , 57(1), 68-82
xvii.	DeMeuse, K.P., Bergmann, T.J., Vanderheiden, P.A. and Roraff, C.E. (2004). 'New Evidence Regarding Organizational Downsizing and A Firm's Financial Perfo Long-Term Analysis'. <i>Journal of Managerial Issues</i> , 16(2), 155-77.
xviii.	Denis, D.K. and Shome, D.K. (2005). 'An Empirical Investigation of Corporate asset downsizing'. <i>Journal of Corporate Finance</i> , 11 (3), 427-48.

- xix. Ellis, P.D. (2006). 'Market Orientation and Performance: A Meta-Analysis and Cross-National Comparison'. *Journal of Management Studies*, 43(5), 1089-1107
- xx. Farrell, M.A. (2003). 'The Effect of Downsizing on Market Orientation: The Mediating Roles of Trust and Commitment'. *Journal of Strategic Management*, 11(1),
- xxi. Farrell, M. and Mavondo, F.T. (2004). 'The Effect of Downsizing Strategy and Reorientation Strategy on a Learning Orientation'. *Personnel Review*, 33(4), 383-402.
- xxii. Farrelly, F and Questor, P. (2003). 'The Effects of Market Orientation on Trust and Commitment'. *European Journal of Marketing*, 37(3/4), 530-53.
- xxiii. Freeman, S. J. and Cameron, K.S. (1993). 'Organizational Downsizing: A Convergence and Reorientation Framework'. *Organizational Science*, 4 (1), 100-29.
- xxiv. Gandolfi, F (2008). Reflecting on Downsizing: What Have Managers Learned?, *SAM Advanced Management Journal*, Spring, 46-55.
- xxv. Hillier, D., Marshall, A., McColgan, P and Werema, S. (2007). 'Employee Layoffs, Shareholder Wealth and Firm Performance: Evidence from the UK'. *Journal of Bu Finance and Accounting*, 43(April/May), 467-94.
- xxvi. Holder-Webb, L., Lopez, T.J., and Regier, P.R. (2005). 'The Performance Consequences of Operational Restructuring'. *Review of Quantitative Finance and Accounting*, 25(4), 319-39.
- xxvii. Lewin, J.E. and Johnston, W.J. (2000). 'The impact of Downsizing and Restructuring on Organizational Competitiveness'. *Competitiveness Review*, 10(1), 45-55.
- xxviii. Love, E.G. and Nohria, N. (2005). 'Reducing Slack: The Performance Consequences of Downsizing by Large Industrial Firms, 1977—93'. *Strategic Management* 26(12), 1087-1108.
- xxix. MacKenzie, S. B., Podsakoff, P. M., & Fetter, R. (1991). Organizational citizenship behavior and objective productivity as determinants of managerial evaluations of salesperson's performance. *Organizational Behavior and Human Decision Processes*, 50, 123-150.
- xxx. McKinley, W., Sanchez, C.M. and Schick, A.G (1995). 'Organizational Downsizing: Constraining, Cloning, Learning'. *Academy of Management Executive*, 7(1), 32-36
- xxxi. Mishra, A.K. and Mishra, K.E. (1994). 'The Role of Mutual Trust in Effective Downsizing Strategies'. *Human Resources Management*, 33(2), 261-79.
- xxxii. Mishra, K.E., Spreitzer, G.M. and Mishra, A.K. (1998). 'Preserving Morale during Downsizing'. *Sloan Management Review*, 39(2), 83-95.
- xxxiii. Nutt, P.C. (2004). 'Organizational De-Development'. *Journal of Management Studies*, 41(7), 1083-1103.
- xxxiv. Organ, Dennis W., (1988) *Organizational Citizenship Behavior: The Good Soldier Syndrome*. Lexington, MA: Lexington Books.
- xxxv. Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational citizenship behavior: Its nature, antecedents and consequences*. Thousand Oaks, CA: Sage.
- xxxvi. Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990) 'Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors', *Leadership Quarterly*, 1: 107–142
- xxxvii. Podsakoff, P. M., & MacKenzie, S. B. (1997). Impact of organizational citizenship behavior on organizational performance: A review and suggestions for future research. *Human Performance*, 10, 133-151.
- xxxviii. Rehman, Waliur and Naeem Hummayoun, (2012), The impact of downsizing on the performance of survived employees: A case study of Pakistan, *African Journal of Business Management* Vol. 6(7), 2429-2434
- xxxix. Sharma Vivek and Jain Sangeeta, 'A Scale for Measuring Organizational Citizenship Behavior in Manufacturing Sector' *Pacific Business Review International*, Volume 6, Issue 8, 57-62
- xl. Smith, C.A., Organ, D.W. & Near, J.P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68: 653-663.
- xli. Tushman, M. L. and Romanelli, E. (1985). 'Organizational Evolution: A Metamorphosis Model of Convergence and Reorientation'. *Research in Organizational Behavior*, 7, 171-222.
- xlii. Williams, Larry J., and Stella E. Anderson (1991) 'Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behavior'. *Journal of Management* 17:
- xliii. Worrell, D.L., Davidson, W.N. and Sharma, V.M. (1991). 'Layoff Announcements and Stockholder Wealth'. *Academy of Management Journal*, 34(3), 662-78
- xliv. Yu, G.C. and Park, J.S. (2006). 'The Effect of Downsizing on the Financial Performance and Employee Productivity of Korean Firms'. *International Journal of Manpower*, 27(3), 230-50.



**A Study of HRM Strategies with
Special Reference to Managerial
Effectiveness, Work Motivation,
and Employee Engagement in Indian
Insurance Companies**

**Dr. Urvashi Ghai Khosla*



Abstract

The purpose of this study is to check the reliability and validity of a well-acknowledged construct of HR practices in insurance sector in Indian context. This study uses a descriptive research design where survey research method has been used. A survey questionnaire comprising of 14 questions was used. The data was collected from 325 employees (managers) from Indian insurance companies in Delhi. Purposive sampling technique was used for data collection. Linear Regression was used to test the hypotheses. Collected data were analyzed via AMOS. This study supports and makes contribution to the previous research on insurance industry in Indian context. The result of this study found all the factors chosen have a significant relationship. The findings of the study suggest that there is a relationship between managerial effectiveness, motivation and employee engagement in the Indian Insurance Companies.

Keywords: *Managerial Effectiveness, Employee Engagement and Work Motivation.*

**Assistant Professor, Delhi Institute of Advanced Studies, Rohini, India*

INTRODUCTION

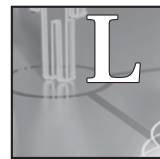
The Indian insurance industry is on the edge of a new era of rapid expansion with new participants entering the insurance industry. In today's competitive environment, HRM strategies are taking on a real importance not only in insurance industry but also in many other industries. Companies are increasingly realizing the importance of HR practices to sustain corporate growth, (Bao & Analoui, 2011). So, the growing expectations of the employees have increased the complexity of human resource practices. The success of a company is an exciting and challenging task, especially when the world has become a global village and economies are in a state of flux. The emphasis on suitable and effective human resource management has come to be identified as an important factor in the company's performance, which is concerned with effectiveness in the form of managing, motivating and retaining employees for the benefit of the company. Managerial effectiveness is generated with clear managerial concepts to influence the employees of the company (Johnson & Nandy, 2015).

Work motivation, which covers two aspects of Internal Motivational Pressures (IMP) and External Motivational Pressures (EMP) where IMP usually includes factors related to human assets, incorporating adjustable framework, cost of training and development of the workforce, whereas EMP shows changes in economic situations, government regulations and the socioeconomic situation between employees and the clients (Kwenin, 2013). Employee engagement is one of the main tasks of companies because it is the key to determinants of employee's performance (Boss, 2014; Kwenin and Nzulwa, 2013; Truss; Shantz; Soane; Alfes&Delbridge, 2013). In India, the journey of the insurance sector has been quite eventful. There were several reasons and certain historical developments which persuaded the Indian Government to take steps in this sector. Various authors have conducted a number of studies in this sector such as Gupta (2000), "Exploring Rural markets for Private Life Insurance Players in India", Mittal and Kumar (2003), "An Exploratory Study of Factors Affecting Selection of Life Insurance Products", Rao (2004), "Alternative Distribution Channels in India", Sinha and Tapen (2005), "The Indian Insurance Industry: Challenges and Prospects", Shah (2007), "Creating Consumer Awareness in Life Insurance", Sen (2008), "An Analysis of Life Insurance Demand Determinants for Selected Asian Economies and India", and Baskar, (2004) "Insurance Distribution in India - A Perspective". An interesting fact regarding the literature on insurance sector is available on the subject with different perspectives. A closer scrutiny of literature dealing with the insurance sector was to provide us a better picture regarding the role, challenges, prospects, reasons and other aspects of the insurance industry.

Now drifting towards the national scenario, the developments in the Indian insurance sector, reveal that the 360-degree turn has been witnessed over a period of almost two centuries (IRDA, Report). Palande, Shaw, and Lunawat (2003) discussed insurance sector at the international and national level. According to them, the recent development of the Indian insurance sector is facing threats and opportunities. In 2005, Bajpai, former Chairman of SEBI (Securities Exchange Board of India) and L.I.C. (Life Insurance Corporation) stated that the

insurance industry is a progeny of the economic order and growth and sustainability of the economy. This shows the significant relationship between the Indian financial and insurance sector. Vijaya Kumar (2001) examined that the insurance sector was fostering competition, innovation, and product variations. However, it also considers various issues such as pension plan and tax benefits under the different insurance schemes. Similarly, the studies done by Sinha (2002), found that India has enough financial resources to purchase different insurance schemes such as pension plans, health, and accident, afterlife, and tax saving. In 1993, Governor Malhotra, former Finance Secretary and Reserve Bank of India (RBI), evaluated the Indian insurance industry and recommended its future direction. Bajpai (2005), focused on customer awareness and satisfaction of life insurance policyholders. The study measures awareness among the urban and rural consumers about the insurance sector and its various policies (involving premium rates). On the other hand, Jagendra (2004) reported that private insurance companies can give good competition to the public sector in terms of customer orientation. The study done by Sarkar (2002) found that insurance is picking up with the entry of a large number of private insurers since December 2000.

Past researches have dwelled upon different area such as the Unfolding Insurance Scenario (Rangachary, 1999), Privatization of the insurance market in India (Sinha, 2002) Insurance in India, Changing Policies and Emerging Opportunities (Lunwat, 2003), Insurance Industry India's Quest for cover (Bajpai, 2005), Changing scenario of insurance industry (Kumar, 2004), An Exploratory Study of Factors Affecting Selection of Life Insurance Products (Kumar, 2003), Exploring Rural markets for Private Life Insurance Players in India (Gupta, 2000), An Exploratory Study of Factors Affecting Selection of Life Insurance Products (Kumar, 2003), and Insurance Regulations in India and Future Directions (Banerjee, 2004). Hence, no studies were found talking about the HRM strategies related to managerial effectiveness, work motivation, and employee engagement in the Indian insurance sector. Based on the above research gap, this study aims to answer the following research question. Is there any relationship between managerial effectiveness, employee engagement and work motivation in Indian Insurance Companies with reference to HRM strategies?



LITERATURE REVIEW

The concept of work motivation, managerial effectiveness, and employee engagement have been discussed by many researchers.

Managerial Effectiveness

Past researches have shown that managerial effectiveness is an important tool for every company. The studies conducted by researcher such as the Zohar and Marshall, 2015; Zuriekat, Salamah, & Alrawashdeh (2011), revealed that managerial effectiveness helps to achieve a competitive advantage which gives the best employees' performance. It also helps to increase the organization's productivity by boosting the confidence of employees at a workplace. Zuber & Skeritt, (2015) has stated the high level of employee development that indicates facts regarding ideas and issues related to the

effective management system of the company. Kaplan & Norton, (1992) emphasized the capabilities of motivating the employees to add strategic value to the organization. The main aspect of effectiveness involves connections of not only physical but also emotions of the employees with the company (Kelman, 2015). Cameron (1993), stated that "managerial effectiveness" is a construct rather than a concept, which can be defined and measured in an exact way by measuring the company output. Thus, managerial effectiveness contributes positively to the growth of organizations.

