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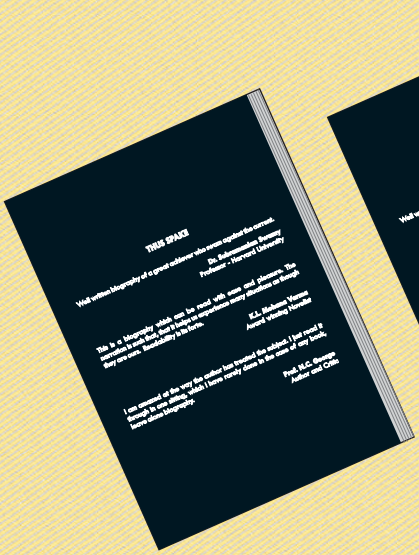
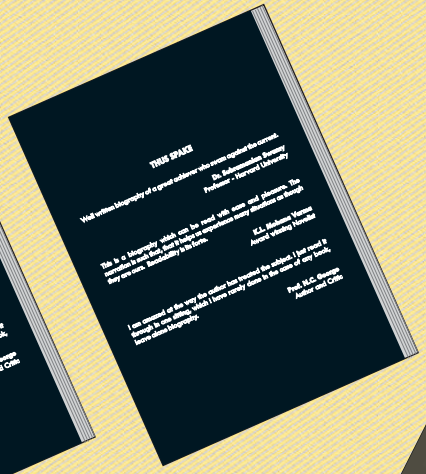
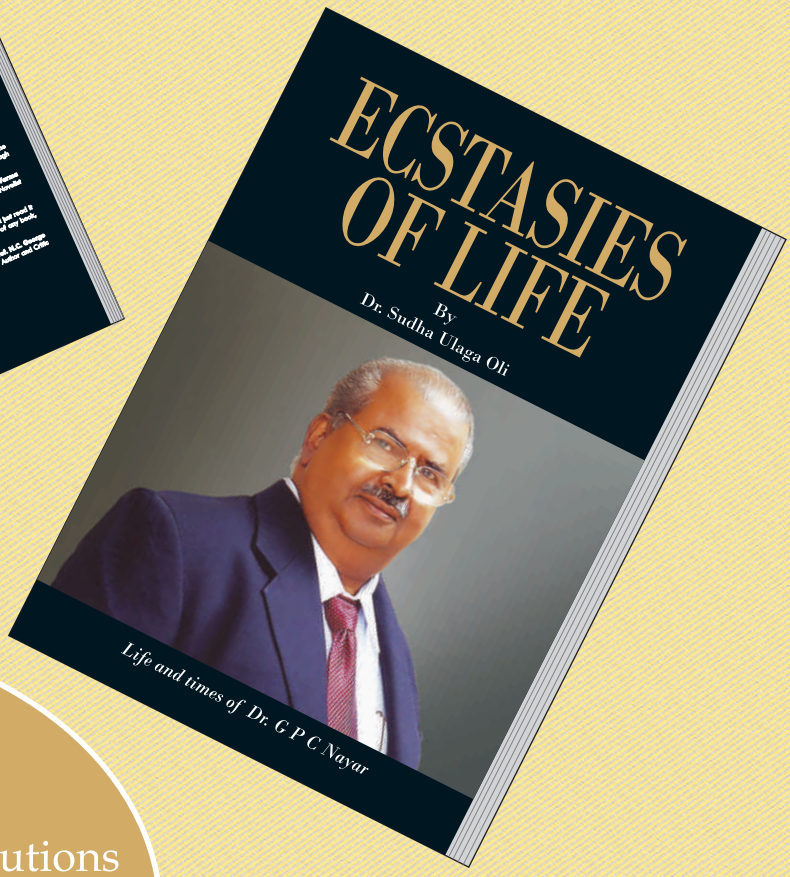
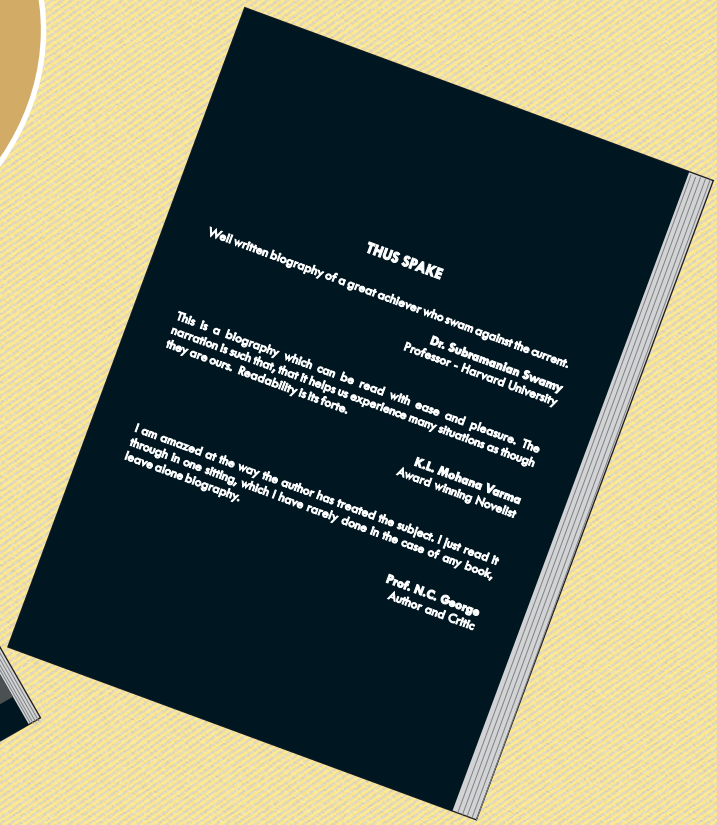






Here's an entrepreneur
who has created
some excellent academic institutions
in an unfriendly environment.
It is a saga of trials and tribulations
in an extremely readable manner
by a consummate
writer in English.



THUS SPAKE

Well written biography of a great achiever who swam against the current.

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Professor - Harvard University

This is a biography which can be read with ease and pleasure. The narration is such that, that it helps us experience many situations as though they are ours. Readability is its forte.

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I am amazed at the way the author has treated the subject. I just read it through in one sitting, which I have rarely done in the case of any book, leave alone biography.

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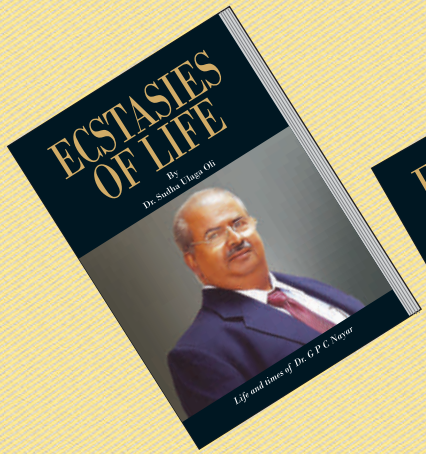
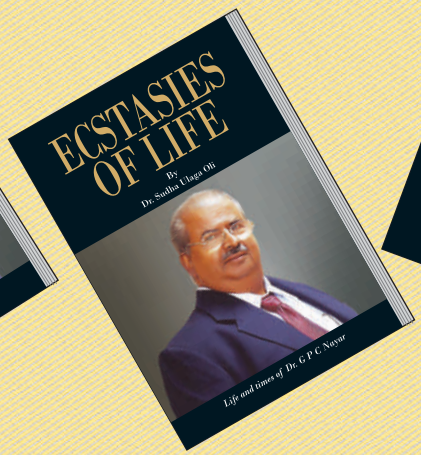
Author and Critic





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Contents

October- December 2016, Vol. XIII, Issue No. 4

Articles

Chairman's Overview

In today's customer-driven market, customer satisfaction is the key for the success of any service industry. In health care industry, it is increasingly being felt that it is quality that will ultimately decide the value of the services.

Nowadays, patients are more conscious of their rights in respect of health care services and the quality of services being delivered to them. The rising literacy rate, higher levels of income, and increasing awareness through mass media, have brought the patients in India closer to demand quality health care. The health care customer is changing qualitatively. Taking these developments into consideration, health care providers need to have a closer look at the perception of their patients and try to provide quality services to meet their expectations.

Service quality in health care is very complex as compared to other services because of the high risk involved in the service. Therefore, to manage quality within the health care framework, is a challenging task. In this background, the lead article in this issue, a study paper on assessment of service quality expectations and perceptions of patients towards health care services in UP, we hope, will be of enormous interest to our readers.

Leadership is an area studied extensively by researchers because of its immense significance on organisational performance. A growing body of literature shows that leadership behavior of managers is correlated with subordinates' job satisfaction. Subordinates demonstrate high level of performance when they are inspired by the leadership style of their manager which in turn increases job satisfaction. Our second lead article is a study on exemplary leadership behavior of manager as a precedent of job satisfaction of subordinates.

Empowering leadership in R & D teams has gained increasing popularity as it encourages member participation and self leadership, and benefits creativity and innovation. Our third lead article discusses the issues of the empowerment for R & D professionals and aims to explore the organisational practices important for empowering.

In addition, the issue carries a number of learned articles on a variety of topics such as Role of Demographics in Usage of Electronic Payment Systems, Measuring Platform Services of Delhi Metro, Intellectual Capital Intensity versus Capital Intensity, Determinants of Inward FDI, Political Marketing, et al.

I am confident that this issue will be truly informative and educative to our readers.

Dr. G. P. C. NAYAR

Chairman, SCMS Group of Educational Institutions.

SCMS Journal of Indian Management

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Editorial

Business Culture

Culture has evolved as an idea spanning over two thousand years. Culture as a reality has existed for a far longer period. It came into existence as the Romans used the term 'cultura' to mean cultivation in classical times making it one of humanity's oldest ideas. Since then, many ideas of culture have been advanced and adopted. Among them are: way of life, cultivation, the arts and humanities, the legacy from the past, heritage of mankind, a complex whole or total way of life, values, beliefs and behavior, the relationship between beings and the environment, and the organizational forms and structures of different species. Most of them boil down to two things: Culture is helping people to understand the world and many different things that exist in the world; and it is helping people to change the world in order to improve their own situations, the human condition, or the world at large. For this, it has been necessary to enlarge the idea of culture progressively over the centuries, from culture as cultivation, popular in classical times, to culture as the organizational forms and structures of different species, increasingly popular today.

In language, this word culture claims the greatest flexibility, adaptability, and versatility when it is understood in these terms. Unlike most ideas that are static and unchanging, culture is dynamic and evolutionary. It has been in tune with the rapidly changing nature of reality and human knowledge and understanding. It is now an all - encompassing idea. Taking our cue from this, culture is defined as "the way in which species in general- and the human species in particular –create wholes or total ways of life that are composed of many different parts as they go about the process of meeting their individual and collective needs and working out their complete association with the world."

Culture is of much importance to the world. On the one hand, it embraces virtually everything that exists in the world. On the other hand, it affirms the fact that the world is made up of culture in general and countless cultures in particular at its very core and essence. Economics and economies constitute an extremely important part of this because they are concerned with the creation of material and monetary wealth with people's jobs, income, and sources of livelihood. They form part and parcel of a substantially broader, deeper, and more fundamental process in present day culture: developing a new business culture that is going to rein supreme, setting the real foundation of existence and survival of nature and human beings.

Dr. D. Radhakrishnan Nair

Service Quality Expectations and Perceptions of Patients towards Health Care Services

Dr. Shailesh Kumar Kaushal

Abstract

The aim of this paper is to test the dimensionality of the modified SERVQUAL instrument in the Uttar Pradesh health care services, to assess the service quality provided in public hospitals in Lucknow city, and to identify the service quality dimensions that play important role on patient perception. For this purpose, modified 'SERVQUAL' instrument was used to measure the patient's perception about service quality delivered by these hospitals. The patient's perceptions of the public hospitals were identified by 35 items and captured in six dimensions by conducting exploratory factor analyses. This research study reveals patient's perceptions identified as: aesthetic, professionalism/skill/competence, promptness, attention, caring staff, medicine availability, accessibility, and affordability. Appropriate statistical analyses such as frequencies, descriptive factor analysis, paired t-test, multiple regression analysis were used according to respective objectives.

Keywords: *Public hospitals, Health care service, Perceived service quality, Patient's satisfaction*

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Public health services play an important role to deliver the medical services utilization to Indians. The constitution of India charges every state with raising the level of nutrition and standard of living of its people and improvement of public health care services as among its primary duties (National Health Policy of India, 1983). Since India is a developing country where a large section of population is below poverty line, health and hygiene are not up to the mark. In many developing countries including India, the excessive emphasis on service coverage and inputs in the provision of health services has ignored the needs of the patients for whom these health services exist (Rao et al., 2006). The current study focused on patient perception of public health care services in the state of Uttar Pradesh (India). The population of Uttar Pradesh, more than 200 million according to Census of India, (2011), given rapid population growth, the government of Uttar Pradesh is facing the daunting task providing health care for every resident of Uttar Pradesh. Roberto Zagha (World Bank

Country Director for India, 2012) describes how inadequate health systems affect the poor most, and, it is estimated that 8 per cent of households in Uttar Pradesh fell below the poverty line. However, Gronroos, (1984) shows health care services can be divided into two components: technical quality and functional quality. Technical quality refers to technical analysis, medical diagnoses, and procedures, while functional quality refers to the manner in which the health care service is delivered to the patients (Lam, 1997). In other words, technical quality is about what the patients get, functional quality is about how they get it. Most of the patients do not have the technical information to evaluate the medical diagnosis and technical procedures, although technical quality has high priority with patients (Ware and Snyder 1975). Because most of patients lack the required knowledge for evaluating the technical quality of the health care services, their evaluation of quality is based on the medical care process (McIver, 1993; Newcome, 1997). Technical quality falls short of being a truly useful measure for describing how patients evaluate the quality of a medical service encounter (Bowers et al., 1994). The service quality approach, which focuses on functional quality perceived by patients, has been widely used to evaluate the health services, (Buttle,1996; Dursun and Cerci, 2004). Few studies have been conducted on patient perceptions of health care services in India. Patient perceptions of public health care services are very important to know the patient satisfaction. Most of the studies have attempted to measure patient perceptions of health care quality based on service quality model, the validity and reliability of these scales are not known. Studies have also shown that public health care utilization in India is very pathetic, for this reason, patient perceptions of health services are very important part of quality measurement in public health care. These scales are questionable to the Indian context because these scales are applicable in other developed countries. The main objective of this study is to develop an instrument to assessing patient perceptions of health care services for public hospitals in the state of Uttar Pradesh (India) and to test the validity and reliability of the modified SERVQUAL scale.

Service quality in the healthcare industry: In Indian context, there is a dearth of an independent model of service quality for healthcare services; researcher extensively studied existing and modified SERVQUAL instruments. Many instruments have been developed to measure patients' perceptions and expectations, but SERVQUAL scale developed by Parasuraman et al. (1988) is the most widely used tool (Sohail, 2003). The SERVQUAL scale has been applied by several researchers in health care services to assess patient perceptions of service quality in different countries successfully (Anderson, 1995; Lam, 1997; Sewell, 1997; Angelopoulou et al., 1998; Alasad and Ahmed, 2003; Mostafa, 2005; Dean, 1999; Wong, 2002; Boshaff and Gray, 2004; Zaim et al., 2010; Butt and Run, 2010; Irfan and Ijaz, 2011, Lis, Rodeghier, and Gupta, 2011, Nekoei-Monghadam, and Amiresmaili, 2011, Brahmbahtt, Baser, and Joshi, 2011; Suki, Lian, and Suki, 2011; Norazah, Jennifer, and Norbayah, 2011; Ahmed and Samreen, 2011; Zarei, et al, 2012, AI-Hawary, 2012; Haque et al, 2012; Norazah, et al., 2011; Ramez, 2012. Babakus and Mangold (1992) found that SERVQUAL scale is a reliable and valid model in the health care service environment. Anderson (1995) studied that SERVQUAL instrument to measure the quality of health care service offered by a public university health clinic, results revealed that assurance dimension was weak dimension among the five dimensions of service quality model. Lam (1997) examined the validity, reliability and predictive validity of SERVQUAL model and assessed quality of health care services in Hong Kong; his results showed that service quality model is reliable and valid instrument for assess quality of health care services. In the same direction, Sewell (1997) conducted research on NHS patients and his results found that the most important quality dimension was reliability followed by assurance, empathy and responsiveness. Tangibility was least important. According to Angelopoulos et al. (1998) employed quality of service in Greece hospitals and they found that patients in public hospitals were satisfied about the competence of physicians and nurses. In other study, Baker, Akgun and Assaf (2008) employed SERVQUAL scale to assess patients' attitudes toward health care service in Turkey; his results revealed that patient perception towards responsiveness and reliability dimensions get the lowest expected scores of all dimensions. In another study, Wong (2002) indicated that three dimensions- responsiveness, assurance and empathy were more important factors than other two dimensions least affecting overall service quality. Kilbourne et.al. (2004) proved that SERVQUAL is capable of capturing quality indicators in a multidimensional way, namely, tangibles, responsiveness, reliability and empathy as well as overall

service quality. Study conducted by Zaim et al. (2010) in Turkey hospitals and it confirmed that tangibility, reliability, courtesy and empathy are significant for customer satisfaction, while responsiveness and assurance were not. The other study by Brahmbahtt, Baser, and Joshi (2011), found that patient' perceptions did not exceed their expectations, as the patients were dissatisfied with the level of health care services rendered by 5 private hospitals from Ahmadabad and Gandhinagar cities of Gujarat state. Norazah et al. (2011) studied patients' perceptions and expectations in a private health care setting in the Klang Valley Region of Malaysia and their results revealed that the patients' perceptions were poor with the waiting time and hospital response. Ramez (2012) found that patients' perception was high on reliability dimension low on the assurance dimension. Abu-Kharmeh (2012), identified responsiveness, assurance, tangibles, empathy, and reliability were ranked in order of importance respectively for health care service quality.

Although many researchers used SERVQUAL instrument successfully for measuring the quality of healthcare services, yet some researcher criticized regarding its conceptual and operational aspects. Haywood- Farmer and Stuart (1988) concluded that SERVQUAL was inappropriate for measuring the quality of health care service since it excluded the dimensions for care service, service customization, and knowledge of the professional, in this direction, Vandamme and Leunis (1993) suggested that SERVQUAL may not be generalized to hospital services or health care services due to the uniqueness of the services offered and further Sohail (2003), concluded his research on service quality measurement in hospitals of Malaysia, did not confirm any of the five generic dimensions of SERVQUAL model. Large number of studies have been conducted on healthcare services and there are substantial proofs that in the multi-service healthcare the dimensions identified are quite different than those used for SERVQUAL model and are yet to be uncovered i.e. many researchers suggested that modified SERVQUAL model by considering more dimensions and latent constructs which are reliable and valid. Reidenback and Sondifer-Smallwood (1990) employed a modified SERVQUAL approach to understand the relationship among patients' perceptions of inpatient, outpatient and emergency room services and their overall perceptions of service quality satisfaction with their care and willingness to recommend the hospital's services to others. Seven dimensions were identified and differential impacts of these dimensions were found in the three hospital settings. "Patient confidence" was found to affect patient satisfaction in all three settings in addition to influencing perceptions of service quality in both the inpatient and the outpatient settings. According to Bowers et al. (1994) identified two additional quality dimensions, namely, "caring" and "patient outcomes" to the five generic quality dimensions of SERVQUAL. The findings of the study pointed out that empathy, responsiveness; reliability, communication, and caring were strongly correlated with overall patient satisfaction. Both the researchers, Cronin and Taylor (1994) suggested SERVPERF model as a modification of SERVQUAL model. SERVPERF is one dimensional model that focuses on five gaps based on perception. Johnston (1995) developed eighteen quality dimensions, namely, cleanliness, aesthetics, comfort, functionality, reliability, responsiveness, flexibility, communication, integrity, commitment, security, competence, courtesy, friendliness, attentiveness, care access and availability. Gabbott and Hogg (1995) identified "caring" as a dimension, but they decided not to accept it as a separate dimension since it was already covered by the five SERVQUAL dimensions. Anderson (1995) used the SERVQUAL instrument to assess the quality of service offered by a public university health clinic. The findings revealed that the clinic investigated was poor on the assurance dimension. Further, Lim and Tang (2000) developed a modified SERVQUAL model considering six dimensions viz. tangibles, reliability, assurance, responsiveness, empathy, accessibility and affordability. They have put emphasis on affordability of patients relating to their satisfaction. Andaleeb (2001) employed modified the SERVQUAL model by including three new dimensions viz. communication, discipline and baksheesh (unofficial payments to service providers) in lieu of empathy, tangibles and reliability. In their research work, it was observed that discipline had a great impact on patient satisfaction whereas baksheesh had least impact on patient satisfaction. Both the researchers, Jaboun and Chaker (2003) conducted a comparative study on public and private hospitals at UAE. Their research result revealed that there is a significant differences between private and public hospitals in terms of

overall service quality in empathy, tangibles, reliability and administrative responsiveness. They conducted a comparative analysis between private and public hospitals and pointed out that public hospitals were perceived to be better than the private hospitals as far as service quality is concerned. Patients of private health organizations in South Africa have found that the service quality dimensions of nursing staff viz. empathy, assurance and tangibles have positive impact on the loyalty of patients, Boshaff and Gray (2004). In this study, Kilbourne et al. (2004) proved that SERVQUAL is capable of capturing even slight quality indicators in a multidimensional way, namely, tangibles, responsiveness, reliability and empathy as well as overall service quality. Ramsuran-Fowder (2005) considered two additional dimensions viz. core medical outcomes and professionalism/skill/competence along with five generic dimension of SERVQUAL model. They also incorporated a few additional items within each of the five SERVQUAL dimensions and finally found that those five dimensions could not be replicated fully to the health care services. Karassavidou et al. (2007) applied SERVQUAL model to measure a service quality on three dimensions viz. a) human aspects, b) physical environment and infrastructure of the care unit and c) access. They applied a modified version of SERVQUAL model where demographic features of patients (age, gender, education, and income) have been taken into account. Applying SERVQUAL model, the researchers have measured gaps between patients' expectation and perception for above-mentioned three dimensions. The research result pointed out that the human aspect is the most important area where the relationship of patients with physicians and other staff of hospital occupy the central place of the health care system. According to Mangkolrat (2008), in her recent work on patient satisfaction measurement, suggested a conceptual framework where she measured the gap between patients' expectation and their perception in the light of service quality. Akter et al. (2008), in their research on service quality perception and satisfaction, applied SERVQUAL model considering three new dimensions viz. communication (a system to convey message to patients and patient parties), discipline (control of non-performance of prescribed duties and non-adherence to written rules), tips or 'Baksis' (extra compensation in order to receive satisfactory service) replacing other three dimensions viz reliability, tangibles and empathy suggested by Parasuraman et al.

Methodology

Instrument development: This research study employed the in-depth interview procedure as the method of collecting qualitative data about healthcare service quality because the technique is particularly suited to determining perceptions of patients. The method has content validity for exploring the range of perceptions about hospital quality because the open ended questions generate data in the patients' own words; there were no closed ended questions asked in this stage, in-depth interviews conducted government hospital located Lucknow city in Uttar Pradesh. The in-depth interview covered topics related to perception about the service quality of hospital such as clean rooms, bathrooms, and toilets, neat appearance, proper sitting and bedding arrangement, sophisticated equipment, electricity and hygienic drinking water, medical store, diagnostic centre and a blood bank, proper parking space, a notice board and a suggestion box, sufficient number of doctors, nurses and technical experts, hygienic canteen, sufficient ambulances, dustbins and spittoons, oxygen cylinders, promised services, record book of patients, reasonable service charge, providing different specialties, explained procedure of treatment, help the patients, quick process of admission, less formality, queries of patients, prompt response, educated hospital staff, assurance of recovery, experienced doctors, convey information accurately, impartial behaviour, individual attention, and consideration of financial condition of patients. A 35-item questionnaire to measure hospital service quality was developed using in-depth interview with patients.

Data collection: A cross-sectional study was conducted during January-February, 2016 in Lucknow, the capital of Uttar Pradesh. The study sample was selected from among all patients who were hospitalized in government hospitals of Lucknow. Three government hospitals namely King George Medical University, Dr Ram Manohar Lohia Institute of Medical Sciences, and Balrampur Hospital were considered for investigation and the samples were divided among the 03 government hospitals based on proportionality to the size. The inclusion criteria comprised adult patients aged 18 years and older who were stayed at

least 24 hours in the hospital and willing to participate in the study. The samples were selected randomly in each hospital, and the questionnaires were given to them on the day of discharge. The aim of the study was explained to patients, and they were assured of the privacy of their information. The selected scale items were translated from English into Hindi, the principal language of Uttar Pradesh. The translation was verified by experts. Each scale item had an associated 5-point Likert-type scale ranging from a score of 1 for 'completely disagree' to 5 'completely agree,' with 3 being the neutral position. Finally, 814 of the 1000 questionnaires distributed between the patients (response rate = 81.4%) were filled out and gathered for analysis.

Demographic profile of the patients: Distributions of the demographic characteristics of respondents are presented in Table-1. Out of 814 respondents 438 (53.80%) are male and 376 female (46.2%) and 20.14%, 15.84%, 19.77%, 21.74%, 22.48% of the respondents were below 30 years, 31-40 years, 41-50 years, 51-60 years, and above 60 years old respectively. 43.98% (358) of respondents were illiterate , 38.57% (314) were primary and secondary intermediate level, and rest of the patients 17.44% (142) graduates. While majority of the patients were urban 71.62 (583) and rural constituted 28.37% (231) of the total sample.

Table-1: Socio-demographic data of the sample (N = 814)

Variables		N	%
Gender	Male	438	53.80
	Female	376	46.20
Age (Years)	⩽30	164	20.14
	31-40	129	15.84
	41-50	161	19.77
	51-60	177	21.74
	61⩾	183	22.48
Education Level	Illiterate	358	43.98
	Primary and secondary school	314	38.57
	Graduates	142	17.44
Residence	Urban	583	71.62
	Rural	231	28.37

Statistical methods: Exploratory factor analysis is used to identify the underlying factors, service quality gap, paired t-test and Cronbach's alpha is used to measure the internal consistency of the scale, followed by regression analysis was done.

Variables measuring client perceived quality: Principal component analysis suggested five important factors. This research paper uses exploratory factor analysis in order to identify the various determinant factors of service quality in government hospitals at Lucknow in Uttar Pradesh. Principal Component analysis was employed for extracting factors and orthogonal rotation with Varimax was applied. As latent root criterion was used for extraction of perception of patients towards service quality in government hospitals, only the factors having latent roots or eigenvalue greater than one were considered significant; all other factors with latent roots less than one were considered insignificant and disregarded. The extracted influencing factors of service quality along with their eigenvalue are shown in figure-1.