Work Motivation

Truss; Shantz; Soane; Alfes & Delbridge, R (2013), motivation is well-defined in a wider sense. It is defined in two ways, first as an intrinsic motivation factor, where an employee takes up challenges by himself and achieves the desired results without any external compulsion. The activities are carried out for sheer happiness and passion for the job. Second, extrinsic motivation factor which is done to obtain a reward & recognition in form of remuneration, bonus, facilities, managerial support, job security, and career opportunities (Uzonna, 2013). It gives a clear career path, rewards (Monetary and Non-Monetary) & recognition, which help in bringing longevity in employee tenure in the organization (Boss, 2014). According to Zuber, Hashim; Ali, Shehzad; Nisar, Waqar & Amir, Muhammad (2015), an effective employee motivation strategy is offering training and development programs that effectively contributes to the personal and professional growth of employees. The authors also explained that motivating the employees through rewards like monetary incentives has increased the performance of the company. Hence, the work motivation contributes to the personal and

professional progress of employees.

Employee Engagement

To survive and sustain growth, the companies must manage their human resource and its performance to keep a strong commitment towards the company (Markos, 2010). According to Purcell (2006), it is meaningful when there is a more open sharing of responsibility between the company and the employees. It involves decisions affecting the job or works, which was strongly associated with employee engagement. Robinson, Perryman, and Hayday (2004), emphasized that the importance of feeling and value of the employee is treated as a key driver of engagement. It can be a useful pointer towards working aspects that requires serious attention. According to Robinson, Perryman, and Hayday (2004), high-involvement with the company has a positive impact on employee engagement. Other researchers have reviewed the concept of engagement in the workplace, such as Markos, S & Sridevi, MS (2010), Siddanta & Roy (2010) Truss; Shantz; Soane; Alfes & Delbridge (2013) and Markos (2010). Engagement is defined as the involvement of emotional and physical acts i.e. showing their passion and dedication towards the work (Gupta, 2015). According to Siddanta & Roy (2010), stated that the stable employees of the organization carry out the roles of better and it will improve the companies' performance. Markos (2010), stated that it is a two-way relationship or two-way communication policy. For the company, it was about creating a great work culture and for the employee, it is a concept that places flexibility, and continuous improvement. Thus, to support the above findings, employee engagement is very important for sustainable growth and development of the company. Hence, Table 1 shows the summary of the literature on these three factors.

Table 1: Dimensions Reviewed

<i>S.No</i>	<i>Dimensions</i>	<i>Definition</i>	<i>Variable observe under the dimensions</i>	<i>Reference</i>
1	Managerial Effectiveness	The competitive advantage which gives the best employees performance to bring success to the company. It provides effective strategies for the number and categories of employees.	Good Working Environment, Appreciation of the Employees, Dynamic Work Force Culture, Issue Resolving and Team Support, Constructive Feedback.	Zuriekat M., Salamah R & A Irawashdeh S(2011); Kaplan, R. S. & Norton, D.P, (1992); Kahn, W.A(1992); Ashmos & Duchon, 2000 and Cole, 2002; Kelman, 2015 and Jenkins, S&Delbridge, R (2013).
2.	Work Motivation	It is identifying an individual motivational need through rewards (monetary & non-monetary) and recognition that can encourage to do good work to fulfill the personal need.	Variable observe under Morale and Reward system, Training and Development, the flexibility of timings, career opportunities.	Mehta,2013; Olko, 1977; Boss, 2014; Luthans, F & Peterson, S.J (2002); Uzonna, U.R (2013); Zuber, Hashim; Ali, Shehzad; Nisar, Waqar & Amir, Muhammad (2015); Truss, C & Shantz, A; Soane, E; Alfes, K Delbridge, R (2013).
3.	Employee Engagement	It defines the mindset of employees in the workplace. It is nurturing the employees to make them feel committed and attached to the organization.	Supervision and Support, Performance appraisal system, Job specific training, Job Security, Workplace flexibility.	Macey, W.H, &Scneider, B (2008); Truss, 2013; McMullen, 2013; Olsen,1993; Desai, Malavika; Majumdar, Bishakha & Prabhu, Ganapathy, (2010) and Markos, S & Sridevi, MS (2010).



OBJECTIVES

Based on the purpose of the study, the objectives are identified as under: -

1. To study the relationship between managerial effectiveness and work motivation in Indian Insurance Companies.
2. To study the relationship between work motivation and employee engagement in Indian Insurance Companies.
3. To study the relationship between managerial effectiveness and employee engagement in Indian Insurance Companies.



METHODOLOGY

Rationale for the Study

This study is based on the facts and findings of various literature which were selected for review purpose of bringing out the important facts about insurance industry, which covers two aspects: Life and Non-life insurance. Life insurance gives a certain amount to the insured or nominated beneficiaries upon a certain event such as the death of the individual who is insured. On the other hand, Non-life insurance protects an individual against losses and damages, apart from the things covered in Life Insurance. The studies on insurance sector – mainly focus on following

area such as Venkataramani (2015), “A study on the attitude of Consumers and Insurance Agents towards the proposed increase in Foreign Direct Investment (FDI) in Insurance sector in India”, Dragos (2014), “Life and non-life insurance demand: the different effects of influence factors in emerging countries from Europe and Asia”, Thomas (2013), “Estimating losses to customers on account of mis-selling life insurance policies in India”, Nena (2013) “Performance Evaluation of Life Insurance Corporation (LIC) of India”, Shah (2007), “Creating Consumer Awareness in Life Insurance”, Sen (2008), “An Analysis of Life Insurance Demand Determinants for Selected Asian Economies and India”, and so on. Thus, it is required to study managerial effectiveness, employee engagement and work motivation in the sector of insurance industry.

Research Method:

To answer the research question, this study uses descriptive research design which makes use of a survey questionnaire to examine the relationship among work motivation, employee engagement, and managerial effectiveness. The survey was conducted with employees of insurance companies operating in Delhi. The survey questions were structured on a five-point Likert scale depicting points 1: Strongly Disagree; 2: Disagree; 3: Neutral; 4: Agree; and 5: Strongly Agree. The questionnaire consisted of 14 items out of which 5 items were related to managerial effectiveness, 4 items were related to work motivation and last 5 related to employee engagement.

Table No. 1

Constructs	Factors	Origin of the items
Managerial Effectiveness (ME)	Good Working Environment (ME1)_ Appreciation of the Employees (ME2) Dynamic Work Force Culture (ME3) Issue Resolving and Team Support (ME4) Constructive Feedback (ME5)	Zuriekat M., Salamah R, & Alrawashdeh S (1992);Kahn, W.A (1992); Ashmos & Duchon, 2000 and Cole, 2002;Kelman, 2015 and Jenkins, S & Delbridge, R (2013).
Work Motivation (WM)	Morale and Reward system (WM1) Training and Development (WM2) Flexibility of timings (WM3) Career opportunities (WM4) Supervision and Support (EE1)Performance appraisal system (EE2) Job Specific Training (EE3) Job Security (EE4) Workplace Flexibility (EE5)	Mehta,2013; Olko, 1977; Boss,2014; Luthans, F & Peterson, S.J(2002); Zuber, Hashim; Ali, Shehzad; Nisar, Waqar & Amir, Muhammad (2015); Truss, C; Shantz, A; Soane, E; Alfes, K & Delbridge, R (2013).
Employee Engagement (EE)	Supervision and Support (EE1) Performance appraisal system (EE2) Job Specific Training (EE3) Job Security (EE4) Workplace Flexibility (EE5)	Macey, W.H, &Scneider, B(2008); Truss, 2013; McMullen, 2013; Olsen, 1993; Desai, Malavika; Majumdar, Bishakha & Prabhu, Ganapathy, (2010) and Markos, S & Sridevi, MS (2010)

Sample:

Employees working in top 10 insurance companies operating in Delhi according to list ranking of IRDA Report, 2018 are included to form a sampling frame. The sampling elements or the respondents were the employees (managers) of these insurance companies. 325 questionnaires were filled. Purposive sampling procedures were used to collect data. The questionnaire also sought personal information such as gender, age, designation and work experience.

Research Hypothesis

Managerial Effectiveness and Work Motivation

A number of studies found a positive relationship between managerial effectiveness and work motivation. Ayuningrat, Noermijati & Hadiwidjojo (2016) state that managerial effectiveness adds strategic value to the organization which helps to achieve the organizational targets. While, work motivation is labeled between two groups: monetary such as

salaries, bonuses, wages; and non-monetary such as pursuit condition and job security (Zamer, 2014). The key factors of managerial effectiveness, such as working conditions, interesting work, and good pay help with motivation. It has long been referred to as a vital issue for a company owing to following benefits, such as improving the level of strength of employees; building a friendly relationship; and leading to achieve the companies' targets (Hashim, 2015). As per Olko (1977), Nwachukwu (2002), and Okigbo (1991) the managerial effectiveness in the companies should be emphasized upon motivation and job satisfaction. Poor managerial effectiveness shows the employees are poorly motivated, thus the result is low productivity i.e. indicates that the company has no monetary and non-monetary rewards given to its employees. Research finding by Okigbo (1991) regarding effectiveness gives designations, rewards, and responsibility to employees to induce higher performance. Based on this literature, managerial effectiveness is a direct way to motivate the employees. Hence, the study proposes the hypothesis as follow:

H₁: There is a positive relationship between Managerial Effectiveness and Work Motivation in Indian Insurance Companies.

Work Motivation and Employee Engagement

As per Vroom (1964), the word motivation has been derived from the Latin word "movere" that means "to move" which refers to the internal force, which is dependent on the need of an individual. According to Webster's dictionary "by looking at the root of the terminology, motivation starts with the motive which means something that causes another thing to act. Thus, motivation simply can be defined as the act of providing a motive that causes someone to act". Mehta (2013) Motivated and engaged employees tend to be more productive. Researchers have tried to identify the more motivational factors that will increase employee engagement. Klupakova (2013), identifies the modern model, called "Hierarchy about engagement" which is similar to the Maslow's hierarchy model. According to this model, once an employee of the company is satisfied with the basic requirements, then the employee looks for growth in careers, such as promotion and other opportunities (Sridevi, 2010). On the other hand, Blessing White (2006) has found that employees want more career opportunities to grow rather than focusing on basic requirements. Besides that, Kumar (2012) mentioned that some factors such as code of conduct, salaries & other benefits, job satisfaction and training & development can motivate the employees to get highly engaged (Mehta&Mehta, 2013; Robinson, Perryman &Hayday, 2004). Furthermore, Lockwood, (2006) explained that employee engagement has been linked to superior performance and organizational commitment. Maitland (2005) reported that "employee engagement can help to achieve the greater income and sales turnover" and Corporate Leadership Council (CLC, 2004) stated that engagement also can motivate the employee to put in the greater effort and increase productivity. Based on the above explanation, motivation is playing a superior role in employee stability. Hence, the study proposes the hypothesis as follow:

H₂: There is a positive relationship between Work Motivation

and Employee's Engagement in Indian Insurance Companies.

Managerial Effectiveness and Employee Engagement

In 1990, Kahn described the concept of employee engagement for the first time. It focuses on how managerial effectiveness in the workplace can shape the process of employee presenting themselves during task performance (Bevan, Richard, 2011). It refers to the stability as the level of commitment and involvement of the employee towards the organizational values. Schneider, (2008) explained the positive relationship between managerial effectiveness and employee engagement. Kumar (2011) focused on various issues which lead to employee stability and what should a company do to make the employees engaged. The proper attention to engagement strategies will increase organizational effectiveness in terms of higher productivity, quality, employee retention, and increased adaptability. Furthermore, Boss (2014) identifies the meta- analysis model. It shows the relationship between managerial effectiveness & employee engagement on the basis of the business unit's outcomes such as employees' satisfaction, companies' profit, productivity, and its turnover. It is a long-term process and linked to the core tenants of the company. It is required to be adopted in a working environment which will lead to managerial support to display an employee's behavior. An organization has to promote the factors which have a positive effect on engagement through every business activity. Thus, the above explanation and findings are believed that strong managerial effectiveness and employee engagement support increases the chances of the employees to have better performance. Hence, the study proposes a hypothesis as follow:

H₃: There is a positive relationship between Managerial Effectiveness and Employee Engagement in Indian Insurance Companies.



RESULTS AND ANALYSIS

Descriptive statistics of the demographic variables such as gender and age, and work experience are shown in Table 2&3.