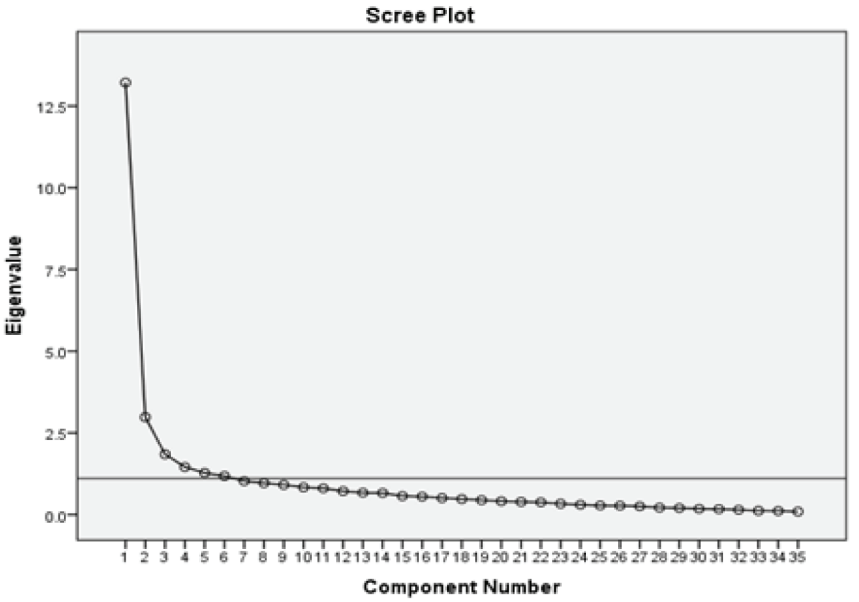

Figure-1: Scree plot of 35 variables

Influencing factors of service quality in hospitals have been given appropriate names on the basis of variables represented in each case. The names of the factors, the statements, the labels and factor loading have been summarized in table -1. There are six factors each having eigenvalue exceeding one for factors, and they are 13.214, 2.981, 1.846, 1.458, 1.280, and 1.182 respectively. The 35 items were subjected to EFA and a final six -factor model was estimated, while 14 items exhibited low factor loadings (<0.50). The six-factor solution accounted for 62.746% of the total variance, and exhibited a KMO measure of sampling adequacy of 0.878. It is a pretty good extraction because we are able to economize on the number of choice factors (from 35 to 6 underlying factors), we lost 37.254 % of information content for choice of variables. The percentages of variance explained by factors one to six are 37.755, 8.516, 5.276, 4.166, 3.656, and 3.377 respectively. Large communalities indicate that a large number of variance has been accounted for by the factor solutions.

Table-2

Constructs	Factor-1	Factor-2	Factor-3	Factor-4	Factor-5	Factor-6	Communalities
Aesthetic							
Sitting and bedding arrangement	0.681						0.502
Functional hygienic canteen	0.667						0.592
Staff are neatly dressed	0.695						0.514
Adequate dustbins and spittoons	0.797						0.653
Professionalism/skill/competence							
Sufficient doctors & technical staff		0.826					0.662
Educated and knowledgeable Staff		0.769					0.586
Experienced doctors		0.631					0.581
Patients properly examined		0.727					0.548

Constructs	Factor-1	Factor-2	Factor-3	Factor-4	Factor-5	Factor-6	Communalities
Promptness attention							
Quick admission process			0.758				0.565
Prompt Response to patient			0.879				0.734
Hospital is less formal			0.722				0.523
Caring staff							
Queries properly addressed				0.793			0.648
Visitors properly treated				0.867			0.726
Impartial staff towards the patients				0.716			0.520
Individual attention to their patients				0.746			0.552
Medicine availability							
Fair health service charges					0.832		0.672
Upgraded medical facility					0.787		0.628
In house medical facilities					0.756		0.572
Accessibility and affordability							
Convenient operating hours						0.752	0.554
Promised services on time						0.824	0.660
Consider financial condition						0.776	0.638
Eigen value	13.214	2.981	1.846	1.458	1.280	1.182	
Variance (%)	37.755	8.516	5.276	4.166	3.656	3.377	
Cumulative variance (%)	37.755	46.271	51.547	55.713	59.368	62.746	
Reliability Alpha (%)	0.853	0.795	0.815	0.829	0.884	0.859	
Number of items (total=21)	04	04	03	04	03	03	

Note: Extraction Method –Principal Component Analysis, Rotation Method – Varimax with Kaiser Normalization, KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) = 0.878, Bartlett's Test of Sphericity: p = 0.000 (x^2 = 2084.744, d.f = 595)

The main purpose of the EFA was to confirm whether items loaded correctly to the corresponding factors as identified by previous research. The purpose was also to assess the dimensionality, measurement, and psychometric properties of scale items used in the study. In order to quantify the scale reliabilities of the factors identified, Cronbach's á coefficient was computed; all of the alpha coefficients easily passed the minimum level of 0.70 recommended by Nunnally (1978) indicating acceptability and reliability of all of the scales.

Gap analysis in health care services: Gap analysis is not new in health care services context, and a number of studies have been influenced by the work of (Parasuraman *et al.,* 1985). For example, (Long *et al.,* 1999) 'gap analysis' to develop a number of questions in order to compare what clients 'look for' (expect) and what they 'experience' on a course. Sander et *al.(*2000), meanwhile, examined customers' expectations and preferences. Customers judge actually quality according to their expectations (Ghobadian *et al.,* 1994; Dotchin and Oakland, 1994: Kandampully, 1997; Fergueson *et al.,* 1999, Lee *et al.,* 2000; Walter and Germunden, 2000). The ultimate measure of quality is whether or not the product or service lives up to expectations of the patients. The most widely used and tested service quality instrument has SERVQUAL, based on the service quality 'gap model' (Parasuraman *et al.,*1988,1991,1993,1994), which defines service quality as a function of gap between patients' expectations of a service and their perceptions of the actual service delivery by organization. The instrument represents a multi-item scale that since its development has been widely used for measuring patient expectations and perceptions of

service quality in government hospitals. It consists of 21 parallel expectations (E) and perception (P) statements the six service quality dimensions. In order to obtain view for the statement, patients are required to select a response on Likert scales that range from strongly disagree to strongly agree. This then allows for the difference scores for each dimension to be calculated. The difference (P-E = Q) represents the measure of service quality (Q). Where Q is negative, a service gap exists. However, Q is positive, patient expectations are being exceeded.

Service Quality Gaps Analysis (P-E): The service quality gaps are demonstrated in the Tables -2. As each item has a negative value, clients' perceptions of the service are falling short of their expectations.

Table-3

S.No.	Variables	Perception Mean (S.D)	Expectation Mean (S.D)	Gap (P-E)
	Aesthetic			
1.	Sitting and bedding arrangement	3.55 (0.892)	4.69 (0.486)	-1.14
2.	Functional hygienic canteen	3.65 (0.977)	4.57 (0.607)	-0.92
3.	Staff are neatly dressed	4.23 (0.750)	4.77 (0.423)	-0.54
4.	Adequate dustbins and spittoons	3.88 (0.891)	4.53 (0.540)	-0.65
	Professionalism/skill/competence			
5.	Sufficient doctors & technical staff	4.17 (0.635)	4.72 (0.473)	-0.55
6.	Educated and knowledgeable Staff	4.22 (0.871)	4.61 (0.490)	-0.39
7.	Experienced doctors	4.19 (0.837)	4.59 (0.514)	-0.40
8.	Patients properly examined	4.15 (0.914)	4.70 (0.503)	-0.55
	Promptness attention			
9.	Quick admission process	3.77 (0.952)	4.57 (0.517)	-0.80
10.	Prompt Response to patient	3.73 (0.662)	4.59 (0.534)	-0.86
11.	Hospital is less formal	3.71 (0.946)	4.48 (0.643)	-0.77
	Caring staff			
12.	Queries properly addressed	3.79 (0.908)	4.58 (0.606)	-0.79
13.	Visitors properly treated	3.54 (0.729)	4.49 (0.559)	-0.95
14.	Impartial staff towards the patients	3.81 (0.534)	4.50 (0.522)	-0.69
15.	Individual attention to their patients	3.35 (0.814)	4.38 (0.632)	-1.03
	Medicine availability			
16.	Fair health service charges	3.95 (0.809)	4.54 (0.576)	-0.59
17.	Upgraded medical facility	4.01 (0.823)	4.66 (0.517)	-0.65
18.	In house medical facilities	4.18 (0.744)	4.61 (0.510)	-0.43
	Accessibility and affordability			
19.	Convenient operating hours	3.76 (0.793)	4.65 (0.520)	-0.89
20.	Promised services on time	3.89 (0.931)	4.54 (0.521)	-0.65
21.	Consider financial condition	3.47 (0.948)	4.33 (0.817)	-0.86
	SERVQUAL TOTAL	81.00	96.1	-15.1

The mean scores from the sample are illustrated in Tables - 2. For each statement the mean Expectation (E) and Perception (P) values, along with a service quality value from the formula are presented, Q = P – E (Parasuraman *et al.,* 1988). The three columns provide summary results for the perception of patients in government hospitals, and the overall SERVQUAL results are illustrated in Table -2, above the three columns. Where the gap (P – E) is negative, this refers to perceptions of the health care services in government hospitals falling short against initial patients' expectations, and the presence of service quality gaps. The findings suggest a short fall on all the items measured. The expectation and perception items were measured using a five point Lickert scale, from 1 = strongly disagree, to 5 = strongly agree, with three serving as a mid point/neutral opinion on the scale. Mean scores greater than three identify a tendency for patients to agree with a particular statement, whereas means of less than three indicate disagreement.

Expectations (E): Tables -2 depicts the following useful information, it can be concluded that expectation (E) values among the patients per se were high (means ranging from 4.33 to 4.77). All the statements illustrate mean scores of 4.33 or greater. This suggests that patients really have high expectations in terms of prompt service.

Perceptions (P): Overall 21 perception items are close to mid value (3) on the scale, suggesting there is some agreement among them. Meanwhile 7 items (3, 5, 6, 7, 8, 17, and 18) exceeded 4.00, suggesting that the sample had a tendency to agree that staff are neatly dressed, sufficient doctors and technical staff, educated and knowledgeable staff, experienced doctors, patients properly examined, upgraded medical facility, and in house medical facilities.

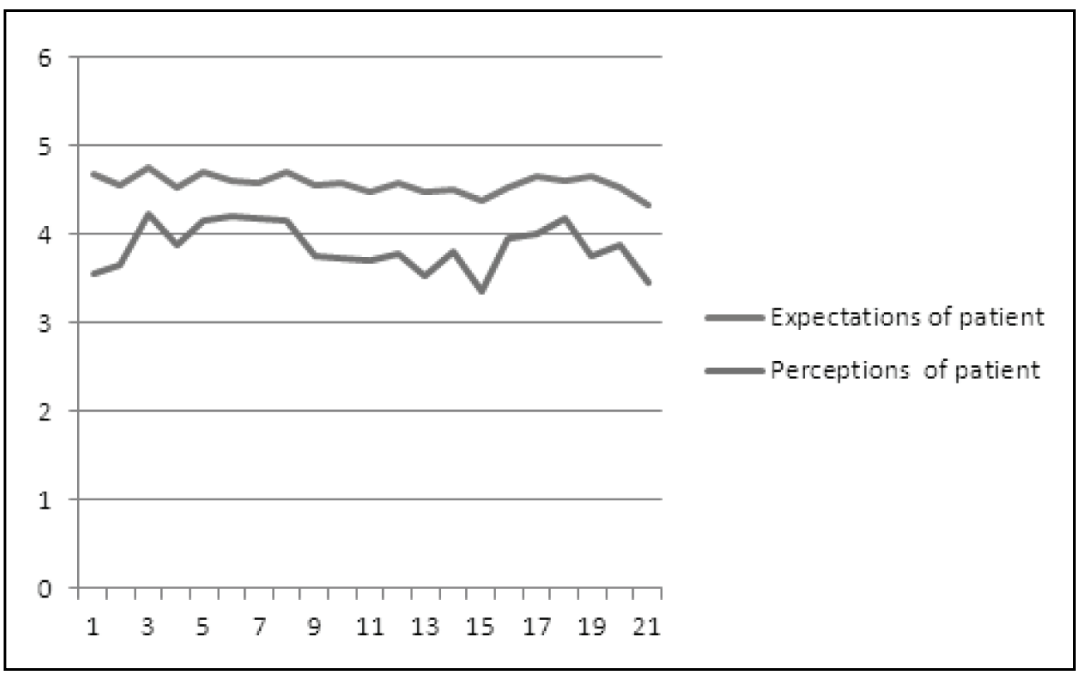

Figure-2: Service quality gap

Paired sample t-test statistics: Paired sample t-tests were also undertaken on the perception and expectation mean items, in order to identify whether or not statistically significant service quality gaps were apparent.

Table-4

S.No.	Variables	Perception Mean (S.D)	Expectation Mean (S.D)	Gap (P-E)	Paired t-test	p-value
	Aesthetic					
1.	Sitting and bedding arrangement	3.55 (0.892)	4.69 (0.486)	-1.14	8.648	.004
2.	Functional hygienic canteen	3.65 (0.977)	4.57 (0.607)	-0.92	7.927	.000
3.	Staff are neatly dressed	4.23 (0.750)	4.77 (0.423)	-0.54	6.673	.000
4.	Adequate dustbins and spittoons	3.88 (0.891)	4.53 (0.540)	-0.65	5.700	.003
	Professionalism/skill/competence					
5.	Sufficient doctors & technical staff	4.17 (0.635)	4.72 (0.473)	-0.55	4.823	.000
6.	Educated and knowledgeable Staff	4.22 (0.871)	4.61 (0.490)	-0.39	4.007	.000
7.	Experienced doctors	4.19 (0.837)	4.59 (0.514)	-0.40	4.450	.005
8.	Patients properly examined	4.15 (0.914)	4.70 (0.503)	-0.55	8.083	.000
	Promptness attention					
9.	Quick admission process	3.77 (0.952)	4.57 (0.517)	-0.80	7.036	.000
10.	Prompt Response to patient	3.73 (0.662)	4.59 (0.534)	-0.86	6.726	.000
11.	Hospital is less formal	3.71 (0.946)	4.48 (0.643)	-0.77	6.529	.000
	Caring staff					
12.	Queries properly addressed	3.79 (0.908)	4.58 (0.606)	-0.79	7.447	.000
13.	Visitors properly treated	3.54 (0.729)	4.49 (0.559)	-0.95	6.414	.000
14.	Impartial staff towards the patients	3.81 (0.534)	4.50 (0.522)	-0.69	5.297	.000
15.	Individual attention to their patients	3.35 (0.814)	4.38 (0.632)	-1.03	7.090	.001
	Medicine availability					
16.	Fair health service charges	3.95 (0.809)	4.54 (0.576)	-0.59	5.751	.002
17.	Upgraded medical facility	4.01 (0.823)	4.66 (0.517)	-0.65	6.260	.000
18.	In house medical facilities	4.18 (0.744)	4.61 (0.510)	-0.43	4.448	.001
	Accessibility and affordability					
19.	Convenient operating hours	3.76 (0.793)	4.65 (0.520)	-0.89	6.346	.000
20.	Promised services on time	3.89 (0.931)	4.54 (0.521)	-0.65	8.340	.000
21.	Consider financial condition	3.47 (0.948)	4.33 (0.817)	-0.86	5.047	.000
	SERVQUAL TOTAL	81.00	96.1	-15.1		

Findings from data presented in Table-4 demonstrate significant differences between public hospitals clients' perceptions and expectations of health care service on all 21statements. However, for all the statements, there is a statistical significance of a 0.05, which illustrates a statistically significant gap between the patients' perceptions and expectations of health care service at the 95% confidence level. These represent service quality gaps that the government hospitals should take the appropriate measures on-board to bridge.

Predicting patient satisfaction: A Multiple Linear Regression(MLR) analysis was conducted to investigate the influence of aesthetic, professionalism, promptness attention, caring staff, medicine availability, accessibility and affordability on satisfaction. The test of multiple linear regression assumption found expected patterns for non-violation of the assumptions and this result supports the use of multiple linear regressions as an appropriate statistical analysis for this study. Tables-5 and 6 provide the results of the multiple linear regression analysis. Based on the results in Table-5, it seems that both models have worked well in explaining the variation in satisfaction (Model 1: F = 35.881; df = 812; p = .000; Model 2: F = 9.160; df = 811; p = .003). The proportion of explained variance as measured by R-square for Model 1 (R^2 = .268) and Model 2 were (R^2 = .331). In other words, 33.1 % of the variation in satisfaction is explained by aesthetic and accessibility in Model 2. As indicated by the unstandardized coefficients (Table-6), both aesthetic (t = 3.264, p = .002, b = .483) and accessibility (t = 3.027, p = .003, b = .379) were found to exert a significant positive influence on satisfaction.

Table-5: Model summary

Model	R	R^2	Adj. R^2	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R^2 Change	F Change	df1	df2	Sig. F Change	
1	.518[a]	.268	.261	.83121	.268	35.881	1[a]	812	.000	1.815
2	.575[b]	.331	.317	.79863	.063	9.160	1[b]	811	.003	

a. Predictors: (Constant), Aesthetic
b. Predictors: (Constant), Aesthetic, Accessibility
c. Dependent Variable: Satisfaction

Table-6: Coefficients[a]

Model	Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.842	.484		1.739	.085
	Aesthetic	.747	.125	.518	5.990	.000
2	(Constant)	.447	.483		.925	.357
	Aesthetic	.483	.148	.335	3.264	.002
	Accessibility	.379	.125	.311	3.027	.003

a. Dependent Variable: Satisfaction

According to stepwise method, aesthetic and accessibility factors exert influence on patient satisfaction (p = .002), and other factors such as Professionalism, Promptness attention, Caring staff and Medicine availability do not seem to influence patient satisfaction. Thus the full model for public hospitals is found as:

Y(Satisfaction) = 1.028 + ***0.667(Aesthetic)*** + .064(Professionalism) + .080(Promptness attention) - .200(Caring staff) -.347(Medicine availability) + ***.455(Accessibility and affordability)***

Discussion: This study has revealed how modified SERVQUAL instrument could help public hospitals identify the healthcare service characteristics that are considered important by patient's point of view. Public hospitals may improve their level of quality and the appropriateness of the model can be monitored longitudinally, with resources being shifted to those areas which most heavily influence patient perceptions of service quality in the state of Uttar Pradesh. This research considers healthcare service quality to be an important factor of patient satisfaction and patients' perception. Modified SERVQUAL instrument demonstrated that all six dimensions of healthcare quality were significant in explaining patient satisfaction. Moreover, aesthetic, professionalism/skill/competence, promptness attention, caring staff, medicine availability, accessibility and affordability were also significant in explaining patient perception. Results of paired t-test showed that there is a statistically significant difference at $p<0.05$ level between the perception and expectation of modified instrument scores in the three public hospitals in Lucknow. The regression results also suggested that perceived quality have the biggest impact on general patient satisfaction i.e. aesthetic has the largest positive effect followed accessibility and affordability, promptness attention and professionalism, while caring staff and medicine availability have the negative impact on patient satisfaction in the public hospitals. These are important areas in which healthcare services in Uttar Pradesh require more attention.

Limitations and **Direction of Future Research:** The empirical results obtained in this study are consistent with the theoretical background of service quality model and also with the general perception of the patient' perception on the subject matter. Despite this, the present research paper has few limitations. The study was undertaken in a single city of Uttar Pradesh i.e. in a particular geography hence the study may not have included all the big cities of the state. In spite of this limitation, the findings are immensely important in advancing the knowledge on the patient perception for service quality dimensions in Uttar Pradesh context considering the diversity and representativeness of sample used for the study. The study has a lot of scope for future. The same research can be conducted across the healthcare organizations to replicate and validate the findings regarding the changing scenario in the healthcare industry. The present study provides initial empirical evidence of the patient satisfaction in the association of healthcare service quality's dimensions. Public hospitals administrators can use the current findings to develop healthcare service marketing strategies that understand and increase patient satisfaction. The current findings may be used by administrators to differentiate themselves in a competitive healthcare marketplace in the state of Uttar Pradesh. In order to successfully satisfy patient needs, healthcare service provider needs to be proficient at diagnosing problems. Present study indicates that although healthcare providers' expertise may be necessary for the development of patient satisfaction. Thus, at the time of recruitment and selection of employees, administrators should also screen for social competence and emotional intelligence. These traits are likely to lead to a high level of courtesy, friendliness, empathy and responsiveness in patient, public hospital staff relationships in hospitals. Furthermore, public hospitals need to carefully design patient centric strategies focusing on service quality' dimensions such as aesthetic, professionalism/skill/competence, promptness attention, caring staff, medicine availability, accessibility and affordability improvement in order to compete effectively with private hospitals.

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Leadership Behaviour of Manager : An Antecedent of Job Satisfaction of Subordinates

Dr. Parikshit Joshi, Ms. Harpal Kaur, and Ms. Anshika Jain

Abstract

This study establishes the effect of different leadership behaviours of superior on job satisfaction of subordinates when emotional intelligence is taken as mediating variable. Data from a sample of 124 respondents, working as full-time professionals in MNC's in India, was obtained using a cross sectional design and a self administered questionnaire. Scale, used for data collection, was measuring three constructs viz., leadership behaviour of manager, job satisfaction of subordinates and emotional intelligence of subordinates. The presence of emotional intelligence strengthens the relationship between leadership behaviour of supervisor and job satisfaction of subordinates.

Since the sample size was small, the model yielded only a marginal increase in the strength between leadership and job satisfaction.

Keywords: *Leadership behaviour, Job satisfaction, Emotional Intelligence (EI), Leadership Practice inventory*



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Leadership behaviour does not necessarily come from hierarchical leaders, but it may derive from the characteristics of other organization members, the tasks they perform, and the organization itself (Lee, Chen, and Liou, 2015; Robbins and Judge, 2013; Jermier Agency Commission for 1-10 subscriptions 10% Agency Commission for 1-10 subscriptions 10% Kerr, 1997; Kerr and Jermier, 1978). The changing nature of work due to factors like – globalization, flatter organizational structure accompanied by technological developments generates problems which call for more focus on situational/contingency leadership behaviour by the managers than ever before (Malik, 2013).

Leadership behaviour of managers has various outcomes and job satisfaction of subordinate (ÇelÝk, Dedeoðlu, and Ýnanir, 2015 ;Webb 2011; Adler and Reid, 2008) is the most cited one. Two factors that have been regarded as fundamental for organizational success are effective leadership and employees' job satisfaction. High job satisfaction enhances employees' psychological and

physical wellbeing (Ilardi, Leone, Kansser, and Ryan, 1983) and positively affects employee performance (Vroom, 1964; Porac, Ferris, and Fedor, 1983). According to Mosadegh Rad and Yarmohammadian (2006), employee job satisfaction refers to the attitude of employee towards their jobs and the organization which employs them. Ensuring job satisfaction amongst employees is need of the day and various organizations and researchers are working in the direction to determine various antecedents of job satisfaction (Kaiman, 2013; Ghorbanian, Bahadori, and Nejati, 2012; Holloway, 2012) such as leadership behaviour of manager(Ghorbanian et al., 2012); organizational climate (Holloway, 2012); employee commitment (Kaiman, 2013); leadership style of manager/supervisor (Jackson, Alberti, and Snipes, 2013). Amongst all these precursors leadership behaviour is the least explored construct. Leadership behaviour can act as a precursor to job satisfaction (Kaiman, 2013; Malik, 2013) also it significantly influences job satisfaction (Kaiman, 2013).

Successful leadership is largely underpinned by the need of leaders to possess Emotional Intelligence (EI) (Goleman, 1998) irrespective of the model of leadership that is being examined. A leader who effectively displays and manages emotions will find it easier to influence the feelings of followers (Robbins and Judge, 2013). The link between EI and leadership effectiveness may be worth investigating in greater detail (Walter, Cole, and Humphrey, 2011). This study attempts to measure the impact of leadership behaviour of manager on subordinates (employees' job satisfaction) also it takes into account emotional intelligence as intercede variable. In view of discussed research gap the study is designed to answer the following research questions:

1. Is leadership behaviour of managers a precursor for job satisfaction of subordinates?
2. Does EI strengthen the relationship between manager's leadership behaviour and employees' job satisfaction?

This study will help organizations functioning in the private sector to identify the importance of leadership behaviour of manager on job satisfaction of subordinates. Also, it assesses the role of EI of employees in strengthening the relationship between job satisfaction and leadership behaviour.

Theoretical Background and Hypothesis

Leadership Behaviour

Leadership is not about personality; it's about behaviour that differentiates leaders from non-leaders (Robbins and Judge, 2013). Despite differences in culture, gender, age, and other variables, these "Personal Best" stories revealed similar patterns of behaviour. When leaders are at their personal best there are five core practices common to all: they Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart(Posner, 2003). The content of leadership effectiveness can relate to task performance (e.g., individual or group performance), affective and relational criteria (e.g., satisfaction with the leader), or overall judgments of effectiveness that encompass both task and relational elements (e.g., overall effectiveness of the leader) (Derue, Nahrgang, Wellman, and Humphrey, 2011).

Job Satisfaction

Job satisfaction can be defined as the extent to which a worker is content with the rewards out of his or her job, particularly in terms of intrinsic motivation (Kaiman, 2013). High job satisfaction is a key factor for innovative work environment, and also correlates with positive attitude and high performance at workplace. Job satisfaction is one of the most important and positive job attitudes(Akdol and Arikboga, 2015). The job satisfaction can also be defined as the reaction of an employee's against their occupation or organization (Hackman and Oldham, 1975). "Job satisfaction is a pleasurable or positive emotional state resulting from an appraisal of one's job or job experiences" (Locke, 1976). Job satisfaction is a combination of internal and external motivations, including salary, working conditions, organisational climate, and leadership behaviour (Bahadori M, Tofighi S, Ameriun A, Ravangard R, Abasi A, Jalalian M.,2010; (Gigantesco A, Picardi A, Chiaia E, Balbi A, Morosini P, 2003) . Organizations with satisfied employees are more productive than those with unsatisfied employees (Hellriegel and Slocum, 2007). Churchill, Ford, and Walker (1974) conceptualized job satisfaction, composed of factors such as job itself and the work environment. It results from the perception of their jobs and the degree to which there is good fit between employees and the organization. Emotional experiences in working life are inevitable.

Job satisfaction can further be classified into intrinsic and extrinsic factors. **Intrinsic Job Satisfaction Factors*:*** Herzberg (Herzberg et al., 1959; Herzberg, 1966) termed these as motivating factors that centered on achievement, recognition, responsibility, advancement, growth, and the work itself. Although their absence was not necessarily dissatisfying, when present, they could be a motivational force (Herzberg et al., 1959; Herzberg, 1966). ***Extrinsic Job Satisfaction Factors:*** The hygiene factors are supervision, working conditions, co-workers, pay, policies and procedures, job security, status, and personal life (Herzberg et al., 1959; Herzberg, 1966). They are not necessarily satisfying, but their absence could cause dissatisfaction.

Leadership Behaviour and Job Satisfaction

Managers play a pivotal role in affecting employee job satisfaction and success(Jackson et al., 2013).The results of the study conducted by J. Chiok Foong Loke (2001) showed that job satisfaction was explained maximum by leadership behaviours of managers followed by organizational commitment and productivity. Riaz and Haider (2010) researched the impact leadership behaviour on job satisfaction and career satisfaction and found a positive correlation between leadership behaviour of supervisor and job satisfaction of subordinates. Leader behaviors cannot explain 20% of change on creativity facet of job satisfaction, whereas as 80% of the changes in employee attitude, behavior and motivation related to job satisfaction are observed with effective leadership behavior of manager (Azkdol and Arikboga, 2015).

Communication between the employees and managers, good relationships with colleagues and managers and most importantly having faith in manager develops a working atmosphere where employees feel highly satisfied with the job (Sypniewska, 2014). Faith in manager is termed as *Modeling the way* by Kouzes and Posner (2000). There was a greater emphasis placed on leadership behavior and faith in manager on satisfaction level of employees in both virtual workplace as well as in traditional work settings(Madlock, 2012).

Employees appeared to be mostly satisfied with their immediate superior, working conditions and work itself when they found that leadership behavior of manger is driven by vision of organization (Belias and Koustelios, 2015), known as *Inspired shared vision*(Kouzes and Posner, 2000). Inspired shared vision style of leadership behaviour results in high productivity and satisfaction of employees(Gupta, Singh, and Khatri, 2013).

Leader enhances employee performance and satisfaction by matching his behavior with subordinates' characteristics along with work settings(Malik, 2013). Thus, leaders foster collaboration and build spirited teams. They strengthen others, making each person feel capable and powerful and such trait is termed as *Enable Others to Act* (Kouzes and Posner, 2000).

Motivation is a valuable "tool" used by managers to obtain for increased performance. The performance primarily refers to the objectives of the organization in optimal costs (minimized) and quality (high) (Gîlmeanu, 2015). There is a positive and significant relationship observed between job satisfaction and working conditions(Amin, 2015) of employees, makes to accomplishing extraordinary things in organizations through hard work. Such leadership behavior which makes employees feel like heroes is termed as *Encourage the Heart* by Kouzes and Posner (2000).

Nasina Mat Desa (2011) tested relations between perceived leadership behaviour and job satisfaction of bank officers are affected by the type of task variety, task autonomy and task structure that subordinates performed. It was found that task structure and task variety did not moderate the relationship between leadership and job satisfaction.

Emotional Intelligence (EI)

EI is "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships" (Goleman, 1998a, p.375). Gupta, Kumar and Singh (2014) defined EI as "the ability of an individual to appropriately and successfully respond to a vast variety of emotional stimuli being elicited from the inner self and immediate environment. Cooper and Sawaf (1997) define EI as "the ability to sense, understand, and effectively apply the power and acumen of emotions as a source of human energy, information, connection and influence." Hence we may define EI as an ability to use and manage emotions appropriately based on the situation and to manage the relationship with others.

High EI of employees can lead to various work related outcomes as well, and one of them is job satisfaction (Bachman et al., 2000; Wong and Law, 2002; and Prati et al., 2003). EI has a positive impact on job satisfaction; the higher the EI, the higher will be his satisfaction from the job (Afolabi et al., 2010). EI as an individual difference variable that incorporates a broad range of abilities explaining the way individuals detect, understand and manage their own and others' emotions (Mayer & Salovey, 1997).

Relationship between Leadership Behaviour and Job Satisfaction mediated by Emotional Intelligence.

Barbara A. Alston, Barbara R. Dastoor and Josephine Sosa-Fey (2010) investigated the relationship between EI and leadership among HR professionals of a Fortune 500 company and to examine its impact on the success of leadership practice. The results suggested that higher levels of individual EI transform into better leadership practices.

Elias and George (2012) examined the relationship between EI and job satisfaction and how designation and marital status affected one's EI and job satisfaction. Data from 208 respondents working in an electronics firm situated in India was collected. The results showed that EI and job satisfaction have a high positive correlation.

Joshi, Suman and Sharma (2015) examined the relationship between EI and job satisfaction of faculty members teaching in engineering and management colleges. Data collected from 212 faculty members showed that EI has a strong correlation with job satisfaction in academic setup.

Molly Mathew and K. S. Gupta (2015) made an attempt to develop a conceptual framework of the relationship between Leadership Behaviour and Emotional Intelligence. Its aim was to examine the extent to which leadership behaviour and El are related. This relationship was empirically examined among 300 leaders from different industries using Six Seconds International Emotional Intelligence and several leadership inventories. The study showed that leadership behaviour and emotional intelligence are related.

On the basis of above mentioned literature review the following hypothesis for the study can be formulated:

H_{01}: Job satisfaction of subordinates depends on leadership behaviour of his/her manager.

H_{02}: Emotional Intelligence can mediate relationship between leadership behaviour of manager and job satisfaction of subordinates.

Methodology

Study Instrument

Data was collected with the help of questionnaires to evaluate the respondents' views about their job satisfaction, their EI level and their managers' leadership behaviour. For measuring EI, participants responded to a 16-item measure of EI (WLEIS, Wong and Law, 2002). It's a popular self-report measure of EI. The scale comprises 4 dimensions: (i) Self-emotion appraisal; (ii) Others' emotion appraisal; (iii) Regulation of emotion; and (iv) Use of emotion(Joshi, Suman, & Sharma, 2015). Job satisfaction was measured using a 20-item measure of Minnesota Satisfaction Questionnaire (short-form) (Weiss, Dawis, 1967). The short-form consists of three scales- Extrinsic Satisfaction, Intrinsic Satisfaction and General Satisfaction.

Leadership Practice Inventory (LPI) recorded views of participants about their supervisors. It comprises 5 types of leadership practices, namely, modeling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart (Kouzes and Posner, 2000).The questionnaire contained personal information in the beginning. The questionnaire consisted of three parts- Leadership, EI and Job Satisfaction but which part corresponded to which construct was not disclosed to the respondents. Part-1 had 30 questions, Part-2 had 16 and Part-3 had 20 questions.

Research design and Sampling

A cross-sectional survey design was used for this study (Gupta, Kumar, and Singh, 2014). The population of study consisted of all full-time professionals working in the private sector (IT and ITES) in Delhi and NCR, India. Initially, judgment sampling was undertaken which was followed by snowball sampling technique. To conduct the study ethically, the rights to anonymity, confidentiality and informed consent were observed. Participants were informed about the purpose of the study, the procedure that would be used to collect the data, and assured that data collected

will be used only for statistical purposes. Sample taken was 250 but only 124 usable questionnaires were obtained, response rate was 49.6%.Amongst them 64.5% respondents were male and 35.5% were female. 46.8% of the respondents were of 20-15 years of age and 29% were of 26-30 years and rest all belongs to higher age brackets.

Analysis and Findings

Data was collected from 124 respondents using questionnaire. The data was then entered in Microsoft Excel-2007 and then transferred to Statistical Package for Social Sciences (SPSS 19.0). Using factor analysis (Principal axis factoring with Varimax rotation), factors were extracted. Reliability (Cronbach's alpha) of the study was tested for individual items obtained as a result of factor analysis and then those factors were plotted against measures of Job Satisfaction(Joshi et al., 2015) using Amos 20.

Exploratory Factor Analysis: Primary purpose of factor analysis is to define the underlying structure among the variables in the analysis (Hair et.al, 2010). The questionnaire was subjected to 'item validation' (Pattanayak et al., 2002) through factor analysis, to determine the internal structure of the variables under study. Set of 12 factors namely - *Model the way, Inspire a shared vision, Challenge the process, Enable others to act, Encourage the heart, Intrinsic Satisfaction, Extrinsic Satisfaction, General Satisfaction, Self-emotion appraisal, Others' emotion appraisal, Use of emotion and Regulation of emotion* - had been derived using exploratory factor analysis from the observed variables in this study. The principal axis factoring method with varimax rotation was used to generate factors (Joshi et al., 2015).
Only those factors have been taken into consideration whose Eigen values are 1 or greater (Hair et al, 2010) and total variance explained by all obtained factors is 71.750%. Items having poor factor loadings (less than .5) were excluded from factor analysis. As a result 12 summated scales (Hair et al, 2010) were obtained and we checked for internal consistency of the measurement model by computing composite reliability (V. Gupta, Singh, and Khatri, 2013). Cronbach alpha score for all summated scales comes out to be in the range of.655 to .921 which is greater than the benchmark of .60 recommended by Fornell and Larcker (1981). Refer **Table 1** for results of factor analysis and reliability of summated scales.

The obtained factors were in accordance with the theory, so we grouped them and assign latent constructs shown in **Table 2**. These constructs further modeled using Structure Equation Modeling (SEM).

Confirmatory Factor Analysis (CFA): Using Amos 20, two CFAs were run and as a result Structural Equation Models were obtained – **Model 1**(Figure 1) and **Model 2** (Figure 2). Following model fit indices are also obtained from Amos 20 - Chi-Squared test, RMSEA, GFI, AGFI, the RMR and the SRMR (Hooper, Coughlan, and Mullen, 2008).

Model 1: Objective of this model is to find the impact of leadership behaviour of manager on job satisfaction of subordinates. Path loading (Figure 1) between leadership behaviour and job satisfaction is .43 which reveals that there is a reasonably good association between the constructs. Also for the model value of Chi-square = 102.825 with degrees of freedom = 19 at probability level = .000. Hence it can be interpreted that job satisfaction of subordinates depends on leadership behaviour of his/her manager (H01 is accepted). Model obtained is a perfect fit as it complies with standard values of model fit indices **(Table 3)**.

Model 2: Second model's objective was to measure the impact of leadership behaviour of manager on job satisfaction of employee when EI is considered as mediating variable. Result reveals that in presence of EI, leadership behaviour has a correlation of 0.45 with Job Satisfaction with Chi-square value = 220.015 at degrees of freedom = 51 at probability level = .000. Hence it can be interpreted that Emotional Intelligence can mediate relationship between leadership behaviour of manager and job satisfaction of subordinates. Obtained model as a result of Structure Equation Modeling was perfect fit as all model fit indices lies within the standard range **(Table 3)**.

Table 1: Factor Analysis and Reliability Analysis of Summated Scales

Factors	Question No.	Factors												Eigen Values	% of Variance	Reliability
		1	2	3	4	5	6	7	8	9	10	11	12			
MODELTHE WAY	Q1.6	0.538												23.144	25.775	0.826
	Q1.11	0.755														
	Q1.16	0.652														
	Q1.26	0.762														
	Q1.21	0.701														
INSPIRE A SHARED VISION	Q1.7		0.621											6.67	7.752	0.873
	Q1.12		0.804													
	Q1.17		0.733													
	Q1.22		0.666													
	Q1.27		0.735													
CHALLENGE THE PROCESS	Q1.3			0.524										3.343	7.275	0.835
	Q1.8			0.794												
	Q1.13			0.67												
	Q1.18			0.745												
	Q1.23			0.649												
	Q1.28			0.57												
ENABLE OTHERS TO ACT	Q1.4				0.656									2.852	5.048	0.897
	Q1.9				0.682											
	Q1.14				0.585											
	Q1.19				0.649											
	Q1.24				0.699											
	Q1.29				0.817											
ENCOURAGE THE HEART	Q1.10					0.728								2.756	4.203	0.884
	Q1.5					0.6										
	Q1.15					0.77										
	Q1.20					0.728										
	Q1.25					0.733										
	Q1.30					0.747										

INTRINSIC SATISFACTION	Q2.2						0.577							2.256	4.117	0.877
	Q2.3						0.58									
	Q2.4						0.503									
	Q2.7						0.556									
	Q2.8						0.642									
	Q2.9						0.546									
	Q2.11						0.571									
	Q2.15						0.545									
	Q2.16						0.577									
	Q2.20						0.517									
EXTRINSIC SATISFACTION	Q2.5							0.591						1.906	4.037	0.783
	Q2.6							0.589								
	Q2.12							0.597								
	Q2.13							0.752								
	Q2.14							0.68								
GENERAL SATISFACTION	Q2.2								0.577					1.815	2.872	0.921
	Q2.3								0.58							
	Q2.4								0.503							
	Q2.7								0.556							
	Q2.8								0.642							
	Q2.9								0.546							
	Q2.11								0.571							
	Q2.15								0.545							
	Q2.16								0.577							
	Q2.20								0.517							
	Q2.5								0.591							
	Q2.6								0.589							
	Q2.12								0.597							
	Q2.13								0.752							
	Q2.14								0.68							
	Q2.17								0.702							

SELF-EMOTION APPRAISAL	Q3.1									0.601				1.63	2.816	0.812
	Q3.5									0.708						
	Q3.9									0.605						
	Q3.13									0.848						
OTHERS' EMOTION APPRAISAL	Q3.2										0.521			1.558	2.794	0.655
	Q3.6										0.703					
	Q3.10										0.63					
	Q3.14										0.593					
USE OF EMOTION	Q3.3											0.745		1.436	2.692	0.684
	Q3.7											0.711				
	Q3.11											0.63				
	Q3.15											0.583				
REGULATION OF EMOTION	Q3.8												0.73	1.424	2.372	0.758
	Q3.12												0.786			
	Q3.16												0.53			
	Q3.4												0.745			

Table 2:Summary of Latent Constructs

SL. No	Goodness of fit measure	Model without Mediating variable	Model with Mediating Variable	Level of Acceptance
1.	Degree of freedom (df)	19	51	
2.	p-value	.000	.000	
3.	Chi-square	102.825	220.015	
4.	Normed chi-square ($\chi 2/df$)	5.41	4.31	5.0 – 2.0 (Wheaton et al, 19 Tabachnick and Fidell, 2007
5.	RMSEA (Root mean square error of approximation)	.189	.164	0-0.8(MacCallum et al, 199 McQuitty, 2004)
6.	SRMR (standardised root mean square residual)	.109	.084	0 – 1 (Byrne, 1998; Diamantopoulos and Siguav 2000)
7.	Goodness of Fit Index (GFI)	.857	.793	0 – 1 (Tabachnick and Fidel 2007;Hooper et al., 2008)
8.	Adjusted Goodness of Fit Index (AGFI)	.729	.683	0 – 1 (Tabachnick and Fidel 2007; Hooper et al., 2008)
9.	Comparative Fit Index (CFI)	.947	.909	CFI ⩾0.90 (Hu and Bentler
10.	Normed Fit Index (NFI)	.936	.886	NFI ⩾.95 (Hu and Bentler,

Table 3: Model Fit Indices

SL. No	Goodness of fit measur e	Model without Mediating v ariable	Model with Mediating Variable	Level of Acceptance
1.	Degree of freedom (df)	19	51	
2.	p-value	.000	.000	
3.	Chi-square	102.825	220.015	
4.	Normed chi-square (χ2/df)	5.41	4.31	5.0 – 2.0 (Wheaton et al, 1977; Tabachnick and Fidell, 2007)
5.	RMSEA (Root mean square error of approximation)	.189	.164	0-0.8(MacCallum et al, 1996; McQuitty, 2004)
6.	SRMR (standardised root mean square residual)	.109	.084	0 – 1 (Byrne, 1998; Diamantopoulos and Siguaw, 2000)
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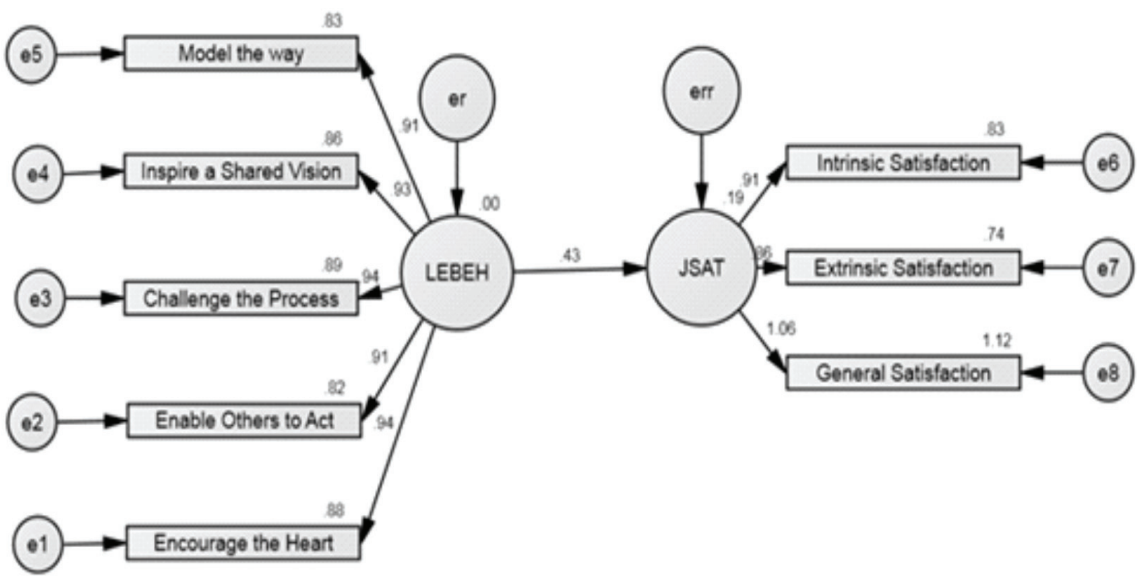
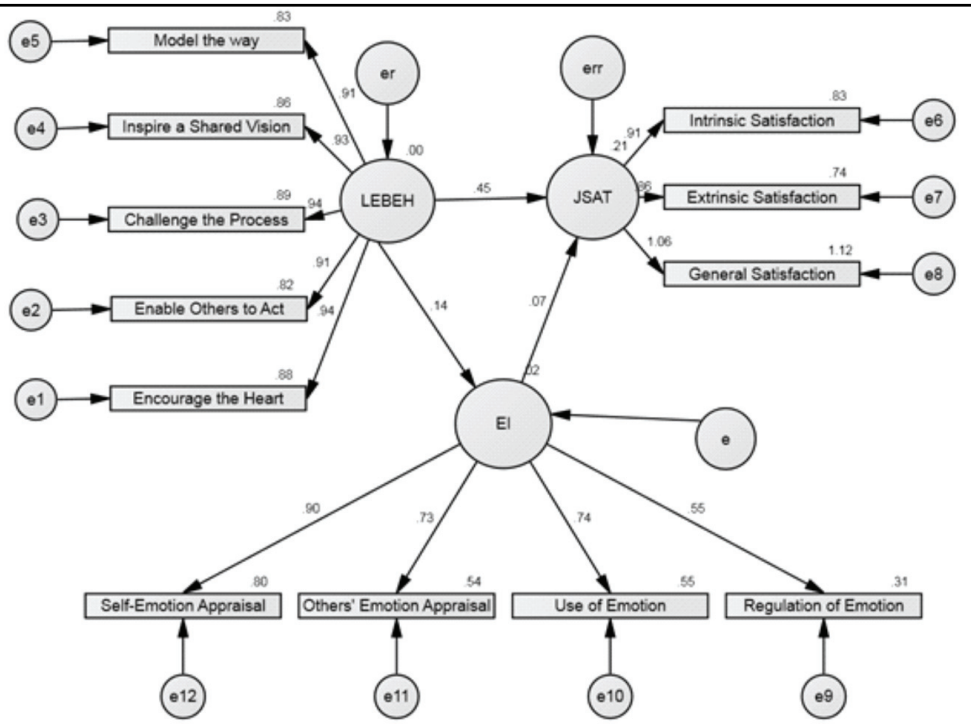
9.	Comparative Fit Index (CFI)	.947	.909	CFI ⩾0.90 (Hu and Bentler,1999)



Note: LEBEH: Leadership Behaviour, JSAT: Job Satisfaction

Figure 1: Path Model showing the impact of leadership behaviour on job satisfaction



Note: LEBEH: Leadership Behaviour, JSAT: Job Satisfaction

Figure 2: Path Model showing the impact of leadership behaviour on job satisfaction with EI as mediating variable.

Discussion

Leadership, the most popular and critical topic of interest for organizations in today's time, is the single most important human capital issue that organizations face. Hence, leadership practised in the early years of one's career will pave way in fulfilling organizations' commitment towards its goals and employees. This study empirically tested the impact of leadership behaviour of manager on job satisfaction of subordinates with and without EI taken as mediating variable.

In the light of findings of this research, it was concluded that there is significant strong relationship between leadership behaviour and job satisfaction (0.43). However; it can also be seen that presence of moderator EI strengthens this relationship by .02 units. Although this enhancement is very low but a valid reason for this may be sample size.

Job satisfaction has considerably good loading with(.45) leadership behavior. Intrinsic Job satisfaction has maximum impact (.91) on latent construct job satisfaction. This shows that achievement, recognition, responsibility, advancement and growth (Herzberg et al., 1959; Herzberg, 1966) in profession gives maximum satisfaction from the job to an employee. But the study was conducted amongst employees of service industry; result may vary as the same is conducted among blue collar workers of production industry. So future researches can focus for studying impact of leadership behaviour of supervisor on job satisfaction of employees(blue collar workers).

Along with EI there can be various other organizational factors which may moderate relationship between leadership behaviour and job satisfaction within organizational settings, so future researches can be conducted by considering those variables such as workplace spirituality. The major and most important outcomes of workplace spirituality in any organization can be – Job satisfaction, both intrinsic and extrinsic (Joshi and Jain, 2016).

With few limitations like poor response rate, social desirability factors and surveys biases this study will help organizations functioning in the private sector to identify the importance of EI in improving job satisfaction of employees and leadership practices. They can use the same scales used in this study for convenience.

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Empowering R&D Professionals in THSTI : Insights and Interventions

Ms. Pallavi Tyagi and Dr. Hardik Shah

Abstract

The paper discusses issues of the empowerment for R&D professionals. It explores the organizational practices important for empowering R&D professionals with reference to its two broad dimensions i.e., psychological and structural empowerment. In many organizations, employee empowerment practices still seem to be disconnected from the employee as well as organizational side and these organizations have only a faint idea of the drivers behind employee empowerment. The paper provides insights into prior literature on employee empowerment, and its effect on R and D professionals, discusses different empowerment models and how different HR sub-system/practices affected the empowerment. Six in-depth interviews have been conducted with different departmental heads of THSTI, Faridabad. Secondary data was also collected at THSTI. Based on interview data and secondary data on people process, interventions were suggested..

Keywords: *Employee Empowerment, Psychological Empowerment, Structural Empowerment, R&D Professionals, Organizational interventions.*

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IBEF report (April, 2016) states that India is one of the top 12 biotech destinations in the world and it ranks third in the Asia-Pacific region. Indian government escalates expenditure in this sector resulting in multiplication of the growth of the sector. By 2017, the government hopes to increase in size of biotech sector to USD 11.6 billion, considering growing demand, intensive R&D activities and strong government initiatives. Various scientists, engineers, management graduates, statisticians employed in this sector contributed to its growth. A huge number of Research and Development (R&D) professionals have been effectively contributing to the scientific development of our country for the last many decades. Business dictionary defines R&D as a systematic activity that aims at developing solutions to the problem or creating new knowledge. By nature, R&D Professionals are highly educated knowledge workers (Manolopoulos, 2006). The most popular and used measure of R&D effectiveness does not focus upon personnel management dimension rather it focuses upon a number of projects going on, total patents filed and awarded, or pending

and R&D spending (Bremser & Barsky, 2004). In order to manage, maintain, and nurture their knowledge and creativity, organizations should take efficient and effective measures for empowerment of R&D professionals. Generally, empowerment literature defines it in two different facets i.e., psychological and structural, and this paper suggests a balanced approach to manage organizational productivity and performance. A bunch of people with management (HR) and organizational initiatives have been employed to empower and motivate R&D professionals in THSTI. As R&D professionals always seek for continuous motivation and empowerment to outperform the role, they must be empowered continuously. The paper explores the meaning of employee empowerment for R&D professionals, issues or concerns, and interventions to provide them empowerment in R&D set up.

Employee empowerment

Empowerment is defined as "an intentional and continuous process focus upon local communication and involves mutual respect, critical reflection, caring, and group participation, through which people who are lacking an alike share of resources earn greater access to and control over those resources" (Zimmerman, 2000). Employee empowerment is the vital terminology for R&D professionals. It is key to success for an organization if practised in an efficient manner. Employee empowerment has a different significance for each type of organization and employees so as for R&D professionals. It has often been noticed in an R&D organisation that turnover rate is lower than that of other industries, but the loss of one employee can be highly expensive because R&D professionals are so precious to the concerned organisation. It is vital to understand the causes of turnover from the employee's as well as organisation's point of view. Causes of turnover may vary by organisation and industry, but one survey of scientific and technical workers, suggests that employee turnover is affected by 5 types of rewards: job content, direct financial (cash), benefits, careers, and affiliation. Therapies to reduce or manage turnover in R&D may vary from what might be used for other employees in the same organisation. In order to give a sense of empowerment, organisation must work in order to curb down internal organizational factors that cause dissatisfaction (Kochanski & Lenford, 2001).

According to Conger and Kanungo (1988), employee empowerment defines working arrangements which engage the empowered at an emotional level. They distinguish between concepts of empowerment which are relational and motivational. This study considers both relational and motivational aspects of empowerment in the form of psychological and structural facets of empowerment and provided organisational and HR interventions for improving employee productivity and organizational performance.

Empowerment process is defined in terms of alterations in cognitive variables that help in determining motivation in workers. They relate motivation to empowerment. R&D professionals are motivated by intrinsic traits of motivation (Amabile & Gryskiewicz, 1988). At individual level of analysis, present literature broadly defines empowerment from two perspectives: one is *Psychological* and other one is *Structural* (some authors also refer it as socio-structural, environmental).

Psychological Empowerment

Spreitzer (1995) determines EE as a motivational construct. Spritzer focuses on psychological side of empowerment. Motivation is inseparable to psychology. He expresses employee empowerment in terms of four cognitions: meaning, competence, self-determination, and impact. Psychological empowerment is something related to the perception of an employee. Zimmerman (1995) further proposes that psychological empowerment involves two important characteristics, first is individual's interaction with their environment, and second is intrapersonal perception of empowerment. However, degree and definition of psychological empowerment vary from area to area, and industry to industry. To survive effectively in today's competitive and rapidly changing R&D environment, R&D professionals must acquire understanding on sharing knowledge effectively. In the year 1997, Liu and Liu identified some psychological and organizational variables like perceived self-efficacy, willingness to share, training and development activities etc., which may support in understanding and determining individuals' engagement in intra-organizational knowledge sharing and also the effect of above mentioned variables on knowledge sharing. In the same year that is 1997, Johnson and Thurstone progresses in the area by developing an 'Empowerment Strategy Grid'

which helps organizational leaders to overcome the barriers takes place during implementation of empowerment program effectively. The anticipated grid's vertical continuum illustrates transitions from disempowered to empowered and horizontal continuum illustrate the themes of the empowerment to dis empowerment. It had four quadrants: empowering manager, empowered work team, platoons, and automation.

One problem continuously follows psychological approach of empowerment and it is its individual centric nature. A comprehensive implementation of the empowerment at work calls for an assimilation of both psychological and structural approaches. Hence, for a complete understanding of the concept, structural facet of empowerment is desired.

Structural empowerment

Structural empowerment often allows an employee to participate in organizational decision making access to organizational resources. Structural empowerment is a management process which allows an employee to access organizational structures and have a say in organization's decision-making processes to enhance worker performance. Structural characteristics of the work place are generally considered more important in achieving empowerment and took primacy over the personal characteristics of an employee (Conger and Kanungo 1988). Knowledge is always an important resource of an organization. It starts with the person who possesses it originally (Nonaka and Takeuchi 1995; Nonaka and Konno 1998). R&D Professionals are widely accepted and categorized as knowledge workers and for managing knowledge workers, organisations need to practise knowledge management practices.

Work processes adopted by R&D professionals are defined by complex system designs, applying knowledge for the quick advances in technology, and robust competition for sustaining and maintaining innovation (Assimakopoulos and Yan 2006). Hence, it requires a strong empowerment framework to support their knowledge based work processes. Sharing of knowledge and information are critical for an R&D professional because handling an issue may require strong knowledge base and expertise. The knowledge-sharing patterns of R&D professionals are quite different from those of traditional workers (Garud and Nayyar 1994; Blackler 1995). Knowledge management practices for R&D professionals involve developing, transferring, transmitting, storing and applying knowledge, and also receive real information from organization to respond and make the right choices, in order to attain the organization's objectives.