Table 2: Gender and Age

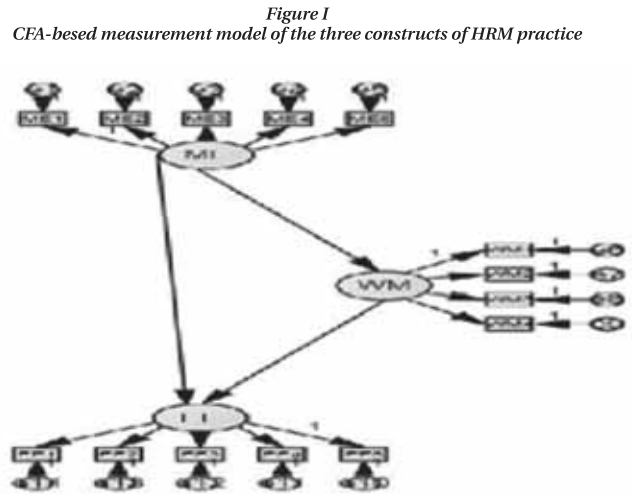
S. No.	Gender	No. of the questionnaires received (N)	Percentage (%)
Life Insurance Sector1			
1	Female	110	34
2	Male	43	13
Non- Life Insurance Sector			
1	Female	105	32
2	Male	67	21
Total		325	100
Age (in years)			
Life Insurance Sector			
1	25-40	46	15
2	41-56	79	24
3	57 & Above	50	15
Non- Life Insurance Sector			
1	25-40	68	21
2	41-56	65	20
3	57 & Above	17	5
Total		325	100

Table 3: Employees' working at present Company

S. No.	Experience	(N)	(%)
Life Insurance Sector			
1	1- 5 years	68	21
2	6-10 years	82	25
3	More than 10 years	30	9
Non-life insurance Sector			
1	1- 5 years	78	24
2	6-10 years	54	17
	More than 10 years	13	4
	Total	325	100

A subsequent confirmatory factor analysis is considered essential for scale refinement and validation (Churchill, 1979). So, to test reliability and validity of the questionnaire, confirmatory factor analysis with the traditional structural equations approach was conducted using AMOS (refer to Figure 1), to analyse the testing of the constructs. A total data from 325 respondents were used for the purpose of conducting confirmatory factor analysis. Initially, the goodness-of-fit indices was found to be marginally below the

values (Byrne, 2001). Thus, resulting into improved model fit indices as reported in Table 5 and a 14-items organized comprising three constructs namely: Managerial Effectiveness, Work Motivation, and Employee Engagement.



With a view to testing the reliability of each of the dimensions, The Cronbach's α of each of the individual construct (Refer to Table 4), i.e. Managerial Effectiveness (.971), Work Motivation (.731) and Employees' Engagement (.821).

Table 4 Summary of Validation

S. No.	Dimensions	Cronbach's A	Convergent Validity				Discriminant Validity		
			CR	AVE	MSV	ASV	1 ME	2 WM	3 EE
1.	Managerial Effectiveness	.971	0.756	0.564	0.023	0.355	0.751		
2.	Work Motivation	.731	0.974	0.881	0.001	0.680	0.032	0.939	
3.	Employees' Engagement	.821	0.829	0.500	0.023	0.182	0.150	0.027	0.707
	Engagement Acceptable Level	More than 0.7	More than 0.7 & greater than AVE	More than 0.5	less than AVE	less than AVE	AVE Square root of each variable listed at diagnosing should be greater than the correlation values with other variables		

It indicates that each construct makes an important contribution in insurance sector and there is a high degree of internal inconsistency. Other measures such as content validity, convergent validity, and discriminant validity can be used to check the validity of the instrument. Construct validity refers to the degree to which a good representation of the measures can be made in a study. The most widely two adopted subcategories of construct validity are convergent validity and discriminant validity (Anderson and Gerbing 1988; Smith 2014). Convergent validity is confirmed based on composite reliability and AVE as suggested by Hair (1998). The following criteria, including composite reliability (CR), the average variance extracted (AVE), maximum shared variance (MSV) and average shared variance (ASV) are used to assess convergent and discriminant validity and construct reliability (Cornell 1981). Table 4 presents the results for convergent

validity (CV) and discriminate validity (DV). For CV, all the values for AVE exceed the recommended level of 0.5 and are less than CR. And, all the values for MSV and ASV are far below the values of AVE. For DV, each squared root of AVE on the diagonal is greater than the correlations of the factor with other factors. As shown in Table 5 Model fits indices, to use Adjusted goodness-of-fit index (AGFI) and the normed chi-square (χ^2/df) to assess the parsimony of the data fit, the fit indices of chi-square of 74.8, degree of freedom is 41 and Bollen-Stine p-value of 0.19 suggests the data set is fit for all the variables of the research. Root mean square error of approximation (RMSEA) is 0.05 with PCLOSE of 0.29 indicating the test of exact model fit is supported. CFI and TLI are more than 0.97 with AGFI more than 0.92 indicating a good model fit. CMIM/DF is 4.9 (>1.5). Therefore, the Total analysis of this model also found an excellent fit and the study is acceptable.

Table 5 Model fits indices

S. No.	Name	Acceptable Level	Model fits indices	Reference
1.	chi-square (χ^2/ df)	$1 < \chi^2/ df < 2$	74.81(41)1.83	Gefen (2000)
2.	Bollen-Stine p	>.05	0.19	Hoyle (2003)
3.	CMIM/DF	>1.5	4.9	Gefen (2000)
4.	RMSEA	<0.06	0.05	Robert et al. (1996)
5.	PCLOSE	>0.05	0.29	Robert et al. (1996)
6.	CFI	>0.95	0.97	Yi (1988)
7.	AGFI	>0.8	0.92	Chau (2001)

Table 6 Analysis of Dimensions

Hypothesis	Model of Dimensions	β	Standard Coefficient	t	Sig.	R Square %	Acceptable Level <0.001	Hypotheses Results
H1	Managerial Effectiveness Work Motivation	.56	.36	3.32	.000	.361 (36%)	Significant	Accepted
H2	Work Motivation Employees' Engagement	.59	0.61	6.56	.000	.402 (40%)	Significant	Accepted
H3	Managerial Accepted Effectiveness Employees' Engagement	.54	0.48	4.03	.000	.410 (41%)	Significant	Accepted

Hypothesis 1: The results of the regression explained the variance R Square=.361 (36%), $p < .001$, whereas, $\beta = .56$, $p < .001$. On the other hand, According to ANOVA, the results show t-value is

3.32 and the standard coefficient is 0.36. Hence, based on the results, H1 is accepted. It means managerial effectiveness has a positive and significant relationship with work motivation in the Insurance companies. This finding supports previous researches about the relationship between managerial effectiveness and work motivation, such as Zameer, (2014); Bao, Analoui (2011), Olko (1977), Nwachukwu (2002), and Okigbo (1991) in other companies. Thus, effective management system gives motivational strategies in the form of remuneration & bonuses, code of conduct, job satisfaction & security and managerial support and are a good tool to encourage the employees to work better.

Hypothesis 2: According to regression analysis, the results explained the variance R Square =.402(40%), and $\beta = .59$, $p < .001$. ANOVA's, the result shows t-value is 6.56 and the standard coefficient is 0.61. Hence, H2 is accepted. It shows that work motivation has an effective relationship with an employee engagement. Motivation in the insurance company is one of the main reasons to build the engagement. It is a positive method to improve employees' performance. Engagement is intangible asset and fragile, it has a positive implication to perform and for sustainable growth of the company. According to Chaudhary & Sharma (2012); motivated and engaged employees tend to contribute more to

productiveness in preserving a higher commitment level leading to higher job satisfaction. Hence, it can be concluded that work motivation is playing a greater role in employee engagement.

Hypothesis 3: The results of the regression explained the variance R Square =.410 (41%), $\beta =$

.54 and $p < .01$. On the other hand, According to ANOVA, the result t-value is 4.03 and the standard coefficient is 0.48. It means H3 is accepted. It shows that managerial effectiveness has a positive and significant relationship with employee engagement of the insurance companies. Hence, on the basis of findings that the managerial effectiveness directly affects to employee engagement, Markos & Sridevi (2010); HBR report (2013) and Siddant & Roy (2010) suggest that employee engagement is an effective tool to improve participation to work together to attain the company's targets. As mentioned above the managerial effectiveness has a higher attitude and benefits to improve employee stability for higher productivity, customer satisfaction and companies' turnover (Timmer, 2003; Vnouckova, 2013). Hence, it has an authentic influence on the employees' stability.



DISCUSSION

To make or maintain the companies' profitability, a business must engage and motivate the employees Hashim; Ali (2015). The findings of this research indicated that the

bond among the managerial effectiveness, employee engagement, and work motivation is an essential element for organizational profitability. Amir; Muhammad (2015), suggested organizations should look for effective managerial support that can both communicate the organization's vision and secure the employees. Engaged employees deliver improved organizational and individual performance. Harter, Schmidt, & Keyes, C.L.M (2003) suggested that motivated and engaged employees become more creative and apply creativity in the workplace.

Companies must understand the need for autonomy, intrinsic rewards, and influence to achieve employee trust (Bevan, 2011). According to Lunenburg, (2011), "It supports, attracts employees who are willing to be engaged, and it leads to an increase in motivation also". Therefore, if an organization is less effective when employees are not motivated to do jobs, directly affects employees' performance. The managerial strategies noted: i) higher levels of employee engagement (Chukwuma, Okafor 2014); ii) rewards and recognition, iii) improved customersatisfaction, and iv) company's productivity and profit (Bevan, 2011). So, it can be suggested that all three construct shall give the strengthening to the insurance sector. Similarly, the hypothesis also suggested:

(a)Managerial Effectiveness and Work Motivation: $\beta = .56$, $p < .001$, to enhance the managerial effectiveness in the companies need to enhance motivation and job satisfaction. The key factors of managerial effectiveness are working conditions, interesting work, and good remuneration that help to motivate the employees. By applying effectiveness and motivational strategies, insurance companies could achieve improved employees' performance and yield greater organizational profitability.

(b)Work motivation and Employees' Engagement: the value score is $\beta = .59$ and $p < .001$, which means the expectations help to create employee motivation. It is the process of developing a mutually beneficial relationship involving two or more people with the same goal of achieving excellent professional outcomes (Chukwuma & Okafor 2014). Disengaged employees will result in reduced workplace productivity and decreased service skills. Thus, the rising level of motivatedemployees can have a significant impact on an organization's profit and the ability to retain skilled employees (Berens, 2013). It will positively affect an employee's job performance and organizational profitability (Mann & Darby, 2014).

(c) Managerial effectiveness and employee engagement: the results are significant ($\beta = .54$ and $p < .01$), it helps to develop the trust and understand the employees' concerns. It has emerged as one of the greatest challenges in today's workplace. It is a critical element in maintaining the organization's vitality and profitability (Albercht, 2015; McMullen, 2013). Thus, managerial effectiveness and employee engagement are continuing process and related to the core tenants of the Indian insurance companies.



CONCLUSION

Summing up the discussion and results, the study established that managerial effectiveness, work motivation, and employee

engagement all have a significant relationship and helps to reduce or minimize inefficiency in the insurance companies. It helps to increase the performance of the company and employees are like two sides of the same coin. The essence of setting up the companies is for its employees and make them comfortable working while employees, in turn, yield energies to make the company profitable. Any disproportion will make the organizational equation "non- quadratic" (Altarawneh, 2014). Thus, according to Table 6, all three hypotheses have accepted relation between: managerial effectiveness and work motivation (H1); work motivation and employee engagement of the company (H2); and managerial effectiveness and employee engagement (H3) and supported by the data. The study also supports the previous researches and theories that have been done, by Robinson, Perryman, and Hayday (2004); Malavika; Majumdar, Bishakha & Prabhu, Ganapathy, (2010); Markos & Sridevi, 2010; Desai, Majumdar & Prabhu, 2010. The managerial effectiveness supports the working environments, interesting work and good salaries that motivates employees to remain stable at the workplace (Zuriekat & Alrawashdeh, 2011; Ayuningrat, Noermijati & Hadiwidjojo 2016). It relates to motivation and keeps employees' stability. So, the transparency and support from management also have a big chance to support the employees and let them be more active, comfortable, and creative. Hence, Refer to Table 7- Goodness-of-fit model indices, it would not be wrong to suggest that the Indian insurance companies should have adopted the strong HR strategies, that leads to increased social development and the company's growth.

Table 7 Goodness-of-fit model indices

χ^2/df	74.81	<3	Boudreau (2001)
Goodness-of-fit index (GFI)	0.915	>0.90	Hoyle (2003)
Adjusted goodness-of-fit index (AGFI)	0.92	>0.80	Chau (2001)
Comparative fit index (CFI)	0.97	>0.90	Yi (1988)
RMSEA	0.05	<0.10	Robert (1996)
PCLOSE	0.29	>0.05	Robert (1996)



IMPLICATION AND LIMITATIONS

This research can certainly be used very effectively to improve the present scenario of HRM practices in insurance sectors of India. It will help to establish a firmer grip on not only organizational behavior but also on employee's psychology. Motivating employees is a delicate and purposeful challenge that requires more than an annual review or jotting a few notes in someone's personnel file. In terms of the practical implications of the study, the empirical confirmation may provide to the insurance companies in India with evidence to look at the issue of the HRM practices. Insurance Companies have always been greatly concerned about human resource mapping. It proposes that with the end of improving HR practices; productivity, flexibility, and adaptability of insurance company need to be improved. Although, the study was conducted by considering the HR practices in form of managerial effectiveness; work motivation, and employee engagement still the present study is merely a tip of an iceberg because of the limited area covered under this study and that too with a small sample size. Therefore, this research can be extended to other segments/ issues related to HR practices.