Different Empowerment Models affecting HR Sub-Systems

Time to time models of empowerment are developed and tested in order to analyze their efficacy and effect on organization's well-being. Different models reflected the importance of empowerment practices by strengthening various HR subsystems. It has been noticed that R&D professionals are creative and knowledge driven (Manolopoulos, 2006). In order to manage their knowledge and creativity various remedies should be planned and planted. Currently, for generating new products, focus is upon cooperation between R&D and other organizational functions (Griffin and Hauser, 1996). This paper focuses on two dimensions of empowerment: psychological and structural.

Various models of empowerment have developed in past keeping in view psychological dimension. Sprietzer (1995) comes up with the widely acclaimed and discussed model of empowerment which defines empowerment in terms of four different dimensions i.e., meaningfulness, self-determination, impact, and competence. *Meaningfulness refers to* a fit between the needs of one's work role and one's beliefs, values and behaviors. *Self-determination* reflects a sense of choice in initiating and regulating one's actions and a sense of autonomy or choice over the initiation and continuation of work behavior and processes (e.g., making work related decisions, work methods, pace, and effort; Bell and Staw, 1989, cited in Spreitzer, 2007). *Impact* is the degree to which one can influence strategic, administrative, or operating outcomes at work (Ashforth, 1989, cited in Spreitzer, 2007). *Competence* also called self-efficacy, is specific to one's work, or a belief in one's capability to perform work activities with skill. (Ambad and Bahron, 2012). This model directly affects the self-motivation of an employee at organisation. Seibert et al. (2004) developed a multidimensional model of empowerment which stresses on the point that empowerment climate was shown to be empirically distinct from psychological empowerment and positively related to manager ratings of work-unit performance. R&D professionals are highly creative and productive, if they are given freedom and autonomy to work

on newer products/services. They prefer to have clear role alignment which helps to create an organizational impact. Results of study support the multidimensional conceptualization and suggest that empowerment climate is an important aspect of an organization's effort to boost employees' experiences of psychological empowerment.

From structural empowerment point of view, there is a great requirement of cooperation between R&D organisation and employees (i.e., R&D professional), a sense of belongingness must exist among employees. Another important thing from organizational point of view to consider, is cross-functional effectiveness. The degree to which employees of an R&D function interrelates and shares important evidence and information with other functions (Song et al., 1997), it increases innovativeness (De Clercq, Thongpapanl, and Dimov, 2011) and new product performance at workplace. Sharing of information is one of the important components of structural empowerment scale developed by Laschinger et al. (2001). However, Magnet model of structural empowerment explains it in a more descriptive manner. Structural empowerment is one of the five elements of the Magnet Model. Other elements of model are transformational leadership; exemplary professional practice; new knowledge, innovations, and improvements; and empirical outcomes (Moore, 2014). Structural empowerment under this model encompasses five factors namely, organisation structure, personnel policies and procedures, community and health care organisations, image of nursing and professional development. Organization structure is a broad area in itself and comprises a range of HR subsystems such as participative management, job enrichment, meaningful organisational goals, less bureaucracy etc.(Schroeter,2010). Some studies found that R&D professionals felt empowered when they work in self-managed teams with lean hierarchy (Park, 2012). In order to explore these two facets of empowerment, this study has been conducted at THSTI (refer annexure-I).

It has been observed that employee empowerment practices lead toward employee satisfaction and improved organizational productivity and performance. Practices related to employee well-being, motivate and inspire R&D professionals to efficiently work and perform. Effective mentorship and maintaining motivation levels is necessary for psychological empowerment. An understanding mentor and good motivation incentive will help in boosting moral at work. Empowerment call for a strong fit between company goals and employees roles within those goals, which is rare to find. In order to build that perfect fit organisation needs to introduce and implement certain HR practices and policies such as job rotation, inter-departmental transfers, open and free communication with seniors, opportunity to learn from mistakes, flexibility in career progression. In the highly competitive scientific environment, employee empowerment is essential for R&D professionals to be more creative, productive, and gaining competitive advantages for 360-degree development of self and institute. R&D professionals should be empowered because only empowerment will help the institute in developing a culture which reflects employee commitment in order to grow, survive, compete, and face challenges posed by economy.

Apart from psychological facet, performance and productivity of R&D professionals have been found to be affected by number of workplace structural factors including knowledge sharing, knowledge sharing patterns, sharing of information, and workplace characteristics. (Conger and Kanungo 1988; Nonaka and Takeuchi 1995; Nonaka and Konno 1998), we argue that it is important for institute to implement empowerment practices with a perfect blend of both empowerment facets. Structurally, there should be fair access to organizational resources, recognition and appreciation, adequate positioning in organisation structure i.e., right person at right job, participative management and participative decision-making to empower R&D professional. Based on the review, the paper has made an attempt to find answers to questions – which organizational practices are important to psychologically empower R&D professionals? Which organizational practices are important to structurally empower R&D professionals? And how different HR sub-systems affect the employee empowerment practices?

Research Methodology:

In order to answer these questions under study, the paper has focused on following objectives:

Objectives of the Study comprise:

- To explore and understand the factors affecting psychologically empowerment R&D professionals.
- To explore and understand the factors affecting structural empowerment R&D professionals.

- To explore organizational and HR practices required to enhance the psychological & structural empowerment for R and D professionals.

Methods of Data Collection: The research has been conducted at THSTI, Faridabad, Haryana, India. THSTI is a Government Bio-tech institute funded by Department of Bio-technology. Primary data were collected, using interview method. Six in-depth interviews have been conducted at six different departments of R&D institute with their respective departmental heads. Duration of these interviews ranges from 30-4 5minutes each. The aim of conducting interviews is to understand different viewpoints about attracting, motivating and empowering employees. Data collected through interviews are analyzed by using content analysis technique. Data collected through interviews and their analysis have helped in developing suitable HR policies and interventions for R and D professionals.

Qualitative Data Analysis:

In order to better understand R&D professional at workplace, content analysis of interviews has been done. Insights from interviews have helped to understand effectively and integrate their aspirations and motivation with overall business objectives of the organization. Below are the excerpts from the contents of interviews**:**

- ✓ R&D professionals require clear role and job description while they work which helps them in focusing upon their area and give them a creative boost.
- ✓ Successful connection with other stakeholders especially general public is utmost for R&D professionals because they are directly contributing in public welfare. An R&D professional is only one who can translate effectively how pure science is useful for a layman. Short public meetings and session could be organized to exchange ideas.
- ✓ R&D professionals are loyal towards their own profession and career. They take their career decision smartly to fulfill their ambitiousness. In order to support their career decisions and ambitions inclusive approach is followed and a sense of ownership is created.
- ✓ Quite a few interesting points came up during one of the discussions at the institute that they often interact with top management for assessing various organizational resources, but function wise they are hierarchy-free organization. They value merit over position and respect the idea even it originated from researcher at lower level in the organization.
- ✓ They prefer to lead in soft way i.e., lead from behind. So people who are left behind can be pushed forward to participate and perform. It's not very hierarchical one, it's more of friendly mixture of interactions between seniors and juniors.
- ✓ One of the interviewees suggested that empowerment starts right after the recruitment and placement of employee at work. An employee is most empowered if he's placed at area of his interest. Meaningful work is most important to empower R&D professional at job with right type of work.
- ✓ Participative decision-making is the factor which is mentioned almost by all departmental heads in all 6 interviews. They value participative approach to encourage their subordinates in labs or in meeting rooms, juniors have been given an opportunity to express their ideas; however, this participation is restricted to certain area only.
- ✓ "Official outings, picnics and get together are also played vital role for improving bonding among employees. Science people also likes to enjoy and interact informally sometimes''- adds another interviewee. These small outings strengthen team spirit and works as a team building activity for lab mates.
- ✓ Quotes that psychologically empower R&D professionals:
  - o "Propagating tangible scientific outputs," "thoughtful scientific processes"
  - o "Be innovative and encouragement for becoming entrepreneur."
  - o "Catalyze creative spirit"
  - o "Freedom to express"
  - o "Merit above position"

- ✓ Quotes that structurally empower R&D professionals:
  - o "Leading from behind".
  - o "Inclusiveness", "develop partnership with companies"
  - o "Employee gets ownership of this place".
  - o "Function -wise, hierarchy-free organization".
- ✓ Rewards they like: full access to organizational resources, availability of funds, full decision making authority of their area of concern. Preferred methods of communication: e-mails, land line telephonic conversations using intercom, text messages.

In interviews, it was also found that departmental heads to whom research is extended having positive views and opinions about employee empowerment practices but unable to list its importance for knowledge workers. It was interesting to explore various empowerment practices at institute. They advocated effective training programs for continuous nurturing, the best administrative processes, speedy decision-making, smooth funding process etc.

HR Interventions into Psychologically Empowered R&D professionals:

Talent sourcing is an easy task for government organisations citing benefits attached with government jobs but talent management is very critical and it is daunting for the R&D institutes. Retaining knowledge is a tedious task sometimes. Actively engaging employees is one of the key challenges for managers and business leaders. It is also argued by practitioners and academicians that engage workforce leads to competitive advantage for the organisation. One of the Hay Group reports (2010) found that companies with high engagement level grow 4.5 times faster than those with low engagement levels. Perrin (2007) found that companies with the highest percentage of engaged employees will have 19% increase in operating income and 28% year to year increase in earnings per share when compared with companies with the lowest percentage of employee engagement. Based on interview and interactions with different Departmental heads, following HR interventions were suggested for psychological empowerment:

- ✓ Organisations need to make work interesting continuous basis. They need to establish effective process of mentorship to have considerate and sympathetic interactions with the superior/boss. Millennials employees are to be allowed for the sabbatical leave as they would want to pursue higher education or update their skills/ competencies academically after getting 3-5 years of work experience.
- ✓ Organisations need to promote and encourage interdepartmental transfers and multiple career ladders as they want to experience different department so as to have overall knowledge. They must provide an open culture where they can communicate with their seniors, their ideas openly.
- ✓ Organisations must provide specific feedback on implementation which will improve themselves and learn from mistakes. Effective horizontal and vertical communication for better clarity on what is expected out of the given task/work. As they prefer immediate promotions as compared with slow growth, the HR policies should be more attractive and creative to accommodate the flexibility and fast-track career progression.
- ✓ The role of performance management system (PMS) is very critical and it must be designed and executed effectively to communicate regularly about how they are performing. The PMS must be equitable and unbiased in terms of performance based pay (PRP) as equity and fairness are valued very high by the selected sample group. The PMS need to base on strong performance analysis and performance metrics.

As R&D professionals are better motivated by intrinsic motivators, appreciation could be given in terms of providing more responsibility, certification of appreciation, appreciating by words, a meal with the president or chairman etc. They also need flexibility in term of office timings as they would prefer to fulfill some personal commitments at a given point in time. Providing flexible working hours as they would not mind to work for long working hours when they are under deadlines may increase the engagement level. It is also suggested that they should be allowed to have small breaks as they don't prefer to work continuously.

Usually institutes and firms focuses upon new product development but tracking new product development (NPD) is equally important in R&D.

Selected Benchmarking Practices for NPD which helps in empowering R&D professionals are as follows:

- It has been noticed, that over 84% more innovative projects use multi-functional teams and approximately 40-50% less innovative projects use multi-functional teams. The best practice institute will extensively use multi-functional teams for these less innovative projects.
- The best practice institute develop a mechanism to measure NPD performance time to time.
- Manage NPD portfolio (Griffin, 1997).

HR interventions Structurally empowered R&D professionals

There are hundreds of touch points where HR can engage on a personal and professional level in order to create sustenance and organization growth. HR needs to understand their aspirations and motivational needs in order to tailor-make HR interventions to engage them. HR needs to take a holistic view for each employee, creating an integrated talent management strategy. As findings suggested that employees aspire to have high variety, technical & functional competence and managerial roles, while they are motivated by equitable pay, advancement, considerate and sympathetic supervisor, etc. HR needs to work out for interventions that will satisfy make them actively engaged. Suggested HR interventions would help the organisation to attract and keep professionals in high spirit. It is firmly believed that, if the organisation would nurture the spark and strengthens of knowledge workers, it could take a big leap towards sustainability and growth.

- ✓ Interaction with departmental heads at THSTI indicates that full access to resources is the critical factor for empowering professionals. E.g.- for a successful NPD, they require full support (tangible and visible) of top management in terms of providing adequate resources and funding, and stable strategies (Griffin, 1997).
- ✓ Recognition in their area or among colleagues is another important factor for structurally empower R&D professionals. Recognition of achievement is a meaningful reward for R&D professionals (Geraci, 1994). It will fill them up with a sense of ownership, authority and accountability. Professional development and the staying up-to-date are some other factors important for their motivation.
- ✓ Adequate positioning in organization hierarchy is important for sustaining motivation level. It is important that high performing technical professionals would acquire top technical positions Allen and Katz (1986).
- ✓ Based on the interaction with one interviewee, we agree on 'participative management' perspective and strongly recommend it to empower R&D professionals. It not only helps in building a climate of trust between senior and junior colleagues but also establish harmonious relationships.

Conclusion and Discussion:

After studying two different dimensions of empowerment at THSTI, it was found that the institute passively has been working in the area of empowerment and it has strong policies and rules for employee welfare but with a complex procedure to implement. The study suggested that apart from only implementing government policies, departmental heads must consider numerous measures in their respective departments for effectively empowering employees such as: establish transparent goals and objectives, clear-cut responsibilities and authority for significant activities; efficient employee involvement; re-align routine processes and systems consistent with empowerment practices; listening different views with patience and tactfully expressing concern about a suggestion; eliminating needless controls and administrative constraints ; and making out important contributions and ensuring appropriate rewards following new responsibilities. If R&D institutes fail to step up and command the approaches that enforce empowerment policies and practices, they may be hijacked by complex processes that quickly undermine their hard work of creating cordial environment, fair distribution of work, autonomy in decision making concerning their jobs, giving feedback and recognition, and having perfect fit between organizational mission and values and personal needs.

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Annexture-1

THSTI is an autonomous institute of Department of Biotechnology working under Ministry of Science and Technology, Government of India and was established in year 2009. The institute is working in the area of biotechnology and aims translating scientific knowledge for public welfare. The institute is situated at Faridabad (Haryana State), India. THSTI comprises various intramural and one extramural center, in order to perform its key objectives and serve the public welfare like Vaccine and Infectious Diseases Research Centre (VIDRC), Pediatric Biology Centre (PBC), Centre for Bio design and Diagnostic (CBD), Drug Discovery Research Centre (DDRC), Centre for Human Microbial Ecology (CHME), HIV Vaccine Translational Research (HVTR) and Clinical Development Service Agency (CDSA). However administrative department of the institute is contributing effectively in the growth of institute and hence it's an integral part of our research.

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Electronic Payment Systems : Role of Demographics

Thirupathi Chellapalli and D. V. Srinivas Kumar

Abstract

The way electronic banking transactions get conducted changes a lot compared to the traditional way of doing banking transactions. Given the fact that dependency on electronic mode of doing transactions is on the rise during the past decade, marketers are faced with the challenges of understanding the various factors that would impact the adoption and usage of electronic payment systems. This study attempts to explore the awareness, adoption and frequency of usage of electronic payment systems by customers with an objective of understanding the role of demographics (age, income, gender, education etc.) in the usage of electronic payment systems.

Keywords: *Electronic payment, online transactions, e-banking, demographics.*

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1. Introduction

The inception of web-based banking came into existence in Europe and USA in the beginning of 1980s. Computers were deployed in Indian banking industry in the early 1990s. The business and consumer world have adopted a new way of conducting trade business, using information technology which was named as electronic commerce (e-commerce). Over the years electronic commerce has become very popular and changed the way of conducting business. E-commerce has become especially important in two interrelated dimensions, namely business-to-consumer (B2C) and business-to-business (B2B) domains. Business-to-consumer (B2C) e-commerce process is enabling customers to have an increasing influence on creation of products, their customization as per the different needs of customers, and the way services are delivered. E-commerce offers customers convenient shopping methods for products, products related information and services and various types of services, electronic banking, and personal finance management. Emergence of e-commerce has made the process easier for consumers to find out the desired

products, services and match them more precisely to their requirements and compare prices (Vulkan, 2003). For business-to-business (B2B) e-commerce companies rely on suppliers and product distribution to respond more efficient operation. This type of e-commerce relationships offer organizations the possibility to work directly with producers, giving more room for customization and control over business activities. This helps to reduce the costs significantly by removing "middlemen" from the supply chain. Good examples of companies that employ this business model are Dell and Cisco (Laudon & Traver, 2002; Guttmann, 2003).

The credit of launching internet banking in India goes to ICICI (Industrial Credit and Investment Corporation of India) bank. Citibank and HDFC (Housing and Development Finance Corporation) bank followed with internet banking services in 1999. Several initiatives were taken by the government of India as well as the Reserve Bank of India (RBI) to facilitate the development of electronic banking in India. The Government of India enacted IT Act, 2000 with effect from October17, 2000. This provided legal recognition to electronic transactions and other means of electronic commerce. In e-commerce environment, payments take the form of money exchange in an electronic form and are therefore called electronic payments. Electronic payments are integral part of e-commerce and are one of its most critical aspects. An electronic payment is a financial exchange that takes place in an online environment (Kalakota & Whinston, 1997).

Difference between Conventional Versus Electronic Payment Systems (EPS):

Conventional Payment Systems: The process of traditional or conventional way of transforming payments and settlements involves a buyer and seller (Singh S, 2009). Buyer can transfer cash or payment information (ex: cheque) to seller. This entire settlement of payments takes place in the financial processing network. A cash payment requires a buyer's withdrawal from his/her bank account. Non cash payment mechanisms are settled by adjusting that is crediting and debiting the appropriate accounts between banks based on payment information conveyed through cheque. Cash moves from the buyer's to seller's bank through face to face exchange in the market while if a buyer uses a non-cash method of payment, payment procedure instead of cash flows from the buyer to the seller, and ultimate payments are settled between affected banks who rotationally adjust accounts on payment information.

Electronic Payment Systems (EPS): According to Kalakota and Whinston (1997), an electronic payment is a financial exchange that takes place in an online environment. An intermediary acts as an electronic bank, which converts outside money (e.g. Rupees or Dollars), into inside money (e.g. token or e-cash), which is circulated within online markets.

2. Literature review:

In order to understand the empirical research on impact of demographic variables an electronic payment systems usage a survey of literature was carried out and various authors are summarized below:

According to David B. Humphery, Lawrence B. Pulley, and Jukka M. Vesala (November 1996), electronic payments can be widely defined as payments that are initiated, processed and received electronically. As per opinions of Donald O. Mahoney, Michael Peirce, Hitesh Tewari (2001), the idea of paying for goods and services electronically is not a new one. All around us we see evidence of transactions taking place where at least part of the process is carried on electronically.

Hsiao-Cheng Yu, Kuo-Hua His, Pei-Jen Kuo (2002), observed that the worldwide proliferation of the internet led to the birth of electronic commerce, a business environment that allows the electronic transfer of transactional information. From the view point of Zheng Huang, Kefei Chen (2002), electronic payments grow rapidly because of the potential operational efficiencies; E-payment is a means to replace traditional cash in the physical world, and as a means of payment in the virtual world.

Albert Levi Cetin Kaya Koc (2002) stated that one of the most important components of an electronic commerce (e-commerce) application is a digitally secure means of electronic payment (e-payment).According to Odlyzko (2003), electronic payment is a subset of an e-commerce

transaction to include electronic payment for buying and selling goods or services offered through the Internet.

Chou, Yuntsai, Lee, Chiwei, Chung, Jianru (2004), stated that electronic cash (or digital cash) was invented early on in the development of e-commerce. Tae-Hwan Shon and Paula M.C. Swatnam (2004), argue that it is important to understand where internet payment systems fit into the continuum of EPS (Electronic Payment Systems), and how this subgroup of the winder EPS group differs from its fellows.

Michelle Baddeley (2004) commented that electronic commerce is growing at an increasing pace and financial instruments are adapting to the increased volume of the spending taking place over the internet (Economides, 2001). Nordea Bank Finland Report (April 2005), explained that e-payment is an electronic payment method in which a buyer selects purchases and pays them within a single internet session. The payment can be transferred to the seller immediately or on a later date.

Erdener Kaynak and Talha D. Harcar (2005) opine that commercial banks of all types and sizes have intensified the use of online (internet/web-based) banking in their operations.

According to Mannan (2010) in a country like India, where majority of population is less educated or uneducated, the utility of banking services are not properly realized. It is found that only educated, well to do persons and men form the majority of the users. Housewives, small businessmen, and persons from unorganized sector still feel shy and keep themselves away from the banking services.

Sharma (2011) opines that there is not much awareness in Indian customers regarding use of e-banking services. But, the guidance and persuasion by bankers promote the use of such services amongst the customers. There is greater incidence of e-banking usage among the middle age men (30 to 50 years of age); and women customers use such services much less frequently. Occupation-wise, the professionals, followed by business class, make more use of e- banking services.

Paul (2013) investigated the "adoption of electronic banking (e- banking) in Odisha, India" using demographic profiles, computer knowledge and banking preference, by analyzing 200 bank customers in the state. It is found from the study that many factors like education, knowledge in computer, willingness of the people, people's convenient and awareness etc. are responsible for the successful operation of e-banking in any area. A thorough study of the data shows that the young generation is more familiar with computer and internet banking. So they are more interested in using the e-banking system particularly in ATM and online transaction rather than old and traditional banking.

As evident from the past studies, banks' customers have been considered as potential respondents for almost every research. The researchers have analyzed the utilization of services with respect to the demographic factors of the customers like gender; age, income, and education qualification etc. The present study focuses on the awareness levels, adoption and frequency of usage of electronic payment systems among the respondents in Hyderabad city.

3. EPS: an overview

3.1. E-Banking (Internet or Online Banking):

Delivery of banking services to customers at their office or home with the help of electronic technology is termed as e-banking. According to Daniel's (1999) opinion, "electronic banking as the delivery of bank's information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as a personal computer and a mobile phone with browser or desktop software, telephone or digital television." The term online became popular in the late '80s and referred to the use of a terminal, keyboard and TV (or Monitor) to access the banking system using a phone line. Online services started in New York in 1981 when four of the city's major banks (Citibank, Chase Manhattan, Chemical and Manufactures Hanover) offered home banking services using the videotext systems. In a country like India, ICICI (Industrial Credit and Investment Corporation of India) bank was the pioneer to introduce E-banking in 1997. It is the first bank in India to launch a web site, and then follow it up with internet banking. After ICICI bank, IndusInd bank and HDFC (Housing Development Finance Corporation) Banks were the early one to embrace the technology in 1999.

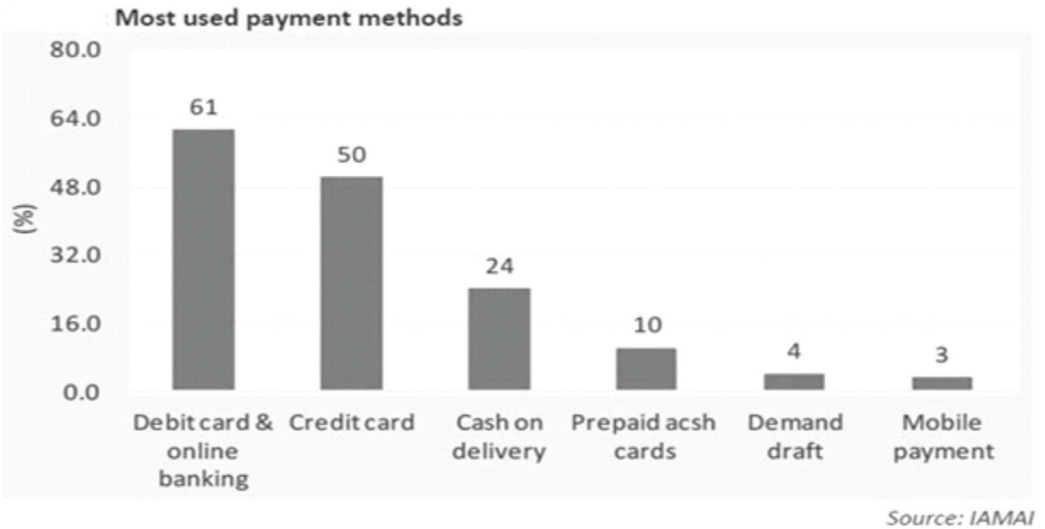

Figure 1: Most used Payment Methods in India (2011)

An observation of the data related to Online Commerce report released by IAMAI (Internet and Mobile Association of India)-IMRB (Indian Market Research Bureau) 2011, reveals that 61% of consumers use debit cards and online banking to make payments. Credit cards are the second most used mode of payment at 50% and cash on delivery is at third with 24% consumers choosing it as the mode of payments. Another study conducted in the year 2012-2013 on the internet users, by Internet and Mobile Association of India (IAMAI), found that about 23% of the online users prefer Internet banking (IB) as the banking channel in India, second to ATM which is preferred by 53%. According to recent report by the IAMAI digital payments in India are expected to touch Rs1.2 trillion by the December 2014. A 40% increase from Rs 85,800 crore the previous year propelled by growing internet penetration, growth in e-commerce and the ease of online payments. Mint newspaper: 21-May-2014.

The common features fall broadly into several categories: a bank customer can perform non-transactional tasks through online banking including:-

- Viewing account balances
- Viewing recent transactions
- Downloading bank statements (e.g. in PDF format)
- Ordering cheque books
- Download periodic account statements
- Downloading applications for M-banking, E-banking etc.

3.2. M-banking (Mobile banking):

Mobile banking or M-banking is an extension of Internet Banking. MB is defined as the "type of execution of financial services which the customer use a mobile communication technique in conjunction with mobile devices" (Pousttchi and Schurig, 2004, P.2). In other words, it means the usage of mobile telecommunication devices for carrying out banking and financial transactions. ICICI bank is pioneer of mobile banking services in India. Among public banks, Union bank of India was first to introduce mobile banking (Ali et al. 2010). Today many commercial banks have launched mobile banking using Information and Communication Technologies (ICT) technology and now they can reach out to customers and provide them with not only general information about their services but also the opportunity of performing interactive retail banking transactions anytime, anywhere. According to Reserve Bank of India (RBI) Report, a total of 3.7 crore mobile transactions took place between February and November 2012. These transactions saw nearly a three-fold increase in value over the same period. Increased smartphone adoption by customers and initiatives such as media promotions and customer education programs for mobile banking has led to this uptrend. For customers, mobile banking is convenient while banks benefit through a low-cost channel.

3.3. Automated Teller Machines (ATM):

The first automated teller machine (ATM) was introduced in the year 1967 by Barclays bank in Enfield town in North

London. ATM is designed to perform the most important functions of a bank. ATMs were introduced to the Indian banking industry during 1987 by HSBC bank (Hong Kong and Shanghai Banking Corporation) in Mumbai. It is operated by plastic card with its special features. The plastic card is replacing cheque, personal attendance of the customer, banking hours' restrictions and paper based verification. Automated Teller Machines (ATMs) have gained prominence as a delivery channel for banking transactions in India. Banks have been deploying ATMs to increase their reach. As per the ATM statistics computed by the Reserve Bank of India, total number of onsite and offsite ATM's of all Indian Banks are 100042 by July 2012. (Jyotiranjan Hota, February 2013) More people are now moving towards using the automated teller machines (ATM) for their banking needs.

3.4. Credit and Debit Cards:

Credit Cards issued by banks are postpaid cards. Debit Card, on the other hand, is a prepaid card with some stored value (money) linked to a bank account. Every time a person uses this card, the merchant's Bank gets money transferred to the merchant's account from the bank account of the buyer. The buyers account is debited with the exact amount of purchases. An individual has to open an account with the issuing bank which gives debit card with a Personal Identification Number (PIN). When he makes a purchase, he enters his PIN on the merchant's PIN pad. The Credit Card holders are empowered to spend wherever and whenever they want with their Credit Cards within the limits fixed by the respective banks.

4. Statement of the problem:

Twenty first century has witnessed electronic payment systems playing key role in delivering services to customers by enabling easy and efficient ways of delivering various services by organizations. This study attempts to explore the awareness and level of adoption and frequency of usage of electronic payment systems by customers with an objective of understanding the role of demographics (age, income, gender etc.) in the usage of electronic payment systems. The specific questions the study attempts to address are as follows:

1. Is there any difference between role of demographics and awareness, level of adoption and frequency of usage an electronic payment system?
2. Is there any relationship between gender with level of adoption and frequency of usage among electronic payment systems?
3. Is there any relationship between age with level of adoption and frequency of usage among electronic payment systems?
4. Is there any relationship between educational qualification with level of adoption and frequency of usage among electronic payment systems?
5. Is there any relationship between annual income with level of adoption and frequency of usage among electronic payment systems?

5. Research objectives:

- To study the awareness level of electronic payment systems among the sample respondents in Hyderabad city.
- To understand adoption (usage) of electronic payment systems among the sample respondents in Hyderabad city.
- To examine the role of demographics on level of awareness and adoption toward electronic payment systems among the sample respondents in Hyderabad city.

6. Research hypotheses:

H1: There is a significant difference between Demographic Variables (Gender, Age, Education and Income etc.) of the respondents with Credit Card Usage.

H2: There is a significant difference between Demographic Variables (Gender, Age, Education and Income etc.) of the respondents with Debit/ATM Card Usage.

H3: There is a significant difference between Demographic Variables (Gender, Age, Education and Income etc.) of the respondents with Internet Banking Usage.

H4: There is a significant difference between Demographic Variables (Gender, Age, Education and Income etc.) of the respondents with Mobile Banking Usage.

7. Research methodology:

The present study collected relevant primary data with the help of structured questionnaire in Hyderabad city (professionals, employees, business men, students etc.) representing various organizations. The questionnaire was

designed to capture the demographic details, and attitudes of respondents towards various payment options, the frequency of usage of various payment systems etc.

8. Research instrument:

A structured questionnaire was used to collect information from the respondents. The questionnaire is broadly divided into three parts:

a) Respondent Profile

b) General Awareness and Usage (Adoption) of the Electronic Payment Systems

c) Frequency of usage and preferences towards usage of Payment Systems are Credit Cards, Debit/ATM Cards, Internet Banking, Mobile Banking etc.

9. Results & findings:

Table 1: Awareness towards electronic payment systems:

Payment Systems	Aware (Number, Percentage)	Unaware (Number, Percentage)	Total (Number)
Credit card	151 (88.3%)	20 (11.7%)	171
Debit/ATM card	168 (98.24%)	3 (1.75%)	171
Internet banking	164(95.9%)	7 (4.1%)	171
Mobile banking	132 (77.2%)	39 (22.8%)	171
Other	25 (14.6%)	146 (85.4%)	171

Interpretation: Above table reveals that maximum percentages of respondents (98.2%) were aware of Debit/ATM cards followed by Internet banking (95.9%), credit cards (88.3%) and Mobile banking (77.2%).

Graph 1: Awareness of various electronic payment systems

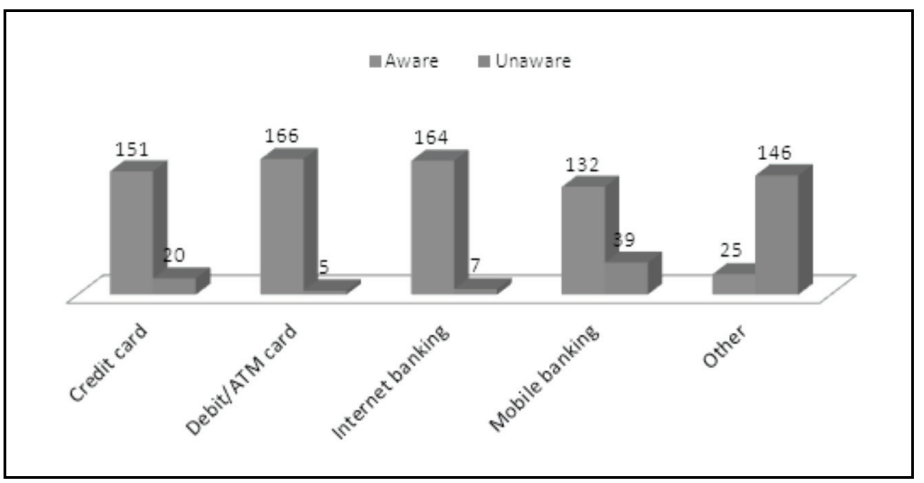

Table 2: Adoption (usage) of electronic payment systems:

Payment Systems	Used (Number, Percentage)	Did not use (Number, Percentage)	Total (Number)
Credit card	93 (54.4%)	78 (45.6%)	171
Debit/ATM card	168 (98.2%)	03 (1.8%)	171
Internet banking	138 (80.7%)	33 (19.3%)	171
Mobile banking	55 (32.2%)	116 (67.8%)	171
Other	11 (6.4%)	160 (93.6%)	171

Interpretation:
Above table reveals that maximum percentage of respondents (98.2%) were using Debit/ATM cards followed by Internet banking (80.7%), credit cards (54.4%) and Mobile banking (32.2%).

Graph 2: Adoption (usage) of electronic payment systems:

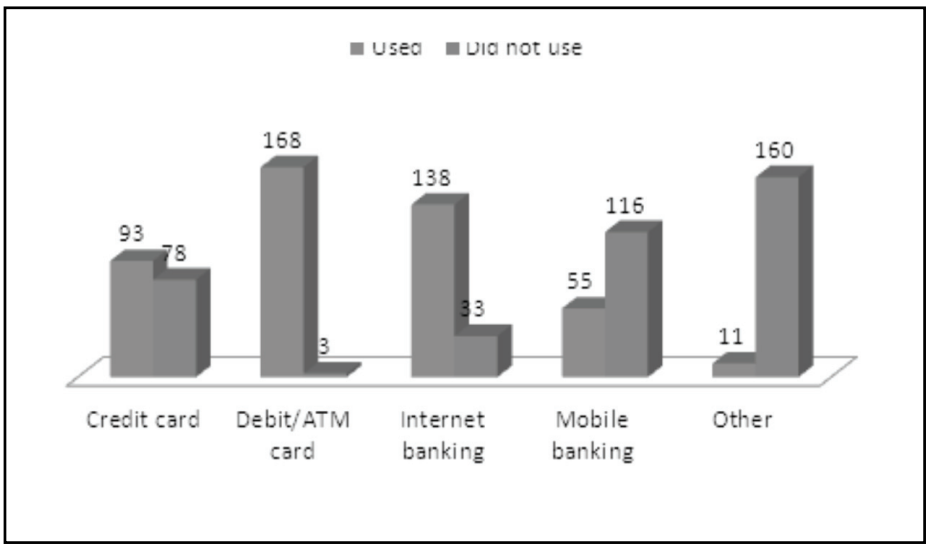

Table 3: Frequency of EPS usage:

Payment System	At least once in a week	At least once in 15 days	At least once in a month	At least once in two months	At least once in three months	Twice a year	Once a year
Credit card	29(17%)	25(14.6%)	23(13.5%)	1(.6)	-	3(1.8%)	1(.6)
Debit/ATM card	79(46.2%)	31(18.1%)	36(21.1%)	6(3.5%)	13(7.6%)	1(.6)	2(1.2%)
Internet bank	44(25.7%)	39(22.8%)	40(23.4%)	3(1.8%)	6(3.5%)	3(1.8%)	-
Mobile bank	17(9.9%)	12(7.0%)	14(8.2%)	1(.6)	4(2.3%)	1(.6)	3(1.8%)

Interpretation:
Above table is frequency of usage of electronic payment systems Debit/ATM cards were given the highest frequency of usage followed by Internet banking, followed by credit cards and mobile banking.

Graph 3: Frequency of usage of electronic payment systems

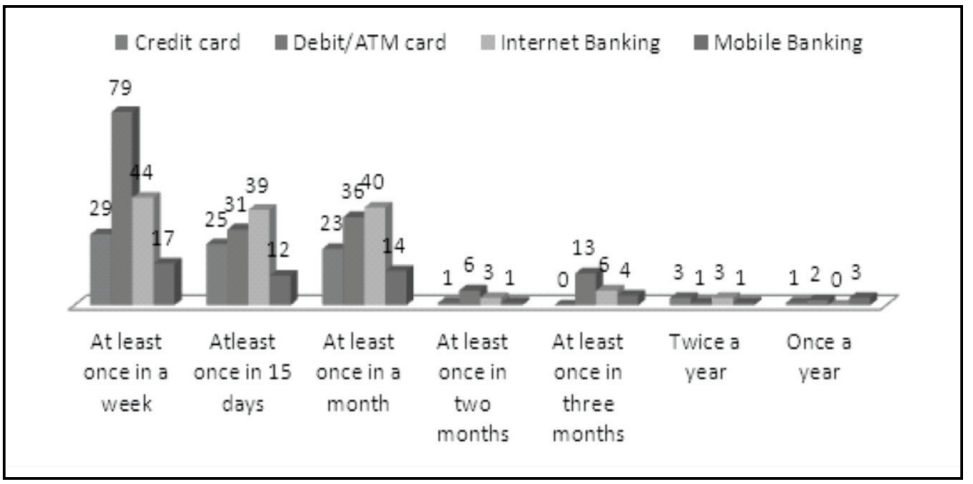

Table 4: Preference given to electronic payment systems:

Payment System	Credit cards	Debit/ ATM cards	Internet banking	Mobile banking
Rank 1	39 (22.8%)	75 (43.9%)	55 (32.2%)	3 (1.8%)
Rank 2	27 (15.8%)	59 (34.5%)	66 (38.6%)	7 (4.1%)
Rank 3	23 (13.5%)	28 (16.4%)	33 (19.3%)	42 (24.6%)
Rank 4	29 (17%)	6 (3.5)	4 (2.3%)	50 (29.2%)

Interpretation: Debit/ATM cards were given the highest preference followed by Internet banking, followed by credit cards and mobile banking.

Graph 4: Preferences given to electronic payment systems

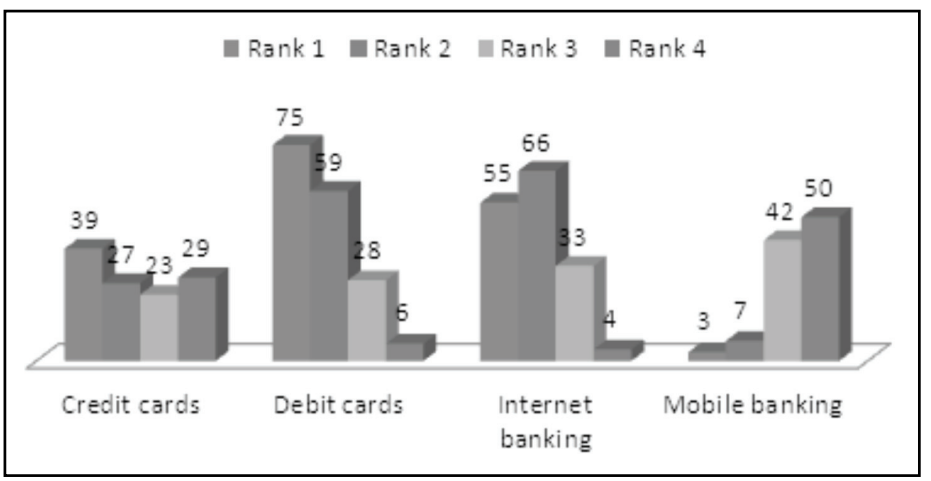

Table 5: Chi-Square Test for Demographic variables Versus Credit Card Usage:

H1: There is a significant difference between Demographic Variables (Gender, Age, Education level, Income level etc.) of the respondents with Credit card usage.

Sl. No	Demographic variables	Credit card Usage Chi-Square value	Hypothesis
1	Gender	2.461 (0.117)	Not Supported
2	Age	36.428 (0.000)	Supported
3	Education	4.799 (0.187)	Not Supported
4	Income	62.264 (0.000)	Supported

Interpretation: above table based on the significance value (the value should be **<0.05** will be accepted) it is identified that P-value corresponding to gender is (0.117), which is greater than (0.05). Hence null hypothesis is accepted. It can be concluded that credit card usage does not differ significantly with respect to gender, or in simple terms, credit card usage is more or less the same in case of males and females. Whereas, P-value corresponding to education is (0.187), which is also greater than (0.05). Hence null hypothesis is accepted. It can be concluded that credit card usage does not differ significantly with respect to education, or in simple terms, credit card usage is more or less the same in case of different educational level.

Further, P-value corresponding to age is (0.000), which is less than (0.05) Hence research hypothesis is accepted. It can be concluded that credit card usage differs significantly with respect to age. In simple terms, credit card usage varies among different age group. Whereas, P-valu e corresponding to income is (0.000), which is less than (0.05). Hence research hypothesis is accepted. It can be concluded that credit card usage differs significantly with respect to income. In simple terms, credit card usage is varies with different income level.

Table 6: Chi-Square Test for Demographic Variables versus Debit/ATM Card Usage:

H2: There is a significant difference between Demographic variables (Gender, Age, Education level, Income level etc.) of the respondents with Debit/ATM card usage.

S.No.	Demographic variables	Debit/ATM Usage Chi-Square value	Hypothesis
1	Gender	2.352 (0.125)	Not Supported
2	Age	3.057 (0.691)	Not Supported
3	Education	1.265 (0.737)	Not Supported
4	Income	10.648 (0.100)	Not Supported

Interpretation: above table based on the significance value (the value should be **<0.05** will be accepted) it is identified that P-value corresponding to gender is (0.125), which is greater than (0.05). Hence null hypothesis is accepted. It can be concluded that Debit/ATM card usage does not differ significantly with respect to gender, or in simple terms, Debit/ATM card usage is more or less the same in case of males and females. Whereas, P-value corresponding to age is (0.691), which is also greater than (0.05). Hence null hypothesis is accepted. It can be concluded that Debit/ATM card usage does not differ significantly with respect to age, or in simple terms, Debit/ATM card usage is more or less the same in case of different age groups.

Further, P-value corresponding to education is (0.737), which is greater than (0.05). Hence null hypothesis is accepted. It can be concluded that Debit/ATM card usage does not differ significantly with respect to education, or in simple terms, Debit/ATM card usage is more or less the same in case of varied educational level. Whereas, P-value corresponding to income is (0.100), which is also greater than (0.05). Hence null hypothesis is accepted. It can be

concluded that Debit/ATM card usage does not differ significantly with respect to income, or in simple terms, Debit/ATM card usage is more or less the same in case of different income groups.

Table 7: Chi-Square Test for Demographic variables Versus Internet Banking Usage:

H3: There is a significant difference between demographic variables (Gender, Age, Education level, Income level etc.) of the respondents with Internet banking usage.

S.No	Demographic variables	Internet banking Usage Chi-Square value	Hypothesis
1	Gender	4.579 (0.032)	Supported
2	Age	12.032 (0.034)	Supported
3	Education	0.022 (0.999)	Not Supported
4	Income	7.445 (0.282)	Not Supported

Interpretation: above table based on the significance value (the value should be **<0.05** will be accepted) it is identified that P-value corresponding to gender is (0.032), which is less than (0.05). Hence research hypothesis is accepted. It can be concluded that internet banking usage differs significantly with respect to gender. In simple terms, internet banking usage varies with male and female. Whereas, P-value corresponding to age is (0.034), which is less than (0.05). Hence research hypothesis is accepted. It can be concluded that internet banking usage differ significantly with respect to age, or in simple terms, internet banking usage is varies with different age groups.

Further, P-value corresponding to education is (0.999), which is greater than (0.05). Hence null hypothesis is accepted. It can be concluded that internet banking usage does not differ significantly with respect to education, or in simple terms, Internet banking usage is more or less the same in case of varied educational levels. Whereas, P-value corresponding to income, is (0.282), which is also greater than (0.05). Hence null hypothesis is accepted. It can be concluded that internet banking usage does not differ significantly with respect to income, or in simple terms, internet banking usage is more or less the same in case of different income groups.

Table 8: Chi-Square Test for Demographic variables Versus Mobile Banking Usage:

H4: There is a significant difference between demographic variables (Gender, Age, Education level, Income level etc.) of the respondents with Mobile banking usage.

Sl.No	Demographic variables	Mobile banking Usage Chi-Square value	Hypothesis
1	Gender	5.032 (0.025)	Supported
2	Age	5.993 (0.307)	Not Supported
3	Education	4.599 (0.204)	Not Supported
4	Income	6.202 (0.401)	Not Supported

Interpretation: above table based on the significance value (the value should be **<0.05** will be accepted) it is identified that P-value corresponding to gender is (0.025), which is less than (0.05). Hence research hypothesis is accepted. It can be concluded that mobile banking usage differ significantly with respect to gender, or in simple terms, mobile banking usage is differ in case of males and females. Whereas, P-value corresponding to age is (0.307), which is also greater than (0.05). Hence null hypothesis is accepted. It can be concluded that mobile banking usage does not differ significantly with respect to age, or in simple terms, mobile banking usage is more or less the same in case of different age groups.

Further, P-value corresponding to education is (0.204), which is also greater than (0.05). Hence null hypothesis is accepted. It can be concluded that mobile banking usage does not differ significantly with respect to education, or in simple terms, mobile banking usage is more or less the same in case of different education level. Whereas, P-value corresponding to income is (0.401), which is also greater than (0.05). Hence null hypothesis is accepted. It can be

concluded that mobile banking usage does not differ significantly with respect to income, or in simple terms, mobile banking usage is more or less the same in case of different income groups.

Limitation of the Study:

- The present study has been confined to Hyderabad Metro city of Telangana state of India.
- This study not addressed perceptions toward electronic payment systems.
- This study only explores the role of demographic variables with respect to the usage of electronic payment systems

Conclusion:

Electronic Payment Systems, like Credit cards, Debit/ATM cards, Internet banking, Mobile banking etc. have revolutionized the bankers industry as well as the retail industry. The emergence of electronic payment systems had created opportunities and challenges for bankers, merchants and customers. Electronic payment systems definitely offer convenience and transference in business transactions but at the same time it requires certain changes on the side of business as well as customers. While business needs to invest in the infrastructure required for electronic transactions, and tie up with banks, the customer need to adopt to various electronic payment systems and deal with cashless transactions. It requires certain amount of learning on the side of the customer to adopt electronic payment systems. Issues like the trust in the electronic systems, security of transaction, ease of transactions, and perceived usefulness of the systems and the readiness of users play a crucial role in the adoption of electronic payment systems. Industry has to carefully segment the users on the bases of relevant demographics/ Geographic's/psychographics and appropriately communicate, address the consents and train the customers so that the benefits of electronic payment systems can utilized.

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Measuring Platform Services of Delhi Metro: Commuter satisfaction

Govind Nath Srivastava and Ranjan Upadhyaya

Abstract

The present study is an attempt to measure the satisfaction level of commuters of Delhi Metro for platform services as it is the first service encounter between commuters and Delhi Metro. Platform services are associated with tangible platform amenities and several other facilities available on the platform. In this study total 1015 sample were taken from different metro stations using convenience sampling due to easy accessibility and affordability. Non disguised structured questionnaire was used as an instrument for collecting the data and 5 point likert scale was used for measuring the responses of respondents. The data was analysed by using SPSS.20 statistical software and statistical tools such as correlation analysis, cronbach alpha test, Chi square test was administered for processing of the data. The result of the study reveals that there is significant and linear relationship between Platform services satisfaction of commuters and variables causing satisfaction of passengers for Platform services. It was also found from the study that demographic variables play significant role in determining satisfaction level of customers.

Key words- *touch points, service encounter, service quality, customer satisfaction.*

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Radical changes are taking place in public transport industry due to deregulation, privatization and liberalization. Earlier public transport industry was highly regulated and owned and controlled by public undertakings. Changes in the market forces and market dynamics forced the public transport organization to adopt customer centric approach to deliver prompt and defect free services.

Prior to 2002, public of Delhi have only three modes of transportation viz. very limited sub-urban railway which connects NCR (National Capital Region), DTC (Delhi Transport Corporation) bus service, and private bus service which were not adequate to meet increasing commuter's demand and unable to address high congestion problem. Due to variety of reasons including increasing population, traffic congestion, increasing pollution level, inability to expand new railway lines and related infrastructure for expansion of railway transport system; the government

agencies and think tank started to find out alternative and cost effective mode of public transportation. The concept of mass transit for metropolitan city emerged from the traffic and travel characteristics study which was carried out in late seventies. After taking into the consideration of all these issues, finally the government induced compact and sustainable mode of public transportation system in Delhi known as Delhi Metro Rail Corporation (DMRC) in 1995. Metro railway is modified form of light rail and sub urban railway. It is sustainable, cost effective, reliable and environment friendly mode of public transportation, and specifically designed for metropolitan cities.

In India the level of the service quality of public transport organization is very poor because the regulatory authority has given importance to cost efficiency, cost effectiveness and infrastructure development at the cost of service quality. The usage of public transport has been declining over the last decade in India despite the fact that travel demand increased in geometric proportion (Ranganathan, N, 2003). The reason behind decline in the usage of public transport is poor infrastructure, poor quality of services and inferior image associated with public transport organization.

Delhi Metro significantly changed the perception of commuters for public transport services. It completely changed the meaning of travelling and transformed painful journey into cool and comfortable one. The popularity of Delhi Metro is growing day by day as 28 lakh commuters are travelling through Delhi Metro.

Literature of Review

Due to variability of the services, it is extremely difficult for the service organization to provide uniform service quality to all the customers. Moreover, the intangible attributes of the services compelled the need to develop trust and confidence in the mind of customers for the service quality. This makes the services more humanistic rather than mechanical.

The phrase 'customer satisfaction' was invented by Theodore C. Levitt in the year 1960. He described the concept of customer satisfaction in his article "Marketing Myopia" and the article was published in *Harvard Business Review*. In the year 1982, Peters and Robert Waterman along with McKinsey published a book "In Search of Excellence." This book spread the idea of caring for customers and customer satisfaction into management religion.

Measuring the satisfaction of the customers, is a complex process as priority and expectation of the customers significantly vary. Various researchers developed the measure and scale to analyze the satisfaction of customers. Researchers across the world tried to analyze satisfaction and perception of commuters for public transportation services. Givoni, Moshe, Rietveld and Piet (2006) examined the impact of accessibility of railway station over the satisfaction level of the customers.

Disney, John (2000) reviewed rail transportation in UK and discussed different aspects of customer satisfaction and loyalty. The researcher used "punctuality, cleanliness, attitude, overcrowding, comfort and catering for customer satisfaction survey." Meyer, C.F. De. and P.G. Mostert (2011) analyzed the effect of passenger satisfaction over long term relationship formation with special reference to South African domestic airlines. The authors pointed out that most of the studies which were conducted in airlines industries, assessed the satisfaction of the passengers only and very limited studies were made to assess the impact of satisfaction over long term relationship. In Indian context, an interesting study was conducted on public transport services by Sreedhar, R. (2012), Agarwal, R. (2008), Matoo, A. (2000) and Mathur M. (2000).

Research Methodology

In this study, total 13 independent variables and one dependent variable were identified. These variables were extracted through in depth interview, focus group interview and extensive review of literature. No disguised structured questionnaire was designed for the study and respondents were asked to indicate their degree of agreement or disagreement on 1 to 5 point likert scale. The objective of the study was also explained to respondents and questionnaires were filled in a self administered manner. Convenience sampling was used for collecting the sample keeping in mind time and financial constraint.

Total 1100 sample were selected from all the 160 metro stations and maximum responses were taken from busiest metro stations such as Rajiv Chowk, Kasmiri Gate, Mandi House, Botanical Garden and Vaishali. Out of 1100 sample 1015 sample were found suitable for the study which shows

the response rate of 92.7% against original sample of 1100. Remaining 85 questionnaires were removed from the study due to vague response given by the respondents.

Pre testing of the questionnaire was administered on 20 carefully selected respondents and based on the feedback obtained from these respondents, few technical questions were removed and some questions were re-worded. Pilot study was performed on 50 respondents and content validity test was used to check validity of the questionnaire. In order to test the reliability of the data, cronbach alpha test was performed. Data was analysed by using statistical tools such as Bivariate Correlation, and Chi square test.

Objectives of the study

Based on review of existing literature and gap analysis, following objectives are determined for the study:

1 To identify the factors influencing Platform services satisfaction of the commuters

2 To analyze the strength and direction of relationship between Platform services satisfaction and variables causing satisfaction of passengers for Platform Services

3 To examine the relationship between demographic variables and several other variables causing Platform services satisfaction of commuters.

Hypotheses

In the present study, non directional hypothesis is used and hypothesis is tested at 5% level of significance. Following null hypotheses are framed, keeping in mind objectives of the study.

H_{01}-There is insignificant relationship between Platform services satisfaction and variables causing satisfaction of passengers for Platform services.

H_{02}-There is insignificant relationship between the variables causing satisfaction of passengers for Platform services.

H_{03}-There is insignificant relationship between age of passengers and medical facility on Platform.

H_{04}-There is insignificant relationship between occupation of passengers and number of ticket counter on Platform.

H_{05}-There is insignificant relationship between age of passengers and seating facility on Platform.

The above hypotheses are tested by Bivariate correlation and Chi square test at 5% level of significance.

Data Analysis

The data were analysed by SPSS(Statistical package for social science) and statistical tools such as Bivariate Correlation and Chi square test was used for processing of the data.

Reliability Test

In order to test reliability of the data, Cronbach alpha test was administered. Reliability is tendency of respondents to respond in a similar manner to identical questions. Out of three reliability tests, Internal Consistency Reliability test was used to test the reliability of data. Internal Consistency Reliability is used to assess the reliability of summated score by which several items are summed to form a total score. In this test Cronbach Alpha or Correlation Alpha was used. Cronbach alpha is different from correlation coefficient and it varies from 0 to 1. Coefficient value of 0.6 or less than 0.6 is considered to be unsatisfactory. Cronbach alpha is estimate of reliability and higher value of cronbach alpha is indicator of reliability.

Table-1(Reliability Test)

Sl. No.	No of items	Cronbach Alpha
1	14	.920

The above table shows that data is highly reliable as value of cronbach alpha is 92%. This shows that data is reliable by 92% and there is only 8% error variance in the data.

Descriptive Analysis of Platform Services

Customer satisfaction also depends on tangible platform amenities and several other facilities available on the platform. The descriptive table describes the values of 13 independent variables and one dependent variable. The data was presented in the form of measure of location and measure of variability.