REFERENCES

- i. Ayuningrat, M. P, Noermijati., & Hadiwidjojo, D. (2016). Green product innovation's effect on the firm performance of managerial environmental concern and green communication. *Journal of Administrative and Business Studies*, 2(2), 56-63.
- ii. Ajit Ranade and Rajeev Ahuja (1999), "Insurance" in KS Parikh (ed), India Development Report 1999- 2000, Oxford University Press, New Delhi, pp 224-229.
- iii. Arrowsmith, J & Parker J, 2013. The meaning of 'employee engagement' for the values and roles of the HRM function. *The International Journal of Human Resource Management*, 24 (14), 2692-2779.
- iv. Aworemi, Abdul-Azeez, Durowoju (2011), An Empirical Study of the Motivational Factors of Employee in Nigeria. *International Journal of Economics and Finance* Vol. 3, No. 5.
- vi. Albert J. Nduna (2005), "Capacity build up and growth through regional reinsurance corporation",
- vii. The Journal of Insurance Institute of India, Vol.No.XXXI, January- June, S.J. Gidwani Publication, pp 53-54. cByrne, M.D. (2001), "ACT-R/PM and menu selection: applying a cognitive architecture to HCI", *International Journal of Human-Computer Studies*, Vol. 55 No. 1, pp. 41-84.
- viii. Bao, C, Analoui, F (2011). An Exploration of the Impact of Strategic International Human Resource Management on Firm Performance: The Case of Foreign MNCs In China. *International Journal of Management & Information Systems* Vol. 15, No. 4, 2011. ABI/INFORM.
- ix. Bevan, Richard (2011). 10 Steps to Build Employee Engagement: Incentive Magazine <http://www.incentivemag.com/article.aspx?id=7681>.
- x. Bajpai G.N. (2005) "Insurance Industry India's Quest for cover", *The Journal of Insurance Institute of India*, Vol. No. XXXII, July- December, S.J. Gidwani Publication, p 67.
- xi. Boss, Jeff (2014). 3 Principles Leaders Must follow to Build Employee Engagement. <http://forbes.com/sites/jeffboss/2014/10/27/3-principles-leaders-must-follow-to-build-employee-engagement>.
- xii. Blessing White (2006). Employee engagement report 2006 Blessing White, Inc. Price town, New Jersey [online] available: www.blessingwhite.com November 15, 2008.
- xiii. Boss, Jeff (2014). 3 Principles Leaders Must follow to Build Employee Engagement. <http://forbes.com/sites/jeffboss/2014/10/27/3-principles-leaders-must-follow-to-build-employee-engagement>.
- xiv. Bevan, Richard (2011). 10 Steps to Build Employee Engagement: Incentive Magazine. <http://www.incentivemag.com/article.aspx?id=7681>.
- xv. Chau, P.A.H.P (2001), "Information technology acceptance by individual professionals: a model of comparison approach", *Decision Sciences*, Vol. 32 No. 4, pp. 699-719
- xvi. Churchill, G.A. Jr (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol. 16 No. 1, pp. 64-73.
- xvii. Chaudhary, N & Sharma, B (2012). Impact of employee motivation on performance (productivity) in private organization: *International journal of business trends and technology*, Vol. 2, issue 4.
- xviii. Chukwuma, E.M & Okafor, O (2014). Effect of motivation on employee productivity: A study of manufacturing companies in Nnewi.
- xix. Cua, K. O., McKone, K. E., & Schroeder, R. G. (2001). Relationships between the implementation of TQM, JIT, and TPM and manufacturing performance. *Journal of Operations Management*, 19, 675-694.
- xx. C.S.Rao (2006), "Insurance – Issues and Challenges", Yojana, Published by Ministry of Information and Broadcasting, April 2006, ISSN-0971-8400, Vol.No.50, pp 4-9.
- xxi. Dr. P.S. Palande, R.S. Shah, M.L. Lunwat (2003), *Insurance in India, Changing Policies and Emerging Opportunities*, Sage Publications, New Delhi, pp 18-69.
- xxii. Dr. Tapen Sinha (2002), "Privatization of the insurance market in India: from the British Raj to Monopoly Raj, to Swaraj", CRLS discussion paper series, www.google.com dated 09-05-2005, p 9.
- xxiii. Desai, Malavika; Majumdar, Bishakha & Prabhu, Ganapathy, (2010). Study of employee engagement in two Indian businesses. *Asian Journal of Management Research*, ISSN 2229-3795.
- xxiv. Decenzo D.A. and Guy (2001). *Fundamentals of Management: Essentials Concepts and Application*, Prentice Hall, New Jersey.
- xxv. Dugguh, S.I. (2014). Using motivation theories to enhance productivity in cement manufacturing companies: An overview. *The International Journal of Social Sciences*. Vol. 20, No. 1.
- xxvi. Gefen, D.S.A.M.B.D. (2000), "Structural equation modeling techniques and regression", *Guidelines for Research Practice, Communication s of AIS*, Vol. 4 No. 7, pp. 1-77.
- xxvii. Harter, J.K, Schmidt, FL, & Keyes, C.L.M (2003). Well-being in the workplace and its relationship to business outcomes: A review of the Gallup studies. In CLM Keyes & J Haidt, *Flourishing: Positive psychology and the life well-lived* (pp. 205-224).
- xxviii. Harvard Business Review Report 2013: The Impact of Employee Engagement on Performance.
- xxxi. Hoyle, D. (2003), "Illuminating sales", *Chain Store Age*, Vol. 79 No. 8, p. 149.
- xxx. Hair, J. (2006), *Essentials of Business Research Methods*, Wiley, New York, NY.
- xxxi. Hair, J.F.J., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, Prentice Hall, Upper Saddle River, NJ.
- xxxii. Harter, J.K, Schmidt, FL, & Keyes, C.L.M (2003). Well-being in the workplace and its relationship to business outcomes: A review of the Gallup studies. In CLM Keyes & J Haidt, *Flourishing: Positive psychology and the life well-lived* (pp. 205-224). APA.
- xxxiii. Jagendra Kumar (2004), "Changing Scenario of Insurance Industry", *The Journal of Insurance Institute of India*, Vol.No.XXX, January- June, S.J. Gidwani Publication, p 44.
- xxxiv. Jenkins, S & Delbridge, R (2013); Context matters: Examining 'soft' and 'hard' approaches to employee engagement in two workplaces. *The International Journal of Human Resource Management*, (pp. 2670-2691).

xxxv. Johnson & Nandy (2013), Leadership Skills, Job Satisfaction, and Motivation in the Workplace: A phenomenological Research. *Journal of Perspectives in Organizational Behavior, Management, and Leadership*. Vol. 1, (2015).

xxxvi. Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692-724.

xxxvii. Kahn, W.A. (1992). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4): pp 692-724.

xxxviii. Kaplan, R. S. & Norton, D. P., (1992), "The balanced scorecard - measures that drive performance", *Harvard Business Review*, Jan. - Feb. 71 - 79.

xxxix. Kwenin, Muathe&Nzulwa (2013). The Influence of Employee Rewards, Human Resource Policies and Job Satisfaction on the Retention of Employees in Vodafone Ghana. *European Journal of Business and Management*, Vol. 5, No. 12, 2013.

xl. Lunenburg, FC, (2011). Motivating by enriching jobs to make interesting and *challenging*. *International journal of management, business, and administration*, Vol. 15 no. 1, 2011.

xlii. Luthans, F & Peterson, S.J (2002). Employee engagement and manager self-efficacy: implications for managerial effectiveness and development, *Journal of Management Development*, 21(5), pp 376-87.

xliii. McMullen (2013). Reward Strategy and Practice: Eight recommendations to improve Employee Engagement. *Journal of Compensation and benefits*. July/August 2013 Thomson Reuters.

xliv. Macey, W.H, &Scneider, B (2008). The Meaning of Employee Engagement, *Industrial and organizational Psychology*, 1(1): pp 3-30.

xlvi. Malhotra Committee Report, Government of India, Ministry of Finance, New Delhi, 1994. www.Indiagov.org. dated 06-06-2005.

xlvii. Markos, S & Sridevi, MS (2010). Employee engagement: the key to improving performance. *International journal of business and management*. Vol. 5. No. 12, Dec 2010.

xlviii. Mehta, D & Mehta N.K (2013). Employee Engagement: A Literature review. *Economy, Seria Management*. Vol. 16, Issue 2, 2013.

xlix. N. Rangachary (1999), "The Unfolding Insurance Scenario", *The Hindu*, Survey of Indian Industry.

i. Okigbo, P (1991). Productivity for self-reliance and excellence.

ii. Olko, O (1977). Incentive and reward for efforts management in Nigeria 15 (5) 22-25.

iii. Purcell, J. (2006). *Change agenda, reflections on employee engagement*. London: CIPD.

liii. Robinson., D., Perryman S., and Hayday S (2004). *The drivers of employee engagement report 408*, Institute for employment studies, UK.

liv. Robert, C., MacCallum, M.W.B. and H.M.S. (1996), "Power analysis and determination of sample size for covariance structure modeling", *Psychological Methods*, Vol. 1 No. 2, pp. 130-149.

lv. Siddanta& Roy (2010), Employee Engagement – Engaging the 21st century workforce. *Asian Journal of Management Research*. 2010.

lvi. Truss, C; Shantz, A; Soane, E; Alfes, K &Delbridge, R (2013). Employee engagement, organizational performance and individual well-being: exploring the evidence, developing the theory. *The international journal of human resource management*, 2013.

lvii. Uzonna, U.R (2013). The impact of the motivation on the employee's performance: a case study of reitwest bank Cyprus. *Journal of economics and international finance*. Vol. 5 August 2013.

lviii. Vnouckova&Klupakova (2013). *Impact of Motivation Principles on Employee*. Published by VSB-TU Ostrava, ISSN 1212-3951. 2013.

lix. V. Jagannathan (2003), "Imperatives of Competition", *The Hindu*, Survey of Indian Industry, p 71.

i. Vijayakumar (2001), "Globalization of Indian Insurance Sector Issues and challenges", www.indian insurance sector.com. dated 04-03-2005, pp 4- 5.

ii. Vittas (2004), "Insurance Regulation in Jordan New Rules - Old System", World Bank Policy Research Working Paper 3298, Financial Sector Development World Bank, <http://econ.worldbank.org>.

lii. VanMarrewijk. M.V and Timmers.J (2003), *Human Capital Management: New Possibilities in People Management*. *Journal of Business Ethics*, May 2003. 61. Yi, R.P.B.A.Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16 No. 1, pp. 74-94.

liiii. Zuriekat, M., Salamah R, & Alrawashdeh S (2011). Participation in Performance Measurement Systems and Level of Satisfaction. *International Journal of Business and Social Science*, Vol. 2 No. 8 May 2011.

liv. Zuber, Hashim; Ali, Shehzad; Nisar, Waqar & Amir, Muhammad (2015). The impact of the motivation on the employee's performance in beverage industry of Pakistan. *International Journal of Academic in Accounting, Finance and Management Sciences*. Vol. 4 No. 1 Jan 2014.

lv. Zameer (2014). The impact of the motivation on the employee's performance in beverage industry of Pakistan. *International Journal of Academic in Accounting, Finance and Management Sciences*. Vol. 4 No. 1 Jan 2014.



Feedback Trading by Institutional Investors in Indian Stock Market: an Analysis of Foreign and Domestic Institutional Investors.

*Dr. Kavita

Abstract

Institutional investments have acquired a significant role in the Indian securities market. This study investigates the trading behaviour of foreign institutional investors (FIIs) and domestic institutional investors (DIIs) in relation to Indian stock market returns as proxied by SEBI and also analyses the interrelationship between both the classes of institutional investors. The study uses a broader definition of DIIs that includes not only mutual funds (MFs) but also banks, insurance companies and domestic financial institutions. The results revealed that the investment strategy of Foreign Institutional Investors is significantly affected by the

investments of DIIs in the Indian stock market. Contrary to findings of earlier studies that FIIs act as positive feedback traders and DIIs act as contrarian investors, the study finds that there is a positive response of the Investments by DIIs to the monthly returns of Sensex whereas the responses of FIIs are found to be in opposite direction. The study observed that the fund flow from Institutional investors are considerably influenced by the lagged returns of Sensex, implying that they have a tendency to follow recent market behaviour. The study also finds that institutional investors, both foreign as well as domestic, do not have a significant impact on Indian stock market.

Keywords: Feed-back trading, institutional investors, BSE Sensex, foreign institutional investors, lagged returns.

JEL Classification: C32, G11.

*Assistant Professor, Delhi Institute of Advanced Studies, Rohini, Delhi, India

INTRODUCTION

Investments by institutional investors play a significant role in the Indian stock market. Apart from augmenting the stock market turnover, both foreign as well as domestic institutional investors play a crucial role in persuading the volatility in the securities market by undertaking the investment decisions which tends to make the prices moving away from the fundamentals. Institutional investment is defined to be the investment undertaken organizations or by foreign as well as domestic institutions such as insurance companies, banks, mutual fund houses, Pension funds etc. in the financial or real assets of a country. Domestic institutional investors are the category of institutional investors who make investments in securities and other financial assets of the country in which they are based. They use pooled funds to trade in assets and securities of their country. These investment decisions are impacted by various domestic, economic, international as well as political trends. Apart from foreign institutional investors, the domestic institutional investors also exercise significant impact on net investment flows into the economy.

Feedback trading refers to the pattern of behavior wherein the investors take their portfolio investment decisions on the basis of the past stock market returns. When the investors, in anticipation of continuation of past trends in the future, undertake huge investments when the market is prosperous and withdraw their investments from the stock market when the market is deteriorating, it is known as positive feedback trading or the momentum trading strategy. It implies that in case the historical stock market returns are positive, the net institutional investment flows are also likely to be positive and vice-versa. An alternate hypothesis suggests that the investors can also select negative feedback trading (or contrarian investment strategy) which is characterized by undertaking investment decision in divergence to the prevailing sentiment of the market. In both the cases, the direction of causality is from the past stock returns to the investment flows. Some researchers also propose that the foreign investors have comparatively less information in comparison to the domestic institutional investors (Choe et al. 2001). Therefore, they pursue the feedback trading strategies. The actual danger of implementing these strategies rises when the institutional investors jointly as a group formulate similar expectations, take similar kind of investment indications from the past price movements and hence take similar portfolio decisions. In such a condition, they make investments and withdraw their investments out of the market, collectively as a group. Such an investment behaviour of the investors when they, in anticipation of similar market sentiments, collectively enter and withdraw from the market is known as Herding behaviour or Momentum trading strategy. The investment strategies of the foreign institutional investors is influenced by similar factors such as fluctuations in exchange rate, performance of domestic stock market vis-à-vis foreign stock markets etc. This may be alternative cause for revealing herding behaviour by the Institutional investors especially the foreign institutional investors. This upsurges the volatility of the securities market and sometimes it may lead to conversion of a trivial financial distress into a complete financial crisis. The related incidence was witnessed in the East Asian markets in the course of the crisis. (Krugman, 1998; Choe et al., 1999; Chakrawarti and Roll, 2002).



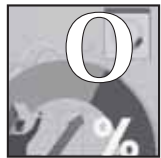
VIEW OF LITERATURE

It is a common belief that Institutional investment is the motivating force in the determination of the market sentiments. A brief description of the past studies related to investments by institutional investors has been given as under:

Chakrabarti (2001) attempted to examine the determinants of Foreign Institutional Investment flows in India. Statistical tools for analysing the presence of causal relationship between the institutional investors and macroeconomic variables were employed for the analysis. The study detected that there existed a high degree of correlation between the institutional investment flows and that they were more likely to be the effect than the cause of these returns. The study concluded that the FII flows have the tendency to increase the volatility in equity market. **Alexakis et al. (2005)** analysed the relationship between mutual fund flows and stock market returns in Greece. The statistical analysis revealed that bidirectional causal relationship existed between mutual fund flows and stock market returns. The analysis using cointegration analysis revealed that mutual funds flow have the tendency to cause the stock returns to rise or fall. **Badhani (2006) and Bhattacharya and Mukherjee (2006)** studied the long run cointegration between FII investment flows and the stock prices. The researchers found that bi-directional long run causality existed between the variables. The findings of **Mukherjee (2006) et al.** specified the likelihood of presence of asymmetry in the dynamic interaction in the FII investment flows and stock market returns. They further found that the FII sales were comparatively more responsive towards returns whereas FII purchase were not. Therefore, FIIs were found to be more responsive to descending price movements than the mounting movements. **Oh and Parwada (2007)** studied the dynamic relationship between mutual fund flows and stock market returns in Korea. The results indicated that there was a significant positive correlation between Returns. It was also revealed that a significant negative correlation was present in the case of net flows. Further, analysis conducted on the direction of causality suggested that stock market returns predominantly contained information on investment flows. **Bose (2012)** discovered the interaction between investment behaviour of foreign institutional investors (FIIs) and domestic institutional investors represented by mutual funds. The study was conducted based on post financial crisis data. A high degree of negative relationship was observed between the investments by these two categories of institutional investors. It was also revealed that the investments by Domestic mutual funds were based on the stock market returns, FII investments as well as their own historical investments. The study also found indication of investments by FIIs having a causal influence on stock market returns. **Qureshi et al. (2016)** attempted to examine the dynamic interaction of aggregate mutual fund flows with stock market variables in ASEAN financial markets. The study included Indonesia, Malaysia, Philippines Thailand and Singapore. GARCH (1, 1) model was estimated and then volatility estimators were found to evaluate conditional variance. The study confirmed the existence of negative feedback trading behavior amongst the institutional investors. In addition, mutual funds were observed to

respond simultaneously to risk-related information in comparison to returns-related evidence in the stock market. **Vardhan and Sinha (2016)** examined the long-term as well as short-term relationships between FIIs and stock market returns as proxied by Sensex returns and also the integration with the US equity market. VAR model was used to analyse the association between various macroeconomic variables. For the purpose of the study, the researcher used cointegration analysis, generalised impulse response analysis, Granger causality test and variance decomposition analysis. The study found that the Sensex returns have a significant impact on foreign exchange rates and variations in the exchange rates were also found to have an impact on outflow of FIIs.

The present study attempts to examine the present feedback trading strategy adopted by both foreign as well as Domestic Institutional Investors in the Indian stock Market.



OBJECTIVES OF THE STUDY

1. To study the investment behaviour of foreign as well as domestic institutional investors in India.
2. To determine whether the institutional investors are the cause or the effect of stock market returns in India.



RESEARCH METHODOLOGY

The present study is based on the monthly data covering a period of 11 years from April 2007 to March 2018. BSE Sensex has been selected as a representative of the Indian stock market. Monthly closing values of BSE Sensex has been used for the purpose of analysis. The monthly data on Foreign Institutional Investment flow and Domestic Institutional Investment flow has been collected from the official website of moneycontrol.com. Closing values of BSE Sensex Index have been obtained from the official website of SEBI.

Ratio of purchases and sales by both foreign as well as domestic institutional investors have been used. This was done to eliminate the problem of non-stationarity of data and to evade the complexity in dealing with the negative figures.



ANALYSIS AND INTERPRETATION

Analysis of the monthly data has been done by means of various econometric tools such as Descriptive analysis, ADF unit root test, Granger's Causality test, Vector Auto Regression (VAR) test, Wald test and Impulse Response Function. For data analysis, Microsoft excel and Eviews have been used.

Statistical and Econometric Tools
Table 1 Descriptive statistics for the period
1st April 2007 to 31st March 2018

	FII_RATIO	DII_RATIO	SENSEX
Mean	1.032700	1.062431	0.871930
Median	1.015500	1.062489	0.575489
Maximum	1.435037	1.698424	28.25510
Minimum	0.755670	0.585485	-23.89010
Std. Dev.	0.154106	0.240969	6.489709
Skewness	0.630018	0.128971	0.078967
Kurtosis	2.978639	2.557780	6.255195
Jarque-Bera	8.734797	1.441506	57.97427
Probability	0.012684	0.486386	0.000000
Sum	136.3165	140.2409	114.2229
Sum Sq. Dev.	3.111082	7.606633	5475.123

Table 1 shows a statistics of sample of 132 observations from 1st April 2007 to 31st March 2018. Descriptive statistics reveal that both the variables, that is, FIIs monthly ratio of investment and Domestic Institutional Investors' monthly ratio of investment are not normally distributed as indicated by the value of JarqueBera statistics which rejects the null hypothesis of normality at 1% level of significance.

The graphical presentation of FIIs investments and Domestic Institutional investors' investments is shown below:

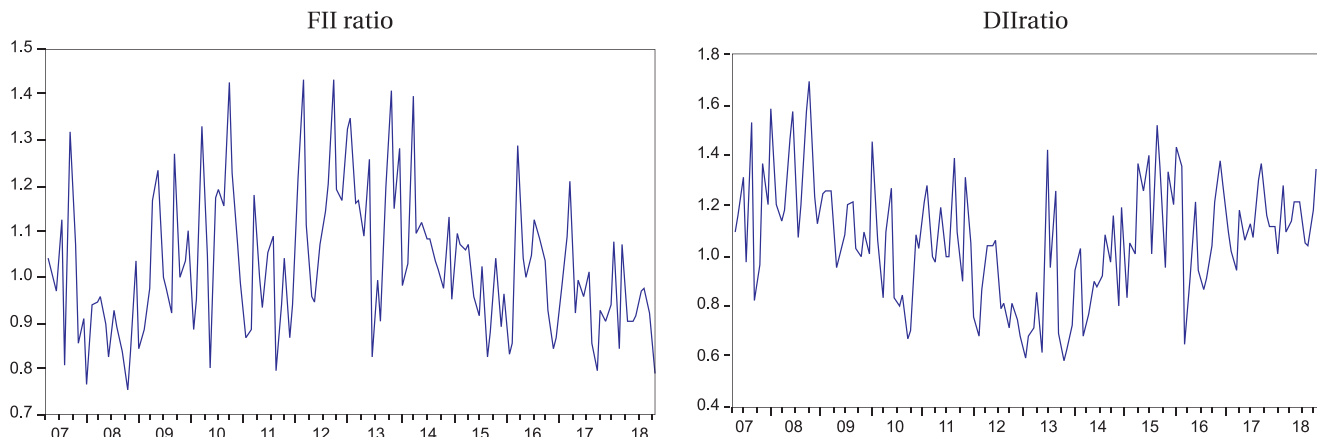


Figure-1
Foreign Institutional Investors investments and Domestic Institutional investors' investments

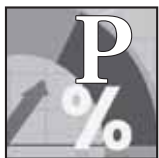
As far as the distribution of series is concerned, both Foreign Institutional Investors as well as Domestic Institutional Investors' monthly ratios of investments are positively skewed as is shown by positive value of skewness at 0.630018 and 0.128971 respectively. Standard deviation, which is the measure of historical volatility, is greater in case of DIIs in comparison to foreign institutional investors. It represents the greater level of volatility in investments by the Domestic Investors. It refutes the results of the prior studies revealing the increase in the level of volatility by the participation of foreign investors in India. Since, the analysis in the present study deals with the time series data, so the primary phase in the analysis is to detect whether the variables contain a Unit Root or not. Stationarity of data is a prerequisite in case of time series analysis because if the data is non stationary then the analysis is considered valid for that particular time period only.



UNIT ROOT TEST

Examination of stationarity properties of the data series is prerequisite under time series analysis. A statistical test of stationarity is known as unit-root test. Amongst the several

unit root tests available (e.g. ADF, KPSS, PP, etc), the present study uses most commonly used Augmented Ducky Fuller (ADF) Unit root test to test the unit root test in the data series. Table- 2 shows the results of ADF unit root test. The results of the analysis as shown in Table-2 depicts that the stock market returns as proxied by Sensex Returns and investments by both the categories of Institutional Investors i.e. Foreign Institutional Investors ratios and Domestic Institutional investors are stationary at level as their ADF test statistics are more than the critical values as shown at 1%, 5% and 10% degrees of freedom. The stationarity of time series data fulfills the purpose of analysis and also provide such results which can be generalized for the entire study period under consideration.



AIRWISE GRANGER CAUSALITY TESTS

Analysis of the cause and effect relationship between the variables under consideration is one of the necessary issues under time series analysis.

According to Granger causality test, if a variable is the cause of another variable or if it granger causes another, say 'X' granger causes 'Y', then the past values of the variable 'X' are considered to contain information in order to predict the variable 'Y' over and above the information as contained in the past values of variable 'Y' alone.