Table-2, Descriptive Statistics (Platform Services)

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Clarity announcement	1015	1.00	5.00	2.92	1.480
updated information	1015	1.00	5.00	2.9054	1.43804
seating facility	1015	1.00	5.00	2.9251	1.05766
Food drinking	1015	1.00	5.00	3.0690	1.05806
Waiting space	1015	1.00	5.00	2.8552	1.06204
Enquiry handling	1015	1.00	5.00	2.7576	1.05396
Medical facility	1015	1.00	5.00	2.6365	1.01704
Signage no	1015	1.00	5.00	2.8680	1.18184
Entry exit points	1015	1.00	5.00	2.9300	1.22355
Directional signage clarity	1015	1.00	5.00	2.9084	1.28812
Wheelchair	1015	1.000	5.000	2.62660	1.170597
Connectivity	1015	1.00	5.00	2.8453	1.26893
Platform cleanliness	1015	1.00	5.00	2.9616	1.45867
Platform Services _Satisfaction	1015	1.00	5.00	2.8828	.83504

The above table No-2 describes the data in the form of mean and standard deviation. It is apparent from the above table that highest standard deviation is 1.480 for clarity of announcement. It is seen from the table that the mean value of all the variables is in the close range of variation which is indication of good validity of the construct being used for the study. It is clear from the above table that responses fall approximately in neutral range.

Correlation Analysis of Platform services

Correlation is used to describe the relationship between two or more than two variables. SPSS presents correlation matrix which describes each pair of the variable. The diagonal element of correlation matrix is equal to one because variable correlates perfectly with itself.

In this study, data was analysed by using Bivariate correlation. In order to analyze relationship between the Platform services satisfaction and independent variables, correlation matrix is used. "The correlation is used to explore the strength and direction of relationship between the variables"(Pallant-2007). As per the guidelines of Cohen (1998), correlation of about .10 may be regarded as small, correlation of about .30 as moderate and correlation of .50 and higher as large. In this study 13 variables have been identified which influence satisfaction of passengers for platform services.

	PS1	PS2	PS3	PS4	PS5	PS6	PS7	PS8	PS9	PS10	PS11	PS12	PS13	PSS
PS1	1	.878**	.356**	.415**	.285**	.506**	.226**	.696**	.702**	.633**	.215**	.539**	.705**	.797**
PS2	.878**	1	.422**	.444**	.282**	.516**	.159**	.690**	.691**	.637**	.204**	.561**	.692**	.805**
PS3	.356**	.422**	1	.360**	.353**	.348**	.305**	.359**	.370**	.303**	.086**	.182**	.269**	.438**
PS4	.415**	.444**	.360**	1	.358**	.419**	.181**	.455**	.392**	.335**	.059	.272**	.344**	.511**
PS5	.285**	.282**	.353**	.358**	1	.480**	.416**	.256**	.340**	.329**	.340**	.299**	.266**	.490**
PS6	.506**	.516**	.348**	.419**	.480**	1	.435**	.601**	.523**	.504**	.269**	.408**	.410**	.681**
PS7	.226**	.159**	.305**	.181**	.416**	.435**	1	.323**	.227**	.223**	.559**	.241**	.159**	.396**
PS8	**.696****	.690**	.359**	.455**	.256**	.601**	.323**	1	.706**	.710**	.284**	.623**	.558**	.795**
PS9	.702**	.691**	.370**	.392**	.340**	.523**	.227**	.706**	1	.718**	.244**	.673**	.653**	.770**
PS10	.633**	.637**	.303**	.335**	.329**	.504**	.223**	.710**	.718**	1	.367**	.697**	.599**	.751**

PS11	.215**	.204**	.086**	.059	.340**	.269**	.559**	.284**	.244**	.367**	1	.430**	.282**	.434**
PS12	.539**	.561**	.182**	.272**	.299**	.408**	.241**	.623**	.673**	.697**	.430**	1	.587**	.703**
PS13	.705**	.692**	.269**	.344**	.266**	.410**	.159**	.558**	.653**	.599**	.282**	.587**	1	.732**
PSS	.797**	.805**	.438**	.511**	.490**	.681**	.396**	.795**	.770**	.751**	.434**	.703**	.732**	1

The above table shows the inter correlation Matrix of Platform services. PS_1 to PS_{13} are used for presenting 13 independent variables. Here PS1=clarity of announcement, PS2=updated information, PS3=seating facility, PS4=food and drinking facility, PS5=waiting space, PS6=enquiry handling at platform, PS7=medical facility, PS8=number of signage, PS9=number of entry- exit points, PS10= directional signage clarity, P11= wheel chair facility, PS12=connectivity of platform with the road, PS13=platform cleanliness. PSS is used to describe platform services satisfaction of commuters (dependent variable).

It is apparent from the above table that there is positive and significant relationship between satisfaction of passengers with platform services (dependent variable-PSS) and variables causing satisfaction of passengers (Independent variables). It is evident from the above table that most significant correlation exists between clarity of announcement and updated information r=.878 (correlation between PS_1 and $PS_{2)}$, followed by correlation between updated information and satisfaction of passengers with Platform services r=.805(Correlation between PS_2 and PSS). The above table shows that statistically significant correlation exists between all the independent variables and satisfaction of commuters with platform services. This shows that first null hypothesis is rejected and alternate hypothesis is selected.

It is also apparent from the above table that all the variables are significant at 5% level of significance and statistically significant relationship exists between all the variables causing satisfaction of passengers. Hence this ascertains that second null hypothesis is rejected and alternate hypothesis is accepted. This proves that significant correlation exists between all the independent variables.

CHI SQUARE TEST (÷2):

Chi square test is used for qualitative data. Chi square test was administered to examine the relationship between demographic variables and variables causing passenger satisfaction. For conducting Chi square test, sample should be drawn randomly from the population and values of the variable should be mutually exclusive. Chi square test analyses that whether observed frequency is matching with expected frequency or not. The value of **÷2** would be equal to zero if actual count is equal to expected count. Greater the difference between actual count and expected count, higher would be the value of **÷2**. Chi square test is run to analyses the relationship between two variables, but it does not give an idea about strength of relationship.

H_{03}- There is insignificant relationship between age of passengers and medical facility on the Platform.

Table-4

Crosstab			Medical facility					Total
			strongly disagree	Disagree	Neutral	Agree	strongly agree	
Age	<25 years	Count	60	215	173	54	22	524
		Expected Count	59.9	192.0	179.7	63.5	28.9	524.0
	25 years to <35 years	Count	42	69	101	39	14	265
		Expected Count	30.3	97.1	90.9	32.1	14.6	265.0
	35 years to <50 years	Count	12	73	57	19	18	179
		Expected Count	20.5	65.6	61.4	21.7	9.9	179.0
	50 years & above	Count	2	15	17	11	2	47
		Expected Count	5.4	17.2	16.1	5.7	2.6	47.0
Total		Count	116	372	348	123	56	1015
		Expected Count	116.0	372.0	348.0	123.0	56.0	1015.0

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.560[a]	12	.000
Likelihood Ratio	39.901	12	.000
Linear-by-Linear Association	10.693	1	.001
N of Valid Cases	1015		

The above table shows that there is significant difference between actual count and expected count. This leads to increase in the value of chi square. Secondly it is also apparent from the table that the value of Chi square test is significant at 5% significance level, this shows that there is significant relationship between age of passengers and medical facility on Platform.

H_{04-} There is insignificant relationship between occupation of passengers and number of Ticket counter on Platform.

Table-5

Crosstab			Ticket counter no					Total
			strongly disagree	disagree	Neutral	agree	strongly agree	
Occupation	salaried	Count	17	156	190	73	73	509
		Expected Count	15.0	152.4	197.6	89.3	54.7	509.0
	self employed	Count	6	33	26	32	11	108
		Expected Count	3.2	32.3	41.9	18.9	11.6	108.0
	house wife	Count	1	24	31	9	5	70
		Expected Count	2.1	21.0	27.2	12.3	7.5	70.0
	student	Count	6	91	147	64	20	328
		Expected Count	9.7	98.2	127.3	57.5	35.2	328.0
Total		Count	30	304	394	178	109	1015
		Expected Count	30.0	304.0	394.0	178.0	109.0	1015.0

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.851[a]	12	.000
Likelihood Ratio	42.920	12	.000
Linear-by-Linear Association	.884	1	.347

The above table shows that the value of Chi square test is significant at 5% significance level. This shows that null hypothesis is rejected and alternate is accepted. This indicates that there is significant relationship between occupation of passengers and adequacy of number of ticket counters.

H_{05}-There is insignificant relationship between age of passengers and seating facility.

Table-6

Crosstab			seating facility					Total
			strongly disagree	Disagree	Neutral	agree	strongly agree	
Age	<25 years	Count	40	180	147	123	34	524
		Expected Count	32.5	179.7	143.0	132.2	36.7	524
	25 years to <35 years	Count	22	53	92	75	23	265
		Expected Count	16.4	90.9	72.3	66.8	18.5	265
	35 years to <50 years	Count	1	87	33	44	14	179
		Expected Count	11.1	61.4	48.9	45.1	12.5	179
	50 years & above	Count	0	28	5	14	0	47
		Expected Count	2.9	16.1	12.8	11.9	3.3	47
Total		Count	63	348	277	256	71	1015
		Expected Count	63.0	348.0	277.0	256.0	71.0	1015

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	73.118[a]	12	.000
Likelihood Ratio	86.769	12	.000
Linear-by-Linear Association	.029	1	.864

The table No.6 shows that there is significant difference between observed frequency and expected frequency with respect to different age group of people in all five scales. In some scale it is very high and in some scale it is very low but overall significant difference is observed. The above table also shows that value of Chi square is significant as p–value is less than 5% level of significance. This states that there is significant relationship between age of passengers and seating facility.

Conclusion

Platform services are very important interface between commuters and Public transport organization and commuters form the perception regarding quality of remaining services of transport organization based on quality of Platform services.

It was found from the study that responses of most of the respondents fall in neutral range. Low rating was found for platform services of Delhi Metro because maximum responses were taken from busiest metro stations. Moreover the commuters of busiest metro stations are not very much happy with Platform services due to high customer traffic, long waiting time in a queue at ticket counter and length of queue at exit and entry points. Significant difference in the rating of passengers was found who travel from busiest metro station and who travel from the stations where customer traffic is low. The result of Bivariate correlation analysis reveals that there is statistically significant relationship between Platform services satisfaction of commuters and variables causing satisfaction of commuters for Platform services. Significant correlation was also found between the variables causing satisfaction of passengers (Among the independent variables).

It can be concluded from this study that demographic variables influence the perception of customers for different kinds of facilities available on the Platform. The result of Chi square test ascertains that the value of Chi square test is significant at 5% level of significance which confirms that there is significant relationship between demographic variables and variables causing satisfaction of commuters for Platform services.

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Sr_No.	Platform Services (A)	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
1	Clarity of announcement is effective					
2	Updated information about arrival & Departure of train through public display system is satisfactory					
3	Seating facilities on platform is satisfactory					
4	Food & Drinking Facility on Platform is satisfactory					
5	Waiting space at Ticketing area is ok					
6	Enquiry handling at platform is satisfactory.					
7	Medical Facility on platform is satisfactory					
8	The number of signage on the platform is adequate in number					
9	The number of entry and exit point on the platform is adequate					
10	Clarity of Directional signage on Platform is satisfactory					
11	Provision of wheel chair & other facilities for physically challenged person is effective					
12	Connectivity of station with road (Bridge facility) is good					
13	Platform cleanliness is effective					
14	Platform Services are satisfactory					

Intellectual Capital (IC) Intensity vs. Capital Intensity: Impact on Corporate Governance and Disclosure Practices of Firms

Dr. Pankaj M. Madhani

Abstract

This research focuses on industry characteristics and their impact on corporate governance and disclosure practices of firms. Nature of industry characteristics divides firms into two broad categories: intellectual capital (IC) intensive firms and capital intensive firms. Accordingly, this research studies the corporate governance and disclosure practices of firms listed in Indian stock market representing different sectors from both categories. The study has taken six sectors into consideration – Power, Oil & Gas, and Metal, along with Health Care, IT and FMCG. These sectors are segregated into high capital intensity (low IC intensity) and low capital intensity (high IC intensity) sectors depending on nature of industry. This study aims to establish a relationship, if any, between IC intensity of firms and their corporate governance practices in Indian context. Research concludes that there is no difference between IC intensive firms and capital intensive firms with respect to corporate governance and disclosure practices. After thorough empirical research, the paper explains why Indian scenario is different from developed nations such as USA.

Key Words: *Corporate Governance, Disclosure, Intellectual Capital Intensity, Intangible Assets, Capital Intensity, New Economy*

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Corporate governance is the system of relations between the shareholders, board of directors and management of a firm as defined by the corporate charter, by-laws, formal policy and rule of law. Management recognizes that there are economic benefits to be gained from a well-managed disclosure policy. A system of corporate governance needs a good level of disclosure and an adequate information to eliminate (or at least reduce) information asymmetries between all parties, making corporate insiders accountable for their actions (Madhani, 2014a). Traditionally corporate governance and disclosure practices of firms are associated with variables such as board size, board independence, board committees, ownership concentration, cross-listing of firms, CEO duality, auditor selection, nature of industry and firm characteristics (size, age, leverage, origin and types of firms viz. public sector, private sector and foreign firms). However, the meaning and

relevance of corporate governance is also changing with times.

In the past, the corporate value was mostly measured by the tangible assets reflected in the book value of the companies. Traditionally land, labor, and capital were considered to be most valuable assets in economics. The old economy, as it is referred to, constitute industries (also called traditional industries) that were mainly dependent on visible physical assets and hence are more capital intensive. However, there is gradual shift in focus from capital and labor intensive firms to knowledge intensive firms. Starbuck (1992) suggests that term 'knowledge intensive' can be applied to firms in which knowledge has more importance than other inputs (i.e. capital and labor), and human capital, as opposed to physical or financial capital, dominates. In the knowledge-based economy numerous corporate organizations have utilized intangible assets (intellectual capital) for their competitive advantage to create corporate value.

The terms intellectual capital (IC), intangible assets and intellectual assets, are used interchangeably as they all represent a non-physical claim to future benefits. The value created by IC is often not reflected in the financial statements of these companies. IC is the prominent resource in knowledge based economy and the growing difference between book value and market value of firms could perhaps explain the role of IC. In fact, many firms rely almost completely on their intellectual assets for generating revenues. This shift in importance has raised a question regarding corporate governance and disclosure practices of IC intensive (knowledge) firms to know whether they have better corporate governance and disclosure practices compared to capital intensive (traditional) firms.

In current Indian business environment there is no much research on the influence of nature of industry such as traditional firms versus IC intensive firms on the corporate governance and disclosure practices; hence, this research aims to contribute to the understanding of this relationship. This study focuses on corporate governance and disclosure practices of sample firms selected from capital intensive firms as well as IC intensive firms and listed in Bombay Stock Exchange (BSE). Traditional industries representing Power, Oil & Gas and Metal sectors are characterized by large investment in tangible assets (capital intensive) while IC intensive firms representing Health Care (Pharmaceuticals), IT (Information Technology) and FMCG (fast moving consumer goods) are characterized by large investment in intangible or knowledge assets. By analyzing the impact of nature of industry (capital intensive firms versus IC intensive firms) on corporate governance and disclosure practices, this research identifies and tests the empirical evidence for such relationship.

Literature Review

A good system of corporate governance will facilitate the resolution of corporate conflicts between minority and controlling shareholders, executives and shareholders, and between shareholders and stakeholders. Corporate governance typically protects investor from managers who instigate self-deal, theft of corporate assets as well as corruption (Dalton and Daily, 1999). The broader objectives of corporate governance are; to ensure shareholders value, to protect interest of shareholders and various other stakeholders including customers, suppliers, employees and society at large, to ensure full transparency and integrity in communication and to make available complete, accurate and clear disclosure to all concerned (Shukla, 2008). Corporate governance stands for responsible business management geared towards long-term value creation. Good corporate governance is a key driver of sustainable corporate growth and long-term competitive advantage (Madhani, 2007a).

Disclosure is an important component of corporate governance since it allows all stakeholders of firms to monitor performance of the firm. Disclosure by firms can be categorized as mandatory disclosure and voluntary disclosure. Voluntary disclosure, also defined as information in excess of mandatory disclosure, has been receiving an increasing amount of attention from researchers in recent corporate governance and disclosure studies. Because of the inadequacy of mandatory disclosure by firms, the proactive action by firms such as voluntary disclosure provides investors with the necessary information to make more informed decisions (Madhani, 2007b).

Mandatory financial reporting is claimed to be less informative in knowledge industries which make larger investments in intangibles such as R&D, human capital and brand development (Collins et al., 1997; Francis and Schipper,

1999; Lev and Zarowin, 1999). Therefore, firms with less informative financial statements are likely to provide more voluntary disclosures (Tasker, 1998). Hence, IC intensive firms with larger investments in intangibles are likely to make more disclosure compared to traditional firms with larger investments in tangible assets.

According to Jensen and Meckling (1976) agency theory provides a framework that link disclosure behavior to firm-specific characteristics as corporate governance mechanisms are introduced to control the agency problem and ensure that managers act in the interests of shareholders. As Himmelberg et al., (1999) pointed out; firms facing large information asymmetry because of its characteristics may signal to the market their intent to protect investors better by adopting good corporate governance policies.

This might be the case for IC intensive firms with relatively large intangible assets. The opacity in disclosure practices can contribute to suspicious and unethical behavior leading to poor valuation of the firm (Madhani, 2007b). Therefore, IC intensive firms operating with higher proportions of intangible assets in their total asset base may find it optimal to adopt stricter corporate governance mechanisms to signal to investors that they intend to prevent the future misuse of these assets (Khanchel, 2007). Klapper and Love (2004), found support for this hypothesis using a capital intensity measure, and concluded that capital intensity is significantly negatively correlated with governance.

It is argued that technology-based or knowledge-intensive (product, process or customer knowledge) industries will engage in more disclosure than industries that rely mainly on physical assets to be profitable. This relationship has been explained by stakeholder theory. Stakeholder theory purports that stakeholders have a right to be provided with information about how the company's activities affect them (Guthrie et al., 2004). When a firm's revenue and reputation derive from assets which are invisible in mandated disclosure, then stakeholder theory argues that such information should be conveyed to stakeholders (Whiting and Woodcock, 2011). To the most powerful stakeholders such as majority shareholders and lenders, disclosure of information can be through private meetings. However, less powerful shareholders do not have access to this direct information channel (Holland, 2001) and in order to satisfy those stakeholders' need for information, firms in technology-based or knowledge-intensive industries will engage in voluntary disclosures about their IC (Yau et al., 2009). Bozzolan et al., (2006) explicitly studied and compared intangible information disclosure in annual reports of "old economy" industries or "traditional firms" on the one hand with disclosure of firms operating in "new economy" or "knowledge-intensive" industries on the other.

An et al., (2011) studied effect of industry types on IC disclosure for Chinese firms between the two industry clusters: service group (22 firms) and industry group (27 firms) by studying annual report of firms. It was found that nature of business did not have a significant influence on IC reporting practices of Chinese mainland firms. Intangible assets of firms (e.g. licenses, patents, brands, customer knowledge) have received an increasing level of attention in both scholarly research and management practice. To date, the growing economic relevance of intangibles has hardly been reflected in mandatory rules accepted by international reporting standards. Hence, quite a number of firms voluntarily publish information on their intangible asset stocks (Gerpott et al., 2008). However, in the Indian context, such research has not been fully explored. Hence, the impact of nature of industry (in terms of capital intensive versus IC intensive) on corporate governance and disclosure practices is studied in this research.

Tangible Assets versus Intangible Assets: Key Features

In knowledge economy, the intangibles or knowledge assets provide value to the firm. While tangible assets have determined the wealth of the 20th century, the wealth of the 21st century resides in intangible assets (Garcia-Parra et al., 2009). Intangibles are typically described as non-monetary economic goods without physical substance (Berry, 2004). Intangible assets take three basic forms: human capital, organizational capital, and relational capital (Madhani, 2008a). In the US, intangibles and market services may account for two-thirds of the gross domestic product (GDP), yet few of these assets appear on financial statements (Jhunjhunwala, 2009). In this knowledge era, value creation of firms relies on the transformation from tangible assets to intangible assets as firms are likely to generate much of their value through differentiating themselves by using intangible assets such as proprietary processes, brands,

strong relationships and knowledge (Nakamura, 2001). As such intangible assets have been identified as key resources and source of competitive advantage (McGaughey, 2002). The drivers of value creation in modern competitive environments lie in a firm's intangible assets rather than its physical and financial capital as they underline future performance and growth. This resource is the main source of sustainable competitive advantage, and is rare, inimitable, and non-substitutable (Madhani, 2012).

As firms now become more knowledge and information-based, intangible assets will comprise a significant percentage of the overall value of businesses. Hence, today's business model in an era of new economy is increasingly dependent on the use of intangible resources that offer value for firms. Some 50-90 % of the value created by a firm in today's economy is estimated to come from the intangible assets of firm rather than from the use and production of traditional material goods (Guthrie and Yongvanich, 2004). Intangible asset is becoming more important than the value of tangible assets. Intangible assets are developing into an unmatched resource for the creation of business wealth. Although, tangible assets such as buildings, facilities, and equipment are still the main elements of producing goods and services, its relative significance has diminished over time as the intangible assets comes to replace tangible assets (Martins and Alves, 2010). However, current accounting models do not capture the key factors of a firm's long-term value – their intangible resources (Wallman, 1995; Hedlin and Adolphson, 2000) – and fail to recognize a fuller range of intangibles.

Capital Intensity Ratio versus IC Intensity Ratio

As described below capital intensity ratio is deployed for measurement of extent of tangible assets used while IC intensity ratio is deployed for measurement of extent of intellectual assets used in overall assets base.

Capital Intensity Ratio for Measurement of Intangible Assets

Capital intensive industry requires substantial amount of capital for the production of goods because of the specific industrial structure and type. Capital intensive industry refers to that old economy industry, which requires large capital investment for starting up the business and to run the business as well. The traditional sectors of economy such as Power, Oil & Gas and Metal etc., are capital intensive as physical capital plays an essential role. Capital intensive industries involve high level of fixed cost as its major project costs result from investments in plant, equipment, machinery, or other expensive capital goods. Hence, for such industries capital intensity ratio is a measure of the relative importance of fixed asset in the firm's output.

The ratio of fixed assets to net sales is called the capital intensity ratio and is reciprocal of the asset turnover ratio.

Capital Intensity Ratio = 1 / Asset Turnover Ratio

= Total Fixed Asset / Total Sales

This ratio indicates the amount of assets needed by the firm to generate a unit of sales revenue. The higher the ratio, the more physical asset the firm needs to generate sales – the more capital intensive the firm and subsequently less significant role of intangibles. Capital intensity is an important consideration for business, because capital-intensive firm typically rely more on physical, as opposed to intangible assets as a source of income. A business that requires a large amount of capital investment in physical assets to generate revenue can be labeled as being more capital-intensive (Parker, Ortega, Neuhart & Kausar, 2011) whereas less capital-intensive firms typically do not rely as much on physical assets in their business model. These firms rather depend on their intangible assets as sources of income.

IC Intensity Ratio for Measurement of Intangible Assets

In knowledge economy, the source of economic value is no longer the production of material goods, but the creation of IC (Chen et al., 2005) and hence, one must take into consideration not only the traditional ways to measure the firm value, but it is necessary to recognize IC as well. Knowledge-based industries hold an implied value of IC assets that may easily exceed the value of their 'hard' assets. IT, Pharmaceutical and FMCG industries have large gaps between the value of its tangible assets recorded on its balance sheet and its stock market-value. These industries have huge investment in IC in the form of human capital, R&D and brands. Hence, traditional measures of a firm's performance, which are based on conventional accounting principles, may be unsuitable in the knowledge–based

economy which is driven by IC (Gan and Saleh, 2008). Conventional valuation methods pay more attention to either historical figures based on the balance sheet, income or cash flow statement of a firm.

The firm value is generated not only from its physical and financial assets, but also its intellectual assets. The market value of the firm is formed on the basis of tangible but also intangible firm assets. The intangible firm assets are far more important for the company itself because they make a far greater market value. The intangible assets consist of the IC of the firm.

Brennan (2001), used a value-based measurement approach for measuring the overall IC level of firms, and suggested that difference between the market value (MV) and the book value (BV) of firm represents IC. Hirschley and Weygandt (1985) reported a statistically significant positive association between MV to BV ratio and R&D intensity. Similarly, human capital and relational capital have positive relationship with MV to BV ratio of firm (Bozbura, 2004). A positive correlation exists between MV to BV ratios and the IC intensity of firms, and firms can address this "hidden value" by voluntarily disclosing information (Brennan, 2001).

Hence, indirect method such as MV to BV ratio (MV/BV Ratio) is financial measures of evaluating IC. Accordingly, MV/BV ratio assumes that a firm's approximate worth (tangible assets plus intangible assets) is indicated by its MV as BV won't consider intellectual assets like the brand name, goodwill and other intellectual property. Therefore, the difference between BV shown on the firm's balance sheet and MV gives an approximate measure of the intellectual capital (Edvinsson and Malone, 1997).

Intellectual Capital (IC) = MV - BV;

MV/BV Ratio = MV / BV;

IC Intensity Ratio = (MV/BV Ratio) - 1.

When there is a large disparity between a firm's MV and BV, that difference is often attributed to IC. MV is, the firm's total shares outstanding times the market price of each share. However, BV is the excess of total assets over total liabilities. Hence, MV has a tangible portion BV, in addition to IC. Hence, supposing MV minus BV is greater than zero (MV-BV > 0), it shows that the firm needs to make provision for managing and measuring its IC.

Intellectual Capital (IC): Major Components

There is no generally accepted definition of intellectual capital (IC) and various researchers have defined it in many ways. IC is defined by Stewart (1997), as 'packaged useful knowledge' and includes an organization's processes, technologies, patents, employees' skills, and information about customers, suppliers, and stakeholders. 'Intellectual Capital is the term given to the combined intangible assets which enable the company to function' (Brooking, 1996). Frykman and Tolleryd (2003) define intellectual capital as all non-financial assets of a company that are not reflected in the balance sheet. According to Sveiby (1997), "Intellectual capital consists of the invisible assets of an organization which include: internal structure, external structure, and employee competence." Roos et al., (1998) state that: "Intellectual capital includes all the processes and the assets which are not normally shown on the balance-sheet and all the intangible assets (trademarks, patent and brands) which modern accounting methods consider…." CIMA (2001) defines intellectual capital as: "possession of knowledge and experience, professional knowledge and skill, good relationship, and technological capacities, which when applied will give organization competitive advantage." The intellectual capital is defined as intangible critical assets, which cannot precisely be disclosed in the financial statement of a company but reflect the real value of the company and are based on knowledge (Yýldýz, 2010).