The test is based on the following two regression equations. These equations help to identify which variable is causing the other and hence it determines the direction of causality amongst the various variables under consideration.

Table-2
Results of ADF Unit Root Test

Variable	ADF Statistics with intercept	ADF Statistics with intercept and trend
Sensex Returns	10.33991	10.29987
Foreign Institutional Investors	7.737849	7.699969
Domestic Institutional Investors	7.190239	7.126854
CRITICAL VALUES		
1 Percent	-3.481217	-4.030157
5 Percent	-2.883753	-3.444756
10 Percent	-2.578694	-3.147221

$$X_t = \alpha_1 + \sum \beta_{1k} X_{t-k} + \sum \chi_{1k} Y_{t-k} + \ell_1 \dots\dots\dots(1)\text{Equation}$$

$$X_t = \alpha_2 + \sum \beta_{2k} Y_{t-k} + \sum \chi_{2k} X_{t-k} + \ell_2 \dots\dots\dots(2)\text{Equation}$$

The equation (1) represents that direction of causality is from X to Y, whereas equation (2) represents that direction of causality is from causality from Y to X.

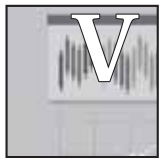
Where, e_{1t} and e_{2t} are mutually uncorrelated white noise errors, X_t and Y_t denote the variables under consideration to be tested, t denotes the time period, k denotes the number of lags, and m is the maximum number of lagged observations which have been included in the model.

The null hypothesis of no causality between the variables is accepted depending upon the Probability value, if the 'p' value or the Probability value is greater than the critical value at 5% level of significance.

Table-3
Results of Pair-Wise Granger Causality Test

Null Hypothesis:	F-Statistic	Probability	Criterion
Domestic Institutional Investors' investments does not Granger Cause Sensex	0.248890.	7801	Accept
Sensex does not Granger Cause Domestic Institutional Investors' investments	5.39779	0.0057	Reject
FII's Investments does not Granger Cause Sensex	0.12962	0.8785	Accept
Sensex does not Granger Cause FII's Investments	1.94529	0.1473	Accept
FII's Investments does not Granger Cause Domestic Institutional Investors' investments	1.36279	0.2597	Accept
Domestic Institutional Investors' investments does not Granger Cause FII's Investments	3.31686	0.0395	Reject

The results of the Granger Causality test have been reported in Table 3. The causality from FII flows to BSE Sensex returns is found to be insignificant at 5 per cent level of confidence. Results indicated in the analysis are tested at lag 2. Results of Pair-Wise Granger Causality Test as shown in Table 3 clearly indicates that both the categories of institutional investors do not have a significant impact on the Indian stock market return as proxied by Sensex returns. The analysis further indicates that there exists a uni-directional causality from BSE Sensex returns to Domestic Institutional Investors' investments and not the other way round. This indicates that feedback trading practices are being followed by Domestic Institutional Investors i.e. upward trend in the securities market leads to increase in investments by DIIs and downward trend prompts them to book profits. Further, it is also revealed that the investments by DIIs granger cause the level of investments by Foreign Institutional Investors in the Indian Stock Market. It thereby indicates that the FIIs base their investments decisions the investments pattern of local or Domestic investors.



VECTOR AUTO-REGRESSION MODEL

The vector autoregression (VAR) is an econometric model which is used to capture the linear interdependencies among manifold time series. VAR models generalize the univariate autoregressive model (AR model). Each variable in a VAR model has an equation which elucidates its evolution based on its own past lags and the lags of the other model variables.

Table-4
VAR Lag Order Selection Criteria for BSE Sensex returns and investments by Foreign Institutional Investors and Domestic Institutional Investors

Lag	Lag L	LR	FPE	AIC	SC	HQ
0	-1109.137	NA	12382.74	17.93769	18.00592	17.96541
1	-841.2388	518.5121*	190.2525*	13.76192*	14.03485*	13.87279*
2	-835.9029	10.06929	201.8944	13.82102	14.29864	14.01504
3	-827.6752	15.12838	204.5666	13.83347	14.51580	14.11065
4	-819.9222	13.88043	208.9871	13.85358	14.74061	14.21391
5	-814.7788	8.959415	222.8495	13.91579	15.00751	14.35927
6	-810.2160	7.727360	240.0919	13.98736	15.28377	14.51399
7	-807.4115	4.613811	266.4101	14.08728	15.58840	14.69707
8	-801.8951	8.808495	283.3379	14.14347	15.84928	14.83641

LR: Sequential Modified LR test statistic (each test at 5% level)

FPE: Final Prediction Error

AIC: Akaike Information Criterion

SC: Schwarz Information Criterion

HQ: Hannan-Quinn Information Criterion

Different Lag Order Selection Criterion are suggesting 2 lags should be included in the analysis. The number of lags to be included as shown in Table-4 is same in all the criterion.

Table 5
VAR Model for BSE Sensex returns and investments by Institutional Investors

	FII_RATIO	DII_RATIO	SENSEX
FII_RATIO(-1)	0.024523	-0.181965	-1578.747
	(0.18117)	(0.27579)	(1473.33)
	[0.13536]	[-0.65979]	[-1.07155]
FII_RATIO(-2)	-0.287412	0.490292	108.8267
	(0.17420)	(0.26518)	(1416.63)
	[-1.64993]	[1.84892]	[0.07682]
DII_RATIO(-1)	-0.262090	0.342914	-1262.425
	(0.11242)	(0.17114)	(914.275)
	[-2.33125]	[2.00368]	[-1.38079]
DII_RATIO(-2)	-0.211140	0.426833	130.1804
	(0.11182)	(0.17022)	(909.331)
	[-1.88827]	[2.50759]	[0.14316]
SENSEX(-1)	-1.54E-05	2.69E-05	0.971155
	(1.5E-05)	(2.2E-05)	(0.11869)
	[-1.05619]	[1.21005]	[8.18222]
SENSEX(-2)	1.15E-05	-2.35E-05	0.019324
	(1.5E-05)	(2.3E-05)	(0.12115)
	[0.76946]	[-1.03428]	[0.15951]
C	1.892212	-0.150468	3065.619
	(0.43071)	(0.65566)	(3502.67)
	[4.39325]	[-0.22949]	[0.87522]
R-squared	0.211886	0.252371	0.967070
Adj. R-squared	0.173441	0.215901	0.965463
Sum sq. resids	2.450842	5.679448	1.62E+08
S.E. equation	0.141158	0.214882	1147.944
F-statistic	5.511467	6.920012	602.0267
Loglikelihood	73.65967	19.03222	-1096.809
Akaike AIC	-1.025533	-0.185111	16.98167
Schwarz SC	-0.871128	-0.030705	17.13608
Mean dependent	1.032905	1.061470	21253.05
S.D. dependent	0.155263	0.242669	6177.039
Determinant resid covariance (dofadj.)		189.0361	
Determinant resid covariance		160.1142	
Loglikelihood		-883.3187	
Akaike information criterion		13.91260	
Schwarz criterion		14.37581	

The table 5 reveals that Sensex returns are impacted by their own past returns at lag 1. 't- statistics' is 8.18222 in case of Sensex and their past returns at lag 1. Also, the effect is not found to be significant as far as the Sensex returns at lag 2 are

concerned. Further, the Domestic Institutional Investors at lag 1 are found to be significant in influencing the investments by both the categories of institutional investors under consideration. Further, Domestic Institutional Investors are found to be affected by their own investments at lag 2 as well.

The results of VAR estimates as shown in Table 5 reveal that FIIs investments in the Indian stock market are not affected by their own past returns at lag 1 and lag 2. This emphasizes that there might be some other variables like Indian Stock market returns, Exchange rate, Growth prospects of India, Inflation in India, Stock market return in the International market, Global interest rates etc. which act as the determinants of investments by the Foreign Institutional Investors. As far as the investments of Domestic Institutional Investors are concerned, their investment pattern is found to be significantly influenced by their own investments in the preceding months at lag 1 and lag 2. Other variables like savings by household savings, growth rate of the economy, interest rate, exchange rate, rate of inflation etc. can be the basis of investments by Domestic Institutional Investors.



WALD TEST

Under the VAR framework, the impact of individual lags of different variables is being studied on the dependent variable. Wald test studies the combined affect of all lags of a particular variable on the dependent variable.



HYPOTHESIS OF THE TEST

H₁: There is no causal relation between investments by Foreign Institutional investors and Indian stock market.

H_{1a}: There is a causal relation between investments by Foreign Institutional investors and Indian stock market.

H₂: There is no causal relation between investments by Domestic Institutional investors and Indian stock market.

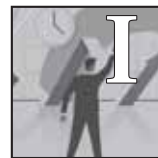
H_{1a}: There is a causal relation between investments by Domestic Institutional investors and Indian stock market.

The null hypothesis of no causal relationship between the variables will be accepted if p>0.05 and the hypothesis will be rejected if p<0.05.

VAR Granger Causality/Block Exogeneity Wald Test for BSE Sensex returns and investments by Institutional Investors Table 6

Dependent Variable: FIIs Ratio	Chi-sq df	Prob.
DII_RATIO	9.150619	0.0103
SENSEX	4.866992	0.0877
All	11.65286	0.0201
Dependent variable: DII_RATIO	Chi-sq df	Prob.
FII_RATIO	3.893547	0.1427
SENSEX	2.779972	0.2491
All	5.522559	0.2378

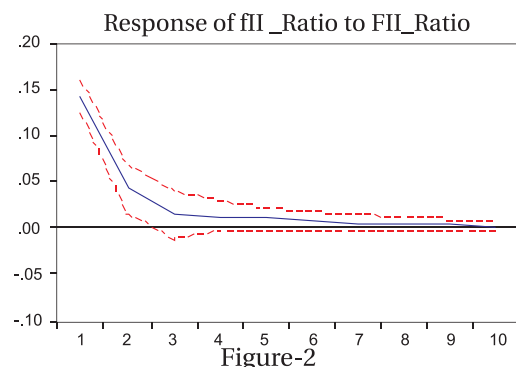
The critical values of Wald test as reported in Table-6 while taking FIIs as dependent variable and investments by Domestic Institutional Investors as independent variable is 0.0103 which is less than .05, so our null hypothesis of no impact investments by Domestic Institutional Investors on FIIs will be rejected. It clearly reveals that domestic institutional Investors have a significant impact on Foreign Institutional Investors in India. Further, the combined effect of Stock market returns as well as investments by Domestic Institutional Investors on the investments by FIIs is found to be significant as indicated by 'p' value of 0.0201. The analysis of the impact of Foreign investors on the domestic investors is found to be insignificant. Also, the impact of Sensex returns on the investments by Domestic Institutional Investors is observed to be insignificant. The results of the Wald test mainly revealed that FIIs base their investment decisions on the investment pattern of Domestic Institutional Investors thereby reflecting chasing behaviour in investment decisions.



IMPULSE RESPONSE FUNCTION

The impulse response studies the responsiveness of the dependent variable in the VAR to shocks to each of the endogenous variables. Figure 2 shows the pair wise impulse response relations among the Domestic Institutional Investors' investment behavior, Foreign Institutional Investor's investment behavior and the monthly returns of the BSE Sensex. As indicated in Figure 2 impulse response analysis shows that the investment decisions of foreign institutional investors as well as domestic institutional investors are influenced by the monthly stock market returns of Sensex. The analysis reveals that there is a positive response of the Investments by DIIs to the monthly returns of Sensex whereas the responses of FIIs are found to be in opposite direction. It can be concluded from the results that Domestic Institutional Investors are engaged in positive feedback trading whereas the Foreign Institutional Investors are engaged in the negative feedback trading. The impulse response analysis also indicates that the level of persistence in the investment behaviour of Domestic Institutional Investors and Foreign Institutional Investor's is up to a period of the lag of three months. Also, the Domestic Institutional Investors' response to the investment patterns of FIIs is observed to be in the opposite direction. This means the Foreign Institutional Investors act as buyers when Domestic Institutional Investors act as the main sellers and vice versa.

IMPULSE RESPONSE FUNCTION
Response to Cholesky One S.D. Innovations ± 2S.E.