Intellectual capital refers to and includes relatively intangible and/or hidden assets of enterprises that are or can be leveraged to create value for the stakeholders of the organizations (Keenan, and Aggestam, 2001). According to the intellectual capital is consisted of components such as human capital, structural capital and customer capital. Intellectual capital has three components: human capital, internal structure and external structure (Sveiby, 2001). Human capital includes employees, education, work related knowledge and competence and know how. Internal structure comprises of intellectual property (patents, trademarks and copyrights) and infrastructure assets (corporate culture, management processes, information systems and networking systems). External structure includes brands, customer loyalty, customers, collaborations, financial contracts, licensing agreements, distribution channels and franchising agreements (Guthrie

and Petty, 2000). Intellectual capital takes three basic forms: human capital, structural capital, and customer capital (Roos and Roos, 1997). According to Bontis (1999), intellectual capital has three sub-domains include (1) Human capital – the tacit knowledge embedded in the minds of the employees; (2) Structural capital – the organizational routines of the business, and (3) Relational capital – the knowledge embedded in the relationships established with the outside environment.

Human Capital

In the knowledge economy, human capital has been realized as an important source of sustainable competitive advantage and is denoted by competencies of individuals and collective workforce of a company (Abeysekera and Guthrie, 2004). Human capital is inherent in people and cannot be owned by organizations. Human capital also encompasses how effectively an organization uses its people resources as measured by creativity and innovation. Human capital is knowledge, skill and experience that have been taken by employees when they leave a company (Starovic and Marr, 2003). Human capital is a combination of genetic inheritance, education, experience, and attitude about life and business (Hudson, 1993). Human capital represents the individual knowledge stock of an organization as represented by its employees (Bontis et al., 2002; Pablos, 2002) and is comprised of elements such as the education, skill, experience, knowledge, competences, and creativity (Guthrie, 2001; Seetharaman et al., 2004). The essence of human capital is the sheer intelligence of the organizational member as it is a source of innovation and strategic renewal (Bontis, 1998).

Structural Capital

Edvinsson and Malone (1997) described structural capital as everything that "supports employees' productivity" or "everything that gets left behind at the office when employees go home." Structural capital is everything in an organization that supports employees (human capital) in their work. Structural capital is the supportive infrastructure that enables human capital to function. Structural capital includes such traditional things as buildings, hardware, software, processes, patents, and trademarks. In addition, structural capital includes such things as the organization's image, organization, information system, and proprietary databases.

Structural capital is further classified into organizational, process and innovation capital (Edvinsson and Malone, 1997). Organizational capital includes the organization philosophy and systems for leveraging the organization's capability. Organizational capital is also called as internal (infra) structures of the firm. This part of IC comprises systems, processes, procedures, patents, concepts, etc. and is not only created by the employees or brought in from external sources, but is also embedded into the firm. Organizational culture is also considered part of the internal structure (Guthrie and Petty, 2000). Process capital includes the techniques, procedures, and programs that implement and enhance the delivery of goods and services. Innovation capital includes intellectual properties and intangible assets. Intellectual properties are protected commercial rights such as patents, copyrights and trademarks. Intangible assets are all of the other talents and theory by which an organization is run.

Structural capital is the whole organizational capabilities, which are owned by the business and involves elements such as culture, intellectual property, system and processes that are kept within the enterprise when the human capital – the employees – has gone home (Huang and Hsueh, 2007). According to Bontis et al., (2000) structural capital "includes all the non-human storehouses of knowledge in organizations which include the databases, organizational charts, process manuals, strategies, routines and anything whose value to the company is higher than its material value."

Relational Capital

Customer capital is information, which is grounded within market channels, which are developed by a company through business relations, and customer relations (Bontis et al., 2000) and involves elements such as brands, customers, customer satisfaction, and relations with customers (Guthrie, 2001). Customer capital is the strength and loyalty of customer relations. Customer satisfaction, repeat business, financial well-being, and price sensitivity may be used as indicators of customer capital. Every successful company not only possesses all kinds of intangibles, but also always has a relative emphasis on one type of intangible (Hussi and Ahonen, 2002).

The essence of relational capital is knowledge embedded in relationships external to the firm and includes organizational relationships with customers, suppliers, stakeholders, strategic alliance partners, etc. Relational capital is knowledge that organization uses it in marketing and relationship with costumer at business (Bontis et al., 2000). Owing to its external nature, knowledge embedded in relational capital is the most difficult to codify (Bontis, 1999).

Assets Composition: Impact on Corporate Governance and Disclosure Practices

The bulk of corporate governance research aims to understand the consequences of the separation of ownership from control on firms' performance. According to La Porta et al., (2000), corporate governance is, to a large extent, a set of mechanisms through which outside investors protect themselves against expropriation by the insiders. Agency problems play a central role in the emergence of corporate governance structures as such problems arise because contracts are not costlessly written and enforced (Fama and Jensen, 1983) and as contracts are not complete, moral hazard and adverse selection problems remain. Also, the level of contracts' incompleteness seems to increase with the level of intangible assets intensity. Particularly in IC intensive firms, managers can improve their bargaining position by developing "manager-specific investments." The costs of writing and enforcing (increasingly incomplete) contracts become severe when managers possess better business expertise than financiers (shareholders and debt holders) (Martins and Alves, 2010). Agency theory argues that financial policies are determined by agency costs. Given intangible asset characteristics, agency costs are expected to be high in intangible asset intensive firms (Alves and Martins, 2010).

Severe agency costs and information asymmetry problems of IC intensive firms have obvious impact on the relationship between firm managers and investors (shareholders and debt holders) and the way they share risks and returns. Given the nature of such firms, asset-substitution and under-investment effects are ever more important. Very often, investors (shareholders as well as debt holders) have limited knowledge about the technicalities of the firms in which they invest. IC assets have a set of specific characteristics – namely, high levels of risk/uncertainty, firm-specificity, human capital intensity, low observability and long-term nature - that make them distinctly different from other categories of assets. These characteristics are likely to have substantial impact on the levels of agency costs of equity (hidden action and hidden information problems) and debt (asset-substitution and under-investment problems), information asymmetry levels between managers and investors and transaction costs of equity and debt (Madhani, 2014d).

Assets composition of a firm will affect its contracting environment (Himmelberg et al., 1999) because fixed assets (i.e. physical capital such as plant, machinery and equipment) are easier to monitor and harder to steal then "soft" assets (i.e. IC assets such as R&D capital.) The more significant the amount of intangible assets, the greater is the scope for managerial discretionary power. Also, as IC assets cannot serve as collateral, the risk-shifting incentive (asset-substitution risk) increases. Hence, IC assets are associated with significant equity and debt agency costs, information asymmetry costs, transaction and bankruptcy costs. These costs are likely to have an impact on the design of corporate governance and disclosure policies. Vergauwen et al., (2007) emphasized that non-traditional industries have more incentive in disclosing more information about intangibles since investors expect continuous investments in R&D and immaterial projects. In this knowledge era, profit of the firms comes from its continued investment in IC. The higher the performance of firms is, the more it will discloses IC to the public (Li et al., 2008).

Various studies (e.g. USA, Italy and Portugal) found significant association between the industry sectors with the extent of disclosure, whereby highly intangibles intensive companies disclosed more than the lower intangibles intensive companies (Too and Wan Yusoff, 2015). Cerbioni and Parbonetti (2007) study found that firms with high growth used information disclosure as one method to connect potential different information between management and investor. They studied Biotechnology firms and used MV/BV ratio as a proxy for growth.

Research Design and Methodology

Objective of the Study

1. To measure extent of corporate governance and disclosure practices of sample firms with the help of an appropriate instrument as an evaluation tool.

2. To know that to what extent corporate governance and disclosure practices of IC intensive firms are different from capital intensive firms.
3. To know how nature of industry influences corporate governance and disclosure practices of the firms.

Scope of the Study

This study will help us to understand that whether intellectual or intangible assets dominance of firms (as characterized by IC intensive firms versus capital intensive firms) is associated with better corporate governance and disclosure practices in Indian context.

Sources of Data

This study employs a method of content analysis of published annual reports of firms. Content analysis can be a great source of information as it involves codifying both qualitative and quantitative information into pre-defined categories in order to track patterns in the presentation and reporting of information (Guthrie et al., 2006). Content analysis is widely used in accounting research to reveal useful insights into accounting practice (Steenkamp and Northcott, 2007). Annual reports are important documents for assessing and analyzing the company performance in regard to corporate governance standards and compliance. The annual reports of 36 firms for the financial year 2011-12 i.e. for the period ending March 2012 or December 2012 (based on the sample firms' financial year) have been downloaded from the CMIE Prowess database (4.14 version).

Sampling Technique Applied

Stratified sampling was used for obtaining data of firms listed in Bombay Stock Exchange (BSE) and is constituent of S&P BSE sectoral indices.

Sampling and Data Collection

The sample for the study was collected from the firms listed in BSE in the form of S&P BSE sectoral indices. Sectoral indices at BSE aim to represent minimum of 90% of the free-float market capitalization for sectoral firms from the universe of S&P BSE 500 index. This sector index consists of the firms classified in that particular sector of the BSE 500 index. The sample firms represent different sectors viz.: Power, Oil & Gas, Metal, Health Care, FMCG and IT. In each of these sectors, top 6 firms as per market capitalization are selected for sample.

In most of the earlier studies on disclosure, firms were taken as the top largest firms listed on their respective stock exchanges which have been selected on the basis of their market capitalization. Such studies also employed content analysis of published annual reports (Joshi et al., 2012). As shown below in Table 1, these 36 firms selected from 6 different sectors represent more than 91% of overall sectoral index weight. Hence, these samples of 36 firms truly represent selected 6 sectors.

Table 1: Weight of Sample Firms in Their Respective Sectoral Indices

Sl. No.	S&P BSE Sectoral Indices	No. of Firms Studied	Weight in Index
1	S&P BSE Power	6	97 %
2	S&P BSE Oil & Gas	6	94 %
3	S&P BSE Metal	6	82 %
4	S&P BSE Healthcare	6	88 %
5	S&P BSE IT	6	95 %
6	S&P BSE FMCG	6	91%
Total Sample Size		**36**	**91%**

(Source: Calculated by author form BSE Web Site)

The Research Instrument: Measurement of Corporate Governance Disclosure Score

In this study, corporate governance and disclosure practices of firms are measured by using index developed by Subramaniana and Reddy (2012). They developed a new instrument to measure corporate governance and disclosure levels of firms, considering only voluntary disclosures in the Indian context. On the basis of the S&P instrument, the instrument also classifies corporate governance-related disclosures under two categories: ownership structure and investor relations (*ownership*), and board and management structure and process (*board*) (Annexure-I). This instrument was also used in prior research on corporate governance and disclosure studies in India (Madhani, 2014b; Madhani, 2014c; Madhani, 2015a; Madhani, 2015b; Madhani, 2015c; Madhani, 2015d; Madhani, 2015e; Madhani, 2016).

The final instrument had 67 items: 19 questions in the *ownership* disclosure category and 48 in the *board* disclosure category. The annual reports of the selected 36 firms were carefully examined for the financial year 2011-12. Hence, to arrive at the overall disclosure score for each category, i.e. *ownership* and *board*, annual reports of each firm under study was scrutinized for the presence of specific items under the above mentioned categories. One point is awarded when information on an item is disclosed and zero otherwise. All items in the instrument were given equal weight, and the scores thus arrived at (for each category), with a higher score indicating greater disclosure. Final corporate governance and disclosure (CGD) score (Maximum: 67) for each firm was calculated by adding overall score received in *ownership* (Maximum: 19) as well as and *board* category (Maximum: 48).

Data Analysis and Interpretation

As explained earlier, with the help of instrument, corporate governance and disclosure practices of firms were calculated by thoroughly scrutinizing annual report of firms. The CGD score was calculated for all 36 firms of sample (Annexure-I). Capital intensity ratio of sample firms was also calculated by taking ratio of fixed asset and gross sales for each firm. This is also reported in Annexure-I. IC intensity ratio of sample firms is calculated and reported in Annexure-II.

Explanatory Variable and Testable Hypothesis

The explanatory variable used in the present research is IC intensity of firm. The study aims to find out if corporate governance and disclosure scores of IC intensive firms and capital intensive firms are significantly different. In the given sample of 36 firms, 18 firms are from capital intensive industries, while 18 belong to the IC intensive industries. As shown in Table 2, traditional (old economy) firms have high capital intensity and include Power, Oil & Gas and Metal industries.

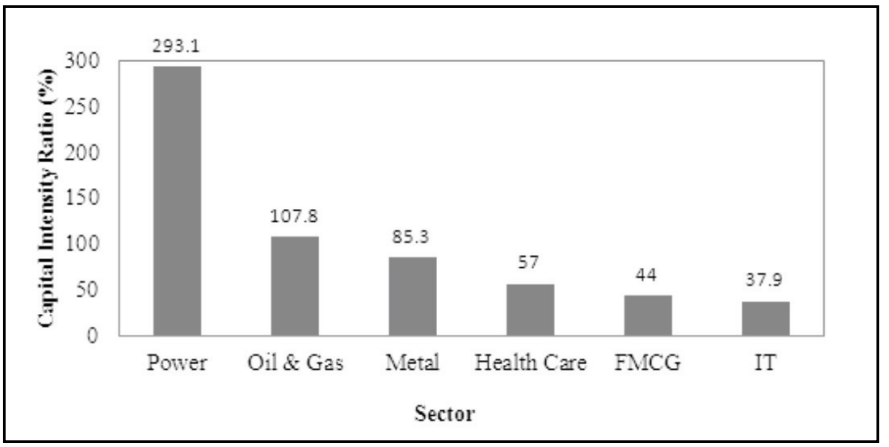
Table 2: Capital Intensity across Various Sectors

Sr. No.	Nature of Industry	Sector	Mean Capital Intensity Ratio	Mean Capital Intensity Ratio - For Industry
1	Capital Intensive	Power	293.1%	High (162.1%)
		Oil & Gas	107.8%	
		Metal	85.3%	
2	IC Intensive	Health Care	57%	Low (46.3%)
		IT	37.9%	
		FMCG	44%	

(Source: Calculated by Author)

It is evident from the Table 2 that, Power, Oil & Gas and Metal are highly capital intensive sectors while Health Care, IT and FMCG are low capital intensive sectors. Capital intensity of various sectors is also shown in the chart of Figure 1, below.

Figure 1: Capital Intensity across Various Sectors



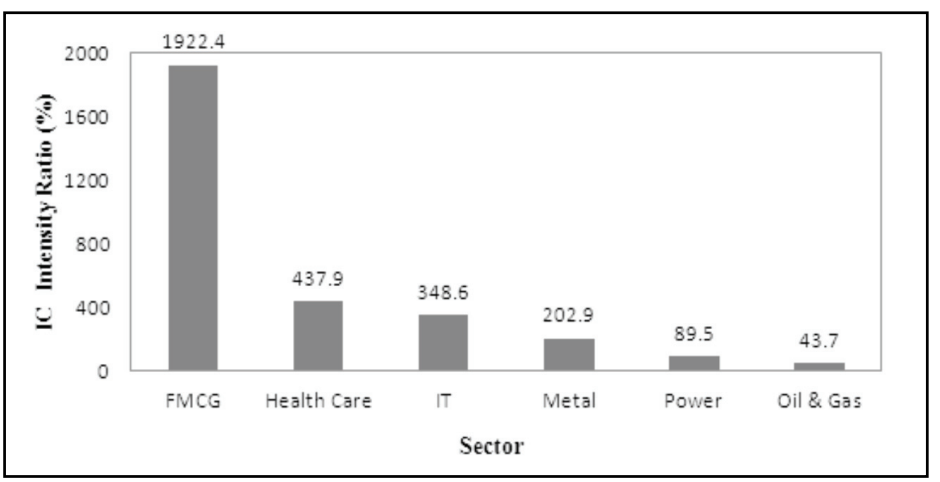
As shown in Table 3, IC intensive firms have high IC intensity and include FMCG, Health Care and IT industries. It is evident from the Table 3 that, Metal, Power, and Oil & Gas are less IC intensive sectors.

Table 3: Capital Intensity across Various Sectors

Sl. No.	Nature of Industry	Sector	Mean IC Intensity Ratio	Mean IC Intensity Ratio - For Industry
1	IC Intensive	FMCG	1922.4%	High (903%)
		Health Care	437.9%	
		IT	348.6%	
2	Capital Intensive	Metal	202.9%	Low (98%)
		Power	89.5%	
		Oil & Gas	43.7%	

(Source: Calculated by Author)

IC intensity of various sectors is also shown in the chart of Figure 2, below.



(Source: Chart developed by Author)

Development of Hypothesis

The relation between corporate governance and disclosure practices and firm characteristics has become a subject of much interest in recent years. According to Lev(2001) the riskiness of intangibles is, in general, substantially higher than that of physical and even financial assets. These characteristics are likely to have substantial impact on the information asymmetry levels between managers and investors. Any firm that has significant investment in IC but does not provide appropriate disclosures may be at a substantial competitive disadvantage and its financial reports may understate the firm's true value (Arcelus et al., 2005; Firer and Williams, 2003). This may create uncertainty over the firms' future earnings (Burgman and Roos, 2007; Williams, 2001). Any information held by the firm's managers but not by its owners (i.e. information asymmetry) may create agency problems and may lead to a variety of issues including insider trading, inaccurate evaluation of the firm's growth potential and increase its cost of capital. Accordingly, firms with higher proportion of intangible assets are likely to disclose more. As discussed earlier IC intensive (knowledge) firms are higher in intangible assets (i.e. high IC intensity) while capital intensive (traditional) firms are higher in tangible assets (i.e. high capital intensity). Hence, following alternate hypothesis is formulated:

Hypothesis (H_1):

Corporate governance and disclosure practices of IC intensive firms are better than capital intensive firms.

IC Intensive Industries: Key Characteristics

While describing IC intensive industries it is more important how the processes are organized, then what they actually produce. Accordingly, the degree to which knowledge is an integral part of a firm is defined not by what the firm sells but by what it does and how it is organized (Zack, 2003). Hence, even though FMCG industries are not much dependent on science and technology, still it is information (knowledge) intensive. In this research, IT, FMCG and Pharmaceutical industries are selected to represent IC intensive industries. Characteristics of these IC intensive industries along with relevance of various IC components are described below:

IT Industry

IT and Software industry is primarily knowledge based with most products never taking a tangible form, being created and delivered electronically. They rely intensively upon human capital, perhaps more so than any other high tech industry. IT consulting firms are knowledge intensive (Alvesson, 1995) and depend much on the knowledge based human assets. Software services, is even more human capital intensive than software products. Employee compensation in IT firms has been increasing over the last few years and accounts for nearly 50 per cent to 60 per cent of total revenue for IT firms (Madhani, 2011). Indian IT requires large number of qualified software professionals. Hence, as human capital it is reflected as major component of IC. In IT industry, indicators such as personnel costs /revenue will provide measure of human capital. The higher the ratio, the more investments have been made in human capital. This proxy is an indicator that measures the input of human capital. Personnel costs are all costs spent on employees, this includes salaries, training and educational costs, benefits etc.

FMCG Industry

External assets are intangibles that are related to market and enhance firm's market potentialities for its success and hence very valuable for FMCG industry. These represent the relationship that a firm established with its customers, suppliers, business partners, industry association, channels of distribution etc. FMCG industry deals primarily with the production, selling, marketing and distribution of a wide range of consumer products. Brand equity is the degree of consumer loyalty that a company's products maintain and hence it is crucial in success of FMCG industry. Established brands act as high entry barriers and if brand loyalty is strong, consumers tend to be willing to pay a high price for the product, and are reluctant to switch to competitive products.

Creation of a strong brand is essential for FMCG firms and considerable money and effort is expended in the development of brands. By and large, FMCG industry is characterized by typically simple manufacturing processes and relatively low manufacturing costs. Investments in manufacturing assets are also relatively low, yielding a high

asset turnover ratio (low capital intensity ratio). Moreover, as the highest value addition comes in the process of branding, firms can avail themselves of third party manufacturing facilities, thus reducing their investments in fixed assets further. The strength of the selling and distribution network helps a FMCG brand to grow volumes through increased penetration levels. The distribution chain ensures widespread presence for the brand so that the products are available to consumers where they want them. Delivering products to the point of consumer demand is a key determinant of success in the FMCG industry.

For FMCG products, advertisement and promotion is absolutely necessary to capture the mind of customers and create recall value and ultimately build the successful brand. The FMCG sector became the top advertiser in India (in both television and print media), according to the KPMG FICCI Frames Report for 2014. FMCG firms spend on advertisement and promotion of their products to build winning brands. In 2014, a study by ET Intelligence Group of FMCG firms reveals that the impact of their brand investments is visible on the firm's stock performance. According to study, Colgate Palmolive spent about 18-20% of its revenues on advertising and its stock has risen 32% and thus making it top performer in the BSE FMCG Index. Also, trade promotion can represent as much as 30 percent of sales for FMCG firms (A.T. Kearney).

The indicator that measure relational capital component of IC in FMCG industry is ratio of marketing expenditures to revenue. Here, marketing expenditures also includes selling and distribution expenditures. The amount of expenses in marketing, selling and distribution costs can approximate the investment in relational capital made by FMCG firms since these costs are expenses to promote a product, to establish a brand name, to improve distribution lines and so on. Therefore, these costs can be seen as investments in brand to strengthen the relationships between a product of firm and its customers.

Pharmaceutical Industry

Beattie and Thomson (2005) found that firm in knowledge-intensive sectors, such as pharmaceutical industries have higher MV/BV ratios when compared to other industries. Pharmaceutical industries are extensively dependent on its intangible assets as a key source for innovation (Huang et al., 2011). In this sector, knowledge is developed by firms mainly in their own research departments or is bought from other firms, and it also is considerably protected by intellectual property rights (IPR) and to a large extent dependent on its IC for a source of renewal (Zucker et al., 1994). This industry is research-intensive (DeVol et al., 2004), highly innovative (Chen, 2004), well balanced in its use of human intervention and technology (Hermans, 2005),

Pharmaceutical industry is recognized as knowledge-intensive and a source of great intellectual capital (Daum, 2005) and therefore, can be considered as an ideal candidate for analyzing IC (Bollen et al., 2005).

The IC in pharmaceutical industry can be traced into various aspects: (1) The skilled manpower which is the core for R&D activities of these firms, the expenses the firms makes on their training and development, etc. these are integral part of human capital. (2) The huge investment that the firm makes on the R&D infrastructure, this is an inseparable component of the structural capital. Subsequently, the continuous efforts of the firm in developing new molecules result in a substantial patent ownership in these firms. This intellectual property represents internal structure and forms a part of the organizational assets and capital (Kamath, 2008) (4) pharmaceutical industry invests heavily in relationship building exercise with physicians, pharmacists and hospitals along with distribution channels and is integral part of relational capital (external structure).

Pharmaceutical industry depends much on the intangible (knowledge based) assets and indicators such as R&D expenditure/revenue will provide measure of organizational capital. The higher the ratio, the more investments have been made to improve structural capital. Another proxy to measure IC is based on intellectual property (IP) i.e. taking ratio of intellectual property (IP) and total assets (TA) represented as (IP)/(TA). IP is capitalized and therefore measurable and comprises patents (internal structure). The second proxy to measure IC is based on strength of highly skilled and experienced manpower required to carry out R&D activities. This is reflection of human capital. A typical pharmaceutical product development team is composed of members with specialization in medicine, pharmacology, chemistry, life sciences, bio pharmaceutics and toxicology. The third proxy to measure IC is based on sales and

marketing expenses. This will provide measure of relational capital (external structure).

In 2013, expenditure on sales and marketing as well as R&D expenditure, shown as a percentage of sales for GlaxoSmithKline (UK), was 23.9% and 12.8% respectively; for Novartis (Switzerland), 24.8% and 16.9% respectively; for Novartis (Switzerland), 17.9 % and 18.48% respectively; Johnson & Johnson (US) 24.5% and 11.50% respectively (GlobalData, 2013). Hence, for pharmaceutical industries, intellectual capital includes investments into competent and skilled manpower required for research. The R&D manpower is generally highly qualified and proficient in conventional techniques of pharmaceutical R&D (reflected in human capital); investments into research infrastructure to carry out research activity (reflected in structural capital) and also investment in sales and marketing and relational building exercise (reflected in relational capital).

Unlike IT and FMCG industries, which are disproportionately dependent on one or few forms of IC, the pharmaceutical industry is reliant on a broad mixture of human, relational and structural capital (e.g. innovation capital, technology, networks, human capital, intellectual property, R&D, brand reputation and corporate image) (Abhayawansa and Azim, 2014). As discussed earlier, IT industries have more focus on human capital; FMCG industries have more emphasis on building customer capital; while pharmaceutical industries have emphasis on all three components of IC, hence, it is expected that they have better corporate governance and disclosure practices compared to IT and FMCG industries. Accordingly following hypothesis has been made:

Hypothesis (H_2):

Corporate governance and disclosure practices of pharmaceutical industries are better than other IC intensive industries i.e. IT and FMCG industries.

Summary of Findings and Empirical Results

A detailed analysis of the CGD score for sample firms representing IC intensive firms and capital intensive firms is presented in Table 3. Values of minimum, maximum, average and standard deviation of CGD score for IC intensive and capital intensive firms have also been reflected. Results show that there is a difference between mean and standard deviation of CGD score for IC intensive and capital intensive firms. Analysis of the result shown in Table 3 indicates that mean and standard deviation of CGD score are higher for IC intensive firms at 27.78 and 9.95 respectively when compared with capital intensive firms in the sample.

Table 3: Descriptive Statistics of Dependent Variable – CGD Score

Sr. No.	Nature of Industry	No. of Firms	CGD Score			Std. Deviation
			Minimum	Maximum	Mean	
1	IC Intensive (*knowledge*) Firms	18	14	47	27.78	9.95
2	Capital Intensive (*traditional*) Firms	18	17	35	27.39	4.90
3	All Firms	36	14	47	27.58	7.73

(Source: Calculated by Author)

For the purpose of this study, the firms have been taken from six different sectors for making meaningful comparison of IC intensive (knowledge) firms and capital intensive (traditional) firms. The reason behind this classification is to find out the extent of disclosure in IC intensive and capital intensive firms. The sector-wise disclosure is shown in Table 4, for IC intensive firms and in Table 5 for capital intensive firms.

Table 4: IC Intensive Industries: Sector-wise Breakup

Sl. No.	Sectors	No. of Firms	CGD Score			Std. Deviation
			Minimum	Maximum	Mean	
1	IT	6	20	47	32	10.20
2	FMCG	6	15	41	27.5	10.82
3	Health Care	6	14	40	23.83	8.68
4	All Firms	18	14	47	27.78	9.95

(Source: Calculated by Author)

Table 4 indicates that it is the IT firms which are found to have the highest corporate governance disclosure score among all IC intensive sectors of sample. Mean CGD score of 32 for IT sector is considerably higher than mean score of 36 firms in sample (i.e. 27.58).

Hence, our of 18 firms in this seH

Table 5: Capital Intensive Industries: Sector-wise Breakup

Sl. No.	Sectors	No. of Firms	CGD Score			Std. Deviation
			Minimum	Maximum	Mean	
1	Power	6	25	30	28	1.79
2	Oil & Gas	6	20	34	27.83	5.08
3	Metal	6	17	35	26.33	7.12
4	All Firms	18	17	35	27.39	4.90

(Source: Calculated by Author)

Table 5, shows capital intensive firms and are related to Power, Oil & Gas and Metal sectors. In the sample of 36 firms studied for this research, 8 firms belong to PSU (public sector undertaking) comprising 3 firms from Metal, 4 firms from Oil & Gas and 1 firm from metal sector. All these PSUs are from industries with high capital intensity.

Hypothesis (H_1):

Corporate governance and disclosure practices of IC intensive industries are better than capital intensive industries.