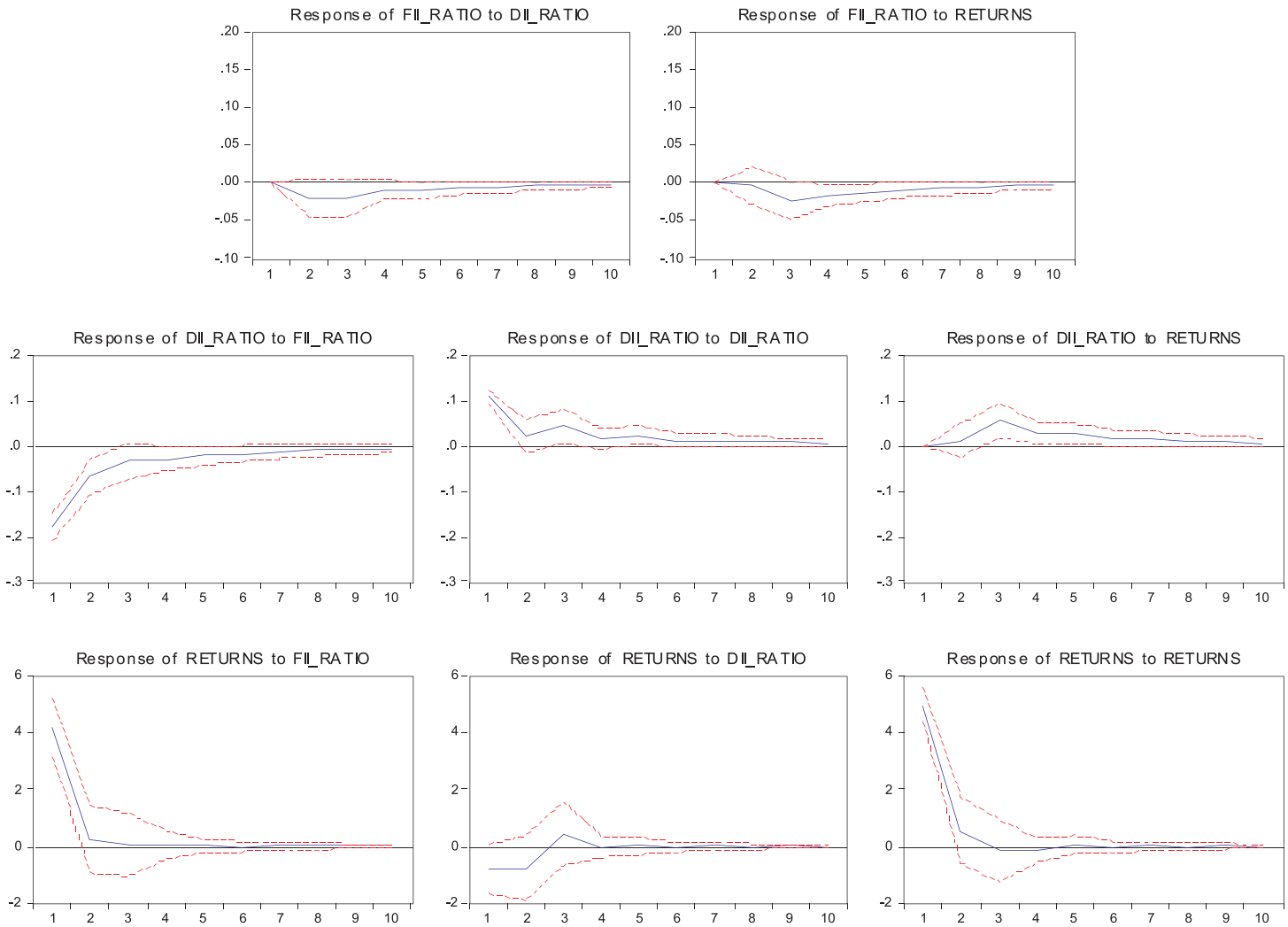
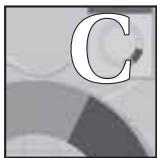


Fig-2



CONCLUSION

The institutional investors such as FIIs and domestic institutional investors have gained a substantial role in Indian equity market. This study analysed the dynamic association between these two categories of institutional investors and the behaviour of stock market return using 11 years of monthly data spanning from 1st April 2007 to 31st March 2018. The study observed that the fund flow from Institutional Investors are considerably influenced by the lagged returns of Sensex, implying that they have a tendency to follow recent market behaviour. This behaviour specifies the momentum trading behaviour or the feedback trading association between the institutional investment flow and Indian stock market returns. The fund flow from Domestic Institutional Investors are significantly affected by their own lags, implying that they pursue their own past strategy while formulating the investment decision. The major implication of the study as revealed from the analysis is that the Domestic Institutional Investors are not dependent on Foreign Institutional Investors. Rather, they base their investment decisions on their own past decisions. The analysis revealed that FIIs flows do not have any significant impact on DIIs. Thus, the study

finds a uni-directional causality running from stock market returns to institutional investment flow. Overall, it can be concluded that the institutional investors are engaged in momentum trading activities and that the trading strategy of the foreign institutional investors is significantly influenced by the investment decisions of Domestic Institutional Investors. Stock market returns are found to be significant in influencing the institutional investors as depicted in the Granger Causality and Block Exogeneity Wald test. The policy holders should lay emphasis on devising such policies which are conducive for increasing the level of investments by Domestic institutional Investors in India. This will act as a source of attraction for the Individual Investors for making an investment in the Indian stock market and as a consequence they can devise their investment strategies accordingly.

The present study based on the monthly data does not find a significant impact of investments by institutional investors on the Indian stock market returns. However, as it is apparent that the trading strategies of different groups of institutional investors are divergent, analysis using daily data of investments may improve the analysis of the dynamic association between institutional investment behaviour and stock market behaviour.

REFERENCES

- i. Agarwal, T. (2013), "Foreign Institutional Investment: A study of correlation with Mutual Funds investment and Sensex", *Researches World- Journal of Arts, science and Commerce*, Vol. IV, No.3, pp.63-69.
- ii. Aggarwal, K. (2011), "The Determinants of Foreign Institutional Investors in India", *Ph.D. Thesis*, Shri Jagdish Prasad Jhabarmal Tibrewala University.
- iii. Alexakis, C., Niarchos, N., Patra, T. and Poshakwala, S. (2005), "The Dynamics between Stock returns and Mutual Fund Flows: Empirical Evidence from the Greek Market", *International review of Financial Analysis*, No.14, pp. 559-569.
- iv. Ananthanarayanan, S., Krishnamurti, C., & Sen, N. (2004), "Foreign Institutional Investors and Security Returns: Evidence from Indian Stock Exchanges", Retrieved from <http://nzfc.ac.nz/archives/2009/papers/ForeignFundFlow.pdf>, Accessed on 1-May, 2017.
- v. Ansari, N. (2013), "An Analytical Study of Functioning of Mutual Fund Industry in India", *Ph.D. Thesis*, Saurashtra University.
- vi. Arora, R.K. (2016), "The Relation between Investment of Domestic and Foreign Institutional Investors and Stock Returns in India", *Global Business Review*, Vol. 17, No. 3, pp. 1-11.
- vii. Aswini.A and Kumar , M. (2014), "Impact of Foreign Institutional Investors in India", *Global Journal of Finance and Management*, vol. 6, No.8, pp. 765 – 770.
- viii. Bose, S., (2012), "Mutual Fund Investments, FII Investments and Stock Market Returns in India" *Money & Finance, ICRA Bulletin*, September 2012.
- ix. Chang, E.C. and Wang, Y. (2002), "A study of Mutual Fund Flow and Market Return Volatility", available online at www.hiebs.hku.hk/working-paper-updates/pdf/wp1065.pdf, accessed on November 19, 2014.
- x. Chauhan, A.K., Garg, A., (2010), "Feed-back trading behavior of Foreign Institutional Investors and local mutual funds in Indian stock market: An Empirical evidence", *Journal of Applied Research in Finance*, vol. II, issue 2, pp. 110-120
- xi. Choe, H., Kho, B., and Stulz, R., (2001), "Do domestic investors have more valuable information about individual stocks than foreign investors?" *NBER working paper*, No. 8073.
- xii. Dhingra, V.S., Gandhi, S. and Bulsara, H.P. (2016), "Foreign institutional Investments in India: An Empirical Analysis of Dynamic Interactions with stock market return and volatility", *IIMB Management Review*, Vol.28, pp. 212-224.
- xiii. Diaconasu (2011), "The role of mutual funds in U.S. economy", *The Annals of The "Stefan cel Mare"*, Vol. 11, No.2, pp. 239-244.
- xiv. Goel, S. (2013), "Performance of Mutual Funds and Investors' behavior", *Ph.D Thesis*, Jaypee Institute of Information Technology.
- xv. Gupta, A. (2001), "Does the stock market rise or fall due to FIIs in India", *Researches World- Journal of Arts, science and Commerce*, Vol. II, No.2, pp.99-107.
- xvi. Gupta, O.P., Gupta, A., Sikdar, C., and Mahapatra, T., (2007), "Indian Stock Market- An empirical study", Vol.20, pp. 92-101.
- xvii. Krugman, P. (1998), "Saving Asia: It's time to get Radical", *Fortune*, September 7.
- xviii. Loomba, J. (2012), "Do FIIs impact volatility on Indian stock market". *International Journal of marketing, Financial services and management research*, Vol.1, No.7, pp. 80-93.
- xix. Luhar, A. and Bhide, K. (2012), "Evaluating role of Foreign Institutional Investors and Mutual funds in changing market scenario", *Abhinav Journal*, Vol. 1, No.4.
- xx. Natalie Y. Oh. and Parwada, J. T., (2007), "Relations between mutual fund flows and stock market returns in Korea" *Journal of International Financial Markets, Institutions and Money*, 17 (2), pp. 140-151.
- xxi. Naik, P.K. and Padhi, P. (2014), "The dynamics of institutional investments and stock market volatility: evidence from Foreign Institutional Investors and Domestic Mutual Funds equity investments in India" available online at "<http://ssrn.com/abstract=2388182>, accessed on November 18, 2014 at 11:20a.m.
- xxii. Oh, N.Y. and Parwada, J.T. (2007), "Relations between Mutual Fund Flows and stock market returns in Korea", *International Financial Markets, Institutions and money*, No.17, pp.140-151.
- xxiii. Prajapati, K.P. and Patel, M.K. (2012), "Comparative study on performance evaluation of Mutual fund schemes of Indian companies", *Researches world- Journal of arts, science and commerce*, Vol.3, No.3 pp.47-59.
- xxiv. Latief, R. and Shah, S.Z.A. (2013), "Mutual funds herding and its impact on stock returns- evidence from Pakistan", *Journal of Basic and applied scientific research*, Vol.4, pp. 72-80.
- xxv. Rakowski, D. and Wang (2009), "The dynamics of short term mutual fund flows and returns: A time series and cross sectional investigation", *Journal of Banking and Finance*, No.33, pp. 2102-2109.
- xxvi. Shah, A. (2016), "Indian markets receive highest FII inflows in Asia ex-Japan since 2007", *Livement*, August 01, 2016.
- xxvii. Srivastav, A. (2013), "Influence of Foreign Institutional Investors in India", *GYAN PRATHA-ACCMAN Journal of management*, Vol.5, No. 1.
- xxviii. Thenmozhi, M., and Kumar, M. "Dynamic Interaction among Mutual Fund Flows, Stock Market Return and Volatility Accessed from, http://www.nseindia.com/content/research/res_paper_final196.pdf
- xxix. Walia, K., Walia, R. and Jain, M. (2012), "Impact of Foreign Institutional Investment on stock market", *International Journal of Computing and Corporate Research*, Vol.2, No.5.
- xxx. Zheng, X. and Edwards, F.R. (1997), "Mutual Funds and stock and bond market stability" available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=138487, accessed on November 19, 2014.

WEBSITES

1. <http://www.bseindia.com/indices/IndexArchiveData.aspx>
2. <http://www.moneycontrol.com/india/stockmarket/foreigninstitutionalinvestors/12/57/activity/MF/201004>
3. <http://www.moneycontrol.com/>

Stock Market Anomalies: an Empirical Study in Indian Context

* Dr. Harshita



Abstract

The study aims to test the presence of five market anomalies (size, calendar, value, liquidity and standardized unexpected earnings (SUE) effects) in the Indian stock market and corroborate the findings with the primary survey of practitioners and regulators. The study covers a period of 22 years (1995 to 2017). The findings suggest presence of size, liquidity and SUE effects over the entire study period. The value effect is evident for the sub-period before 2008 but ceases to exist for the sub-period after 2008. For the calendar effect, no month-of-the-year consistently generates highest returns over the study period. To the best of the author's knowledge, this is probably the first study to report for an emerging market (India), five of the major market anomalies at an individual level as well as their interplay and supplement the findings with a primary survey.

**Assistant Professor, Fore School of Management, New Delhi, India*

INTRODUCTION

Stock market anomalies refer to the behavior observed in the stock markets which are deviations from the normal order. In the field of finance, it is a practice to consider an efficient stock market as 'normal', and therefore, 'anomalies' are deviations from market efficiency. In the context of this thesis, anomalies are defined as deviations from semi-strong form of market efficiency. A market is said to be semi-strong form efficient when the stock prices quickly and fully incorporate all the publicly available information. If the stock prices fail to do so, it is said to be an evidence of an anomaly.

This study aims to test the presence of five of the major anomalies in the Indian stock market and corroborate the findings with the primary survey of practitioners and regulators. The anomalies are: (a) Size effect anomaly: It refers to the tendency of small size stocks (in terms of market capitalization) to generate higher risk-adjusted returns than big size stocks, (b) Calendar effect anomaly: It refers to the tendency of stocks to generate higher returns at certain calendar times of a year, (c) Value effect anomaly: It refers to the tendency of stocks with low price-to-fundamentals ratio (also known as value stocks) to generate higher risk-adjusted returns than stocks with high price-to-fundamentals ratio (also known as growth or glamor stocks), (d) Liquidity effect anomaly: It refers to the tendency of less liquid stocks to generate higher risk-adjusted returns than more liquid stocks and (e) Standardized Unexpected Earnings (SUE) effect anomaly: Also termed as post-earnings-announcement drift (PEAD) anomaly or the earnings momentum anomaly, it refers to the tendency of stocks with positive SUE to continue to drift in positive direction in the post-earnings-announcement period and vice-versa.



RESEARCH OBJECTIVES AND METHODOLOGY

Research gaps and objectives

Based on review of literature, following research gaps were identified:

- i. There are very limited studies based on emerging markets, especially India. Only a few of them report country specific findings.
- ii. No comprehensive study was found in the context of India on all the major market anomalies taken together.
- iii. Primary surveys of practitioners with regard to market anomalies have been very limited in the Indian context.

Corresponding to the research gaps, following research objectives were designed:

- i. To test the existence of the following market anomalies in the Indian context:
 - a. Size effect anomaly
 - b. Calendar anomaly
 - c. Value effect anomaly

- d. Liquidity effect anomaly
- e. Standardized unexpected earnings (SUE) effect anomaly
- ii. To test the relationship among different anomalies.
- iii. To carry out a survey to gauge the perceived relevance of stock market anomalies by investors and regulators.



COPE

Secondary data: The study covers a time period of 22 years (October 1995 to September 2017) and the constituent companies of Nifty 500 index form the study sample. As on 31 March 2014 (the date of sample collection), the index represented 97 per cent of the free float market capitalization of the stocks listed on the National Stock Exchange (NSE fact sheet, 2014). Further, the study is limited to company-years that end in March - 88.90 per cent of the total records meet this criterion. The data is collected from Ace Equity®, and the websites of the Reserve Bank of India (RBI) and NSE.

Primary data: Primary survey is based on structured questionnaire based survey. Responses are sought from the practitioners and regulators of the stock market, viz. investment advisors, portfolio managers, research analysts and stock brokers. The information about the prospective respondents are obtained from the websites of Securities and Exchange Board of India (SEBI) and the NSE.



METHODOLOGY

Market capitalization is chosen as the proxy for size. Price-to-book (P/B) ratio and price-earnings (P/E) ratio are employed as the proxies for value. To test the presence of liquidity effect anomaly, four measures are employed as the proxies for liquidity for the initial analysis – Amihud's (2002) illiquidity (AI) measure, trading volume, rupee trading volume and turnover rate. For subsequent analysis, AI measure is chosen as the proxy. To test the presence of SUE effect anomaly, actual earnings of the same quarter in the last fiscal year is chosen as the proxy for the expected earnings of this quarter.

While size, value and liquidity effects are analyzed based on Capital Asset Pricing Model (CAPM) using ordinary least squares (OLS) regression with robust standard errors, the calendar effect is tested with the exponential generalized autoregressive conditionally heteroscedastic (EGARCH) model and SUE effect requires employment of Fama and MacBeth (1973) cross-sectional regression. To study the interplay among anomalies, augmented CAPMs are additionally employed. Table 1 summarizes the employed models.

To test if the results are robust to changes in the underlying study period, the overall study period is divided into two sub-periods, with September 2008 chosen as the point of division – the period before this point is referred to as sub-period 1 and the period after this point is referred to as sub-period 2.

Table 1: Summary of models employed

CAPM E	$E(R_i) = R_f + \beta_i[E(R_m) - R_f]$ <p>Where :</p> <p>$E(R_i)$ is the expected return on security or portfolio i (R_f) is the risk-free return β_i is the regression coefficient (gradient).</p> <p>$E(RM)$ is the expected return on market portfolio</p>
EGARCH	<p>Conditional Mean</p> $R_t = \lambda_1 JAND_t + \lambda_2 FEBD_t + \lambda_3 MARD_t + \lambda_4 APRD_t + \lambda_5 MAYD_t + \lambda_6 JUND_t + \lambda_7 JULD_t + \lambda_8 AUGD_t + \lambda_9 SEPD_t + \lambda_{10} OCTD_t + \lambda_{11} NOV D_t + \lambda_{12} DECD_t + u_t$ <p>Conditional Variance</p> $\ln(\sigma_t^2) = \iota + \kappa \ln(\sigma_{t-1}^2) + \xi \frac{u_{t-1}}{\sqrt{\sigma_{t-1}^2}} + v \left[\frac{ u_{t-1} }{\sqrt{\sigma_{t-1}^2}} - \sqrt{\frac{2}{\pi}} \right]$ <p>Where :</p> <p>$\lambda_1 - \lambda_{12}$ are regression coefficients</p> <p>JAND – DECD are dummy variables for each month of the calendar 1n is the natural logarithm</p> <p>σ_t^2 and σ_{t-1}^2 are conditional variance of u_t and u_{t-1} respectively ι, κ, ξ and v are the parameters of the equation</p>
Amihud Illiquidity (AI)	$AI_{i,y} = \frac{1}{D_{i,y}} \sum_{d=1}^{D_{i,y}} \frac{ R_{i,y,d} }{RVOL_{i,y,d}}$ <p>Where :</p> <p>$AI_{i,y}$ is illiquidity for stock i during year y</p> <p>$D_{i,y}$ is number of days with available trading data for stock i during year y</p> <p>$R_{i,y,d}$ is the return on stock i on day d of year y</p> <p>$RVOL_{i,y,d}$ is the trading volume (in Rupee) of stock i on day d of year y</p>
Fame & MacMeth	<p>Standalone:</p> $PEAD_i = \omega_0 + \omega_1 SUE_i + u_i$ <p>Where :</p> $PEAD = BAHR_{stock} - BAHR_{market\ index}$ $SUE = \frac{Actual\ earnings - Expected\ earnings}{Scaling\ variable}$

	<p>$PEAD_i$ is the PEAD for Stock i</p> <p>ω_0 and ω_1 regression coefficients (intercept and gradient respectively)</p> <p>SUE_i is the SUE for stock i</p> <p>BAHR is the buy and hold return</p> <p>Interplay:</p> $PEAD_i = \omega_0 + \omega_1 SUE_i + \omega_2 (SUE_i X Beta_i) + \omega_3 (SUE_i X Size_i) + \omega_4 (SUE_i X Value_i) + \omega_5 (SUE_i X Illiquidity_i) + u_i$ <p>Where:</p> <p>ω_2 to ω_5 are regression coefficients (gradients)</p> <p>Interaction variables for stock i are derived from interaction of SUE with the control variables (beta, size, value and liquidity)</p>
Augmented CAPM	$R_{it} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \zeta_i SMB_t + \eta_i LMH_t + u_{it}$ $R_{it} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \zeta_i SMB_t + \theta_i IMV_t + u_{it}$ $R_{it} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \eta_i LMH_t + \theta_i IMV_t + u_{it}$ <p>Where:</p> <p>SMB_t is the size premium</p> <p>LMH_t is the value premium</p> <p>IMV_t is the liquidity premium</p> <p>ζ_i, η_i, and θ_i the regression coefficients (gradient)</p>

Findings

At the individual level, the findings suggest the presence of size, liquidity and SUE effects over the entire study period. The value effect is evident during whole study period and sub-period 1 but ceases to exist during sub-period 2. For the calendar effect, no month-of-the-year consistently generates highest returns over the study period. The summary of results is presented in Table 2.

Table 2: Summary of results – Objective (i)

Anomaly	Existence	Robust to sub-period analysis
Size effect	✓	✓
Calendar effect	✓	✗
Value effect (P/B effect)	✓	✗
Value effect (P/E effect)	✓	✗
Liquidity effect	✓	✓
SUE effect	✓	✓

For interplay of anomalies, while the SUE effect is evident even after controlling for other variables, the remaining four anomalies generate mixed evidences (of persistence) after controlling for the other effects. For example, December effect is evident for all but the largest size portfolio. Size effect is evident for a subset of portfolios after controlling for P/B ratio. Size and liquidity effects are not robust after controlling for each other. While size effect fails to exist, liquidity effect is evident only during two of the three study periods. Liquidity effect is evident in subset of portfolios after controlling for P/B ratio or P/E ratio. The results are summarized in Table 3.

Table 3: Summary of results – Objective (ii)

Anomaly	Existence/Robustness to sub-period analysis					
	Size effect	Calendar effect	P/B effect	P/E effect	Liquidity effect	SUE effect
Size effect	N/A	Conditional	Conditional	Conditional	Conditional	
Calendar effect	Conditional	N/A	Conditional	Conditional	Conditional	
P/B effect	Conditional	*	N/A		Conditional	
P/E effect	Conditional	Conditional		N/A	*	
Liquidity effect	Conditional	Conditional	✓*	✓*	N/A	
SUE effect	✓✓		✓✓		✓✓	N/A

For primary survey, nearly 70 per cent of the respondents consider market anomalies while taking decisions to buy, hold or sell stocks in the Indian stock market. Among the five market anomalies studied here, value effect anomaly is the most sought after (employed by 26.51 per cent respondents) whereas calendar effect anomaly is the least sought after (employed by 13.86 per cent of the respondents). The same is presented in Table 4.

Table 4: Summary of results – Objective (iii)

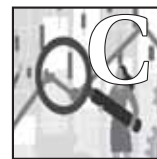
Anomaly	Aware (%)	Perception about presence in India (%)	Consider in decision-making (69.39%)
Size effect	64.29	78.72	25.30
Calendar effect	46.94	63.64	13.86
Value effect	60.20	77.17	26.51
Liquidity effect	63.27	81.40	19.88
SUE effect	73.47	80.72	14.46



RECOMMENDATIONS

These findings have important implications for four sets of stakeholders. For academia, the study implies that the debate on market efficiency is not over yet and more studies are recommended. Investors can benefit from the findings by designing their investment strategies taking into

consideration the prevalent anomalies of the market. Policy makers and regulators are interested in knowing the anomalous areas operating in the stock markets. By providing an update on the five major anomalies, this study recommends the possible areas that they ought to concentrate their efforts on. Further, by providing an update on the level of efficiency of the Indian stock market and by suggesting recommendations for designing investment strategies, this study recommends the society to increase their participation in the Indian stock market. A better functioning market could lead to better economic growth.



CONTRIBUTION

The study endeavors the following contributions towards each of the three research gaps identified:

- i. By endeavoring to provide an in-depth study on the Indian stock market, this work attempts to contribute to the limited literature on emerging markets (country level).
- ii. While there were studies reporting individual or interplay of some of the anomalies, this study brings together five of the major stock market anomalies.
- iii. At present, there is a paucity of studies reporting primary data on the relevance of stock market anomalies in actual practice. By undertaking a survey to gauge the role of stock market anomalies in the strategies designed by market practitioners, this study aims to address this dearth in literature.

REFERENCES

i. Amihud, Y. (2002), "Illiquidity and stock returns: cross-section and time-series effects", *Journal of Financial Markets*, Vol.5 No.1, pp. 31-56.

ii. Fama, E. F. and MacBeth, J. D. (1973), "Risk, Return, and Equilibrium: empirical Tests", *The Journal of Political Economy*, Vol.81 No.3, pp. 607-636.

iii. National Stock Exchange of India Limited (2014), "Factsheet CNX 500", available at: <https://www.nseindia.com/products/content/equities/indices/indices.htm> (accessed 10 May 2014).

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Plot No. 6, Sector 25, Rohini, Delhi - 110 085 India

Ph. : +91-11-2793 2742, 2793 4011, 2793 4400 Fax: +91-11-2793 4200 Email: dias@dias.ac.in