Research Procedures for Testing Hypothesis

This research conducted an inferential statistical analysis for testing the hypothesis. In order to test the significant differences in the corporate governance disclosure practices of IC intensive firms and capital intensive firms, univariate *t*-test has been used.

The study aims to find out if corporate governance and disclosure scores of IC intensive firms and capital intensive firms are significantly different. Results of parametric test, as indicated in Table 6, show that significance value p is greater than 0.05, therefore at 5% level of significance; null hypothesis of equality of means fails to be rejected. Thus, there exists no statistically significant difference between corporate governance disclosure practices of IC intensive firms and capital intensive firms.

Table 6: Results of Univariate Test for Difference between IC Intensive and Capital Intensive Industries

Null Hypothesis	*t* -Value	Significance Level
No significant difference between corporate governance disclosure practices of IC intensive industries and capital intensive industries	0.193	.848

(Source: Table developed by author)

Hypothesis (H_2):
Corporate governance and disclosure practices of pharmaceutical industries are better than other IC intensive industries i.e. IT and FMCG industries.

Research Procedures for Testing Hypothesis
In order to test the significant differences in the corporate governance and disclosure practices across Pharmaceutical, IT and FMCG industries, one-way ANOVA test has been used. One-way ANOVA tests the difference in the dependent variable among two, three or more groups. It tests whether groups formed by the categories of independent variables are similar. Results presented in Table 7 show that the significance value is greater than 0.05. Therefore at 5% level of significance, the null hypothesis of equality of means fails to be rejected. Thus, there exists no statistically significant difference between the corporate governance and disclosure practices in Pharmaceutical, IT and FMCG industries.

Table 7: Results of ANOVA Test for Difference among Various IC Intensive Industries

Null Hypothesis	*F* - Value	Significance Level
No significant difference between corporate governance and disclosure practices of Pharmaceutical, IT and FMCG industries	1.016	.386

(Source: Table developed by author)

Discussion and Research Implications

This research does not find statistically significant difference between corporate governance and disclosure practices of IC intensive firms and capital intensive firms listed in BSE. A possible explanation could be overall level of corporate governance and disclosure practices across all the firms was low during the study period 2011-12 (mean CGD score of all sample firms was low, i.e. 27.58), so that the effect of asset composition (tangible versus intangible assets) in old economy versus new economy firms was not apparent. As such there was little difference between mean CGD score of old economy firms and new economy firms. Another explanation could be that firms listed in Indian stock exchange i.e. BSE are mainly dominated by tangible assets (i.e. capital intensive firms). To throw more light on lack of intangible assets dominance of firms listed in BSE, an analysis is given below to compare Indian economy with US economy.

US Economy: Dominance of New Economy Firms

US firms exhibit higher proportion of intangible assets in overall asset base. According to a Federal Reserve Board analysis of 2006, investment in intangible assets in the US exceeds all investment in tangible property (Corrado et al., 2006). It was also reported that during period from 2001 to 2007, intangible investment in USA was 45% larger than tangible investment. Increasingly, intangibles are a principal driver of the competitiveness of US firms and economic growth (National Academies Press, 2009). Corrado et al., (2006) report that for the period 2000-03, the aggregate US investment in intangible assets averaged 11.19% of GDP and estimate that these investment levels translate into a stock of intangible capital valued at 33.18% of GDP. These statistics show that US economy is dominated by intangible assets.

Indian Scenario: Dominance of Old Economy Firms

Indian economy has transitioned from production to knowledge-based economy. The growing software and IT, and pharmaceutical industries etc, have led to increasing investments in intangible assets. However, in comparison to US (the world's largest economy), Indian firms are still not dominant in intangible assets. For Indian IT industry, to move from low skills-based programming and maintenance jobs to high knowledge-based product development, it is essential to build domain expertise with leading edge technologies through major R&D investments (Madhani, 2008b). In Indian scenario, the market is under developed and yet to reflect the performance of the firms especially in

terms of intangible assets (intellectual capital) efficiency. The stakeholders still perceive the performance of the firm in terms of tangible assets and less in terms of intangible assets (Kamath, 2008). According to Mehra (2010), during period of 1991-2004, tangible assets alone account for over 95% of the value of the entire market, emphasizing greater contribution of tangible assets in Indian context.

In India, expenditure on R&D is 0.9 % of GDP. In world GDP of US$ 70.2 trillion in 2011, the share of services was 67.5 per cent. For US, share of services was 78.4% of GDP while, for India service sector contributed 58.2% of GDP for same period (Government of India, Economic Survey 2012-13). As per Global Competitiveness Report 2012-13, published by World Economic Forum, Global Competitiveness Index rankings is 59 for India with rank for capacity for innovation is 42, company spending on R&D rank is 37 while in all these categories rank for US is 7. In the Indian pharmaceutical industry the average R&D expenditure is around 2 per cent of sales (Kamath, 2008). All these statistics confirm that Indian economy is still not dominated by new economy firms with higher proportion of intangible assets.

Limitations of the Study

This research considers firms listed with BSE, i.e. listed firms only and the time period considered for the study is financial year 2011-12. The firms which have been included in research may not represent the difference of all industries prevailing in the country.

Conclusion

In this research, the corporate governance and disclosure practices of IC intensive firms and capital intensive firms listed in S&P BSE sectoral indices were studied. A clear picture emerges from this study that in the Indian scenario, there is no statistically significant difference in the corporate governance and disclosure practices of IC intensive firms and capital intensive firms. As focus of Indian economy will further shift in future from traditional capital intensive industries (old economy) to research and innovation based IC intensive industries (new economy), proportion of intangible assets and R&D, in overall asset base will go up for Indian firms. In that context, it will be interesting to see whether it influences corporate governance and disclosure practices of Indian firms in future.

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Determinants of Inward Foreign Direct Investment (1994-2014): The Case of India

Dr. Namrata Sandhu and Neha Gupta

Abstract

Against the backdrop of the government's recent attempts to attract foreign direct investment, the present study attempts to establish the significant determinants of inward foreign direct investment to India. With the help of an econometric model and twenty-year time series data, the study establishes gross domestic product, exchange rate, trade openness and US interest rate as the significant determinants of foreign direct investment. The study exhibits the complementarity between a secondary data based determination of the determinants of foreign direct investment and existing literature on the subject. Policy implications are discussed.

Keywords : *Foreign Direct Investment, India, Economy, Policy, Globalization*

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In India, Narender Modi's 'Make in India' campaign is taking off. The government is introducing 'Big Bang' reforms to lure foreign investors and encourage foreign investments. The government has already eased foreign direct investment regulations in numerous sectors including medical services, railways, pension, insurance, construction, defense, plantation, e-commerce, retail etc. The government is also pushing GST, which is likely to overcome the problem of India's cumbersome taxation system (Economic Times, 2015). However, despite all out efforts by the government, the inflow of foreign direct investment to India leaves much to be desired. This is probably because other than a robust regulatory framework, the basic macroeconomic prerequisites of foreign direct investment are not in place (Anand, 2015). Towards this end, the present study is an attempt to establish the significant macroeconomic determinants of foreign direct investment and discuss the policy implications of the findings.

In the present study, the authors explore the history of globalization and foreign direct investment. They also systematically review the relevant literature to underscore

the rationale for foreign direct investment, and shortlist the macroeconomic variables that are believed to significantly impact it. The study design constitutes of an econometric model developed with the help of the short listed variables. The model makes use of twenty-year time series data to establish the significant determinants of inward FDI to India. The study ends with an exhibition of the complimentarity between a secondary data based determination of the determinants of foreign direct investment and existing literature on the subject, and discussion on policy implications of the findings.

Theory

Globalization and FDI

Globalism and globalization have a long ancestry (Schmukler, 2004). Their existence can be traced back to ancient civilizations. Evidence of trade relations between the Indus Valley and Sumerian civilizations, Persian and Roman civilizations, Portuguese and Spanish empires etc. is available that indicates that globalization has been prevalent for centuries (Travalini, 2009). Not only this, the earliest multinational companies were set up as long back as the 16th and 17th century (Dulupcu and Demirel, 2005). However, globalization as we see today, emerged not more than three decades back. United States of America is believed to be the champion of this movement. It adopted a very aggressive approach towards globalization, leading to the current revolution that facilitates internationalization and cross-country exchanges (Travalini, 2009). Following in the footsteps of USA, the South Asian region embraced globalization in the last two decades of the 20th century (Weerakoon, 2004). In India too, the present globalization process originated in the 1980s, when India began liberalizing its economy to achieve higher market orientation. Following a major crisis in the balance of payments, massive reforms were introduced in 1991 that promoted globalization (Nayak, Chakarvati, and Rajib, 2005; Hutchison, Kendall, Pasricha, and Singh, 2009; Sharma, 2012). Since then, there has been no looking back on this front.

Generally speaking, globalization is the integration of international economies into one global economy (Dunning, 1995; Weerakoon, 2004). In literature, globalization is accepted as a blend of four key trends - the extension of global trade, immigration, global communication and cross border financial flows (Penalver, 2002). If we specifically talk about the last component – cross border financial flows, it is further typified into three categories, that is, foreign portfolio investment, debt, and foreign direct investment (Kirabaeva and Razin, 2010). Of specific concern to the present study is foreign direct investment.

Benefits of FDI

Of late, foreign direct investment has become a norm in the world community. Evidence is available that suggests that it is the most stable form of cross border financial flow (Lipsey, 1999; Sula and Willett, 2006). In the last few decades, foreign direct investment has helped several poor countries grow economically (Reisen and Soto, 2001; Travalini, 2009; Zvezdanovic, 2013). The transfer of technology, assets, and knowhow that has taken place as a result of foreign direct investment has created developmental effects that have enhanced the total factor productivity, employment, income and prosperity of receiving countries (Poon and Thompson, 1998; Sofilda, Amalia, and Hamzah, 2015; Kulkarni, Tapas, and Dangre, 2016).

Extant literature also shows that foreign direct investment results in a transitional experience for not only the host, but also the home country (Ovin and Macek, 2010). The home country gets access to cheap labor, which significantly reduces the cost of production and enhances profits of the investing firms (Nourbakhshian, Hosseini, Aghapour, and Gheshmi, 2012; Sankaran, 2015). It also allows the investing firms to tap into new market and growth opportunities (Lipsey, 2004). This mutually symbiotic relationship between the investor and investee countries fosters enduring and amicable relationships between both sets of countries, and leads to inter-country commercial and political affiliation (OECD, 2013). Therefore, foreign direct investment has twin benefits – it leads to economic growth as well as integration of the world economy.

Determinants of FDI

The benefits of foreign direct investment (henceforth FDI) make a very compelling case for attracting it. This is perhaps the reason why the determinants of FDI have drawn extensive scholarly attention. The authors came across numerous studies that have established explanatory variables widely accepted as significant determinants of

FDI. A close scrutiny of these determinants revealed that these determinants vary from study to study, period to period and country to country. Therefore, two factors were primarily kept in mind while choosing the studies for review. First, since on the Indian front, most of the significant developments in globalization and FDI took place post economic liberalization, only the relevant studies conducted in or after 1991 were reviewed. Second, keeping in mind the similarity of the macroeconomic goals of most of the developing countries, and their dependence on FDI to achieve these goals, with a few exceptions, only the studies conducted in developing countries were reviewed. Table 1 provides a snapshot of the reviewed studies.

Table 1: Significant determinants of FDI: A literature review (1991-2015)

Author	Year	Country/ Region	Significant determinants					
			GDP	Interest rate	Inflation	Exchange rate	Trade openness	Others
Sofilda, Amalia, and Hamzah	2015	6 ASEAN Countries (Indonesia, Malaysia, Singapore, Thailand, Philippines, and Vietnam)	✓	✓	-	✓	✓	Global competitiveness
Okafor	2015	23 countries of Sub-Saharan Africa	✓					Availability of natural resources, Level of education, infrastructure
Sankaran	2015	Dominican Republic	✓	-	-	-	✓	Infrastructure, natural resource extraction, secondary education, labor force participation rate
Ojong, Arikpo and Anthony	2015	Nigeria	-	-	-	-	-	Market capitalization, gross fixed capital formation, level of economic activities
Faroh and Shen	2015	Sierra Leone	-	-	-	✓	✓	-
Gharaibeh	2015	Kingdom of Bahrain		✓	✓		✓	Government expenditure, labor force, public education, population
Bandekar and Sankaranarayanan	2014	India	✓	-	-	✓	✓	External debt, electric power consumption per capita, employment growth, total reserves
Awan, Ahmad, Shahid and Hassan	2014	Pakistan	✓	-	-	-	-	Gross capital formation, exports, external debt, imports, military expenditure

Narayan	2014	India	✓	-	-	-	-	Forex reserves
Bilawal et al.	2014	Pakistan	-	-	-	✓	-	-
Emmanue and Luther	2014	Ghana	-	✓	-	✓	-	-
Gamboa	2013	Mexico	✓	-	-	-	-	Proximity to the USA and Mexico city, years of schooling, wages, industrial units, infrastructure, delinquency rates
Pillai and Rao	2013	India	✓	-	✓	✓	✓	Forex, stock market index, industrial production index
Moses, Anigbogu, Okoli and Anyanwu	2013	Nigeria	-	-	-	-	✓	Natural resources
Uwubanmwen and Ajao	2012	Nigeria	-	✓	✓	✓	✓	-
Lokesh and Leelavathy	2012	India	✓	-	✓	-	-	Policy framework, political factors
Doytch and Eren	2012	21 Eastern European and Central Asian Countries	-	-	-	-	-	Institutional quality, low wages, skilled labor force
Panigrahi and Panda	2012	India and China	✓	-	-	-	-	Gross capital formation, capital infrastructure, external debt, export, import
Panigrahi and Panda	2012	Malaysia	-	-	-	-	-	Gross capital formation
Mohammadvandnahidi, Jaberikhosroshahi and Norouzi	2012	Iran	-	-	-	✓	-	Infrastructure
Ehimare	2011	Nigeria	-	-	-	✓	-	-
Wafure and Nurudeen	2010	Nigeria	✓	-	-	✓	✓	Political stability
Azam and Lukman	2010	Pakistan, India and Indonesia	✓	-	-	-	✓	External debt, domestic investments, physical infrastructure
Bo	2009	Developed and Developing Countries	-	-	-	✓	-	Institutional instability (political risk)
Aw and Tang	2009	Malaysia	-	✓	✓	-	✓	Corruption

Mottaleb	2007	60 Low-Income and Lower-Middle Income	✓	-	-	-	-	Infrastructure
Cevis and Camurdan	2007	Pakistan	✓	✓	✓	-	✓	Business climate
Tsen	2005	Malaysia	✓	-	✓	✓	-	Education, infrastructure,
Tsen	2005	Malaysia	✓	-	✓	✓	-	Education, infrastructure, current account balance
Agiomirgianakis, Asteriou and Papathoma	2003	20 OECD Countries (1975-1997)	-	-	-	-	-	Human capital, trade regime, infrastructure
Addison and Heshmati	2003	Developing countries	-	-	-	-	-	ICT, democratization
Yang, Groenewold and Tcha	2000	Australia		✓			✓	Industrial dispute, wage rate
Ren and Pentecost	1991	China	✓	-	-	✓	-	Labor, trade, tax rate

From table 1, we can construe that exchange rate is the most consistent macroeconomic variable that impacts FDI inflow. This variable is followed by trade openness, gross domestic product, interest rate and inflation. The other variables that significantly impact FDI inflow are market size and infrastructure of the host economy. The literature survey also indicates a few other macroeconomic variables, such as, education, wage rate, tax rate, external debt, total reserves etc. that impact FDI. However these variables did not consistently appear as significant determinants of FDI across studies and countries.

Another significant take away from table 1 is the absence of a unified theory that explains the most relevant determinants of FDI. Since the determinants of FDI vary from time period to time period, and country to country, experts believe that the possibility of developing a unified theory that explains the determinants of FDI is extremely low. Hence, they call for frequent studies to determine the contemporary and regional factors that impact FDI inflow to a country (Zvezdanovic, 2013). This study addresses this call for further research and attempts to categorically establish the determinants of FDI inflow into India. It is believed that results of this study will serve as an input to the policy makers attempting to make India a future FDI hub. The results will also add to the existing literature on the subject.

β

Methodology

The present study intends to enlist the significant determinants of FDI inflow into India. The study categorically examines the impact of six macroeconomic variables on inward FDI to India. These variables are gross domestic product, inflation, interest rate in India, exchange rate, trade openness, and interest rate in USA. The first five of these variables have been shortlisted on the basis of the existing relevant literature. The sixth variable – interest rate in USA was included in the current study because this study was conducted at a time when there was a high uproar of change in US monetary policy and its probable impact on FDI inflow into emerging market economies. The study used twenty-year time series data for all the study variables (1994 to 2014). Data for the study was obtained from the Handbook of Statistics on Indian Economy by the RBI, statistical releases and historical data form the official website of the Federal Reserve and the US Bureau of Economic Analysis.

Empirical Model

Regression analysis was used to estimate the relationship between the dependent variable - FDI inflow to India, and the predictor variables – gross domestic product, inflation, interest rate in India, exchange rate, trade openness and the interest rate in US. The model as depicted in table 2 was developed.

Dependent Variable	Independent Variables
FDI	Gross domestic product
	Inflation
	Interest rate in India
	Exchange rate
	Trade openness
	Interest rate in USA

Source: Authors' study

$$FDI = \beta_0 + \beta_1 GDP + \beta_2 INF + \beta_3 IR_1 + \beta_4 ER + \beta_5 TO + \beta_6 IR_2 + \mu \quad \text{.....Equation 1}$$

In the above model, FDI is foreign direct investment inflow into India (the parameter to be estimated), β_0 is the constant, β_1 to β_6 are the slope coefficients, INF is inflation, IR_1 is interest rate in India, ER is exchange rate, TO is trade openness, IR_2 is the interest rate in US and μ is the random residual or error term, which captures the other variables that may influence the dependent variable (FDI), but not considered in the model.

Foreign Direct Investment (FDI) – In the current study, data for direct investment to India from 1994-2014 was used.

Gross Domestic Product (GDP) – As suggested by previous studies, the receiving country's market size or economic growth positively impacts the inflow of FDI (Mottaleb, 2007; Sofilda et al., 2015). Countries with rising GDPs attract FDI. Consequently, the economic activity of the recipient countries further flourishes. Therefore, in the present study, the expected sign of the correlation between GDP and FDI is positive.

Inflation (INF) – Previous literature has established low inflation as an indicator of the internal economic stability of a country (Tsen, 2005; Lokesh and Leelavathy, 2012), and economically stable countries attract more FDI (Uwubanmwen and Ajao, 2012). Thus, a low rate of inflation is desired in economies that seek FDI as a source of capital. Therefore, the correlation between inflation and FDI inflow is likely to be negative.

Interest rate (IR) – In the present study, two series of interest rates - IR_1 and IR_2 are considered. IR_1 refers to interest rate in India and IR_2 refers to interest rate in the US.

Faroh and Shen (2015) suggested that interest rate of host country and FDI inflow are positively correlated. However, this relationship may change if foreign investors actively raise capital in the host country itself (Siddiqui and Aumeboonsuke, 2014). Though the existing literature on the association between interest rate and FDI lack consensus, most empirical evidence suggests a positive relationship. The same relation is expected in the present study too.

Further, Byrne and Fiess (2011) found US interest rates to be a crucial determinant of capital flows to emerging market economies. Ghosh, Kim, Qureshi, and Zalduendo (2012) also suggested that low interest rate in US enhances the likelihood of capital inflow to emerging market economies. Therefore, the recent tightening of the US monetary policy (other things being equal) is expected to lower capital inflows to emerging market economies (Calvo, Fernandez-Arias, Reinhart, and Talvi, 2001). In line with this expectation, the anticipated correlation between the US interest rate and FDI inflow into India is negative.

Exchange rate (ER) – Froot and Stein (1991) suggested that depreciation of the host country's currency positively impacts FDI inflow because it increases foreign investors' wealth. Various subsequent studies have confirmed this finding (Tsen, 2005; Bo, 2009; Wafure and Nurudeen, 2010; Sofilda et al., 2015). Therefore, the expected correlation between exchange rate and FDI inflow is negative.

Trade Openness (TO) – Previous studies have established that trade openness augments FDI inflows (Chakrabarti, 2001; Aw and Tang, 2009; Bandekar and Sankaranarayanan, 2014). It is believed that higher the extent of trade openness of a country, the more is its orientation towards the foreign market. Such countries are more open to external capital. This explains the positive association between trade openness and FDI inflows. In the present study too, a positive correlation between trade openness and FDI inflows

is expected. Further, in the current study, the sum of imports and exports divided by the gross domestic product is used as a proxy for trade openness (Faroh and Shen, 2015).

Hypotheses

The aforementioned studies provide evidence of the significant impact of gross domestic product, inflation, interest rate in India, exchange rate, trade openness and interest rate in USA on FDI inflow. The hypotheses of the current study examine these relationships in the Indian context. Hypotheses proposed are based on extant literature.

H1: There is a significant impact of gross domestic product on FDI inflow.

H2: There is a significant impact of inflation on FDI inflow.

H3: There is a significant impact of domestic interest rate on FDI inflow.

H4: There is a significant impact of exchange rate on FDI inflow.

H5: There is a significant impact of trade openness on FDI inflow.

H6: There is a significant impact of US interest rate on FDI inflow.

Analysis

Tables 3, 4 and 5 exhibit the outcome of regression analysis. The variance inflation factor was calculated to assess multi-collinearity between the six independent variables. Its average value worked out to less than ten in each case, indicating absence of multi-collinearity (Kothari, 2007). Further, Durbin Watson statistic was used to test the assumption of independent errors. Its value (1.878) establishes freedom from autocorrelation and spuriousness (Gujarati, 2006). Also, the R square value of .975 suggests that 97.5 per cent of the variance in FDI can be explained with the help of the six independent variables. This indicates a very strong predictive power of the independent variables. All these statistics collectively establish the overall reliability and validity of the empirical model (Gujarati, 2006).

Table 3. ANOVA for regression

Sources of variation	Sum of squares	Degrees of freedom	Mean square	Computed F	Significance
Regression	9498292.322	6	1583048.720	90.322	.000
Residual	245374.380	14	17526.741		
Total	9743666.702	20			

Source: Authors' computation

Table 4. Model summary

R	R square	Adjusted R square	Standard error of the estimate	Durbin-Watson
.987	.975	.964	132.38860	1.878

Source: Authors' computation

Table 5. Results of regression analysis

Variables	Unstandardized regression coefficients		Standardized regression coefficients	T	Significance (p-value)
	B	Standard error	Beta		
GDP	.254	.033	5.258	7.618	.000*
INF	-3.724	2.110	-.133	-1.773	.098
IR_1	.407	13.482	.002	.030	.976
ER	-80.971	14.954	-.829	-5.415	.000*
TO	11386.132	1774.366	3.893	6.417	.000*
IR_2	-86.387	25.909	-.288	-3.334	.005*

Intercept (constant) = 404.127
*Significant at five percent level of significance
Source: Authors' computation

As evident from table 3, the overall empirical model is significant. Table 5 further indicates that four variables – gross domestic product, exchange rate, trade openness, and interest rate in USA are significant at five percent significance level. Therefore, H1, H4, H5 and H6 are accepted. On the other hand, inflation and domestic interest rate are statistically insignificant. H2 and H3 are hence rejected. Post analysis, equation 1 takes the following shape:

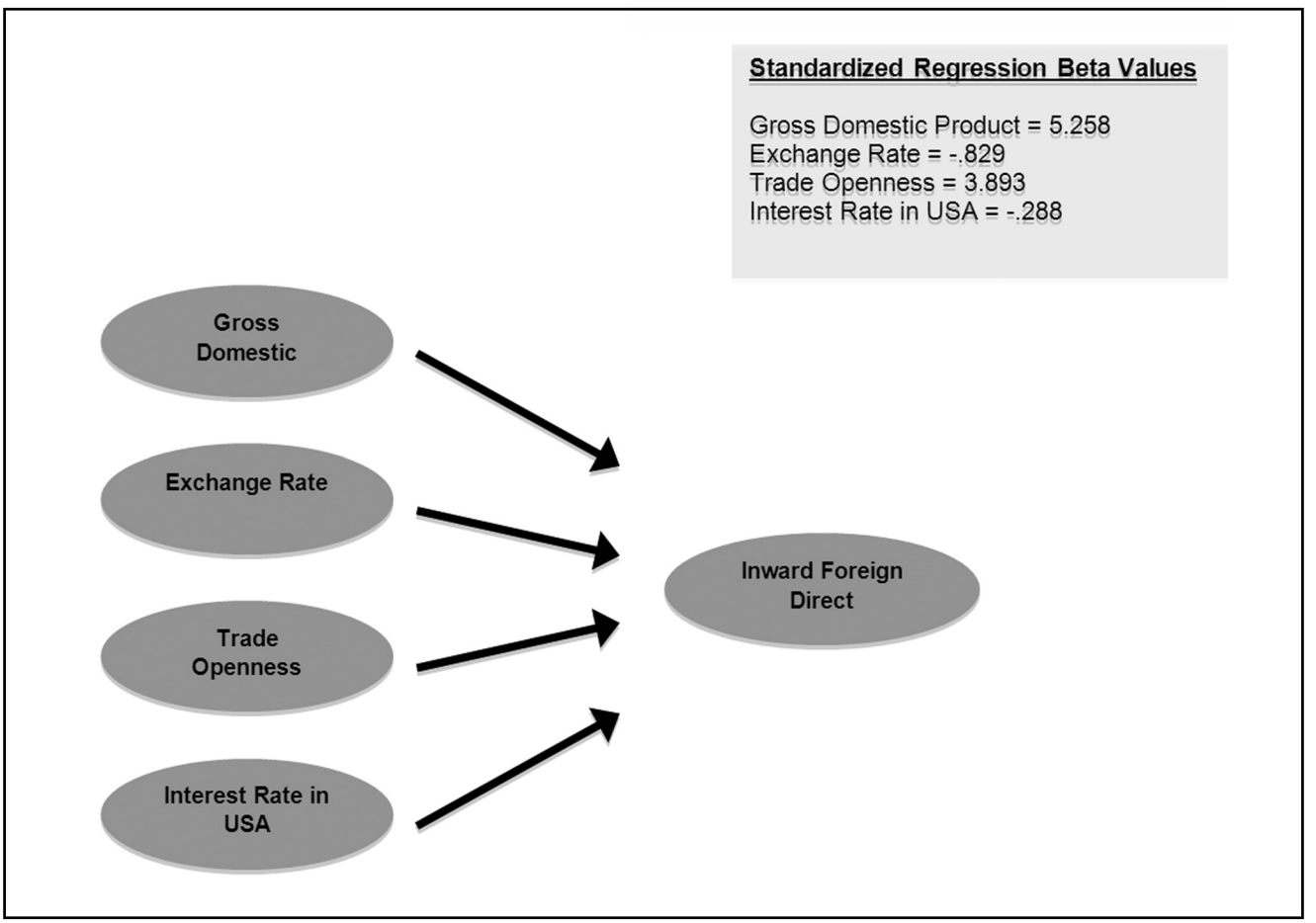
$FDI = \beta_0 + \beta_1 GDP + \beta_4 ER + \beta_5 TO + \beta_6 IR_2 + \mu$ ..... Equation 2

$FDI = 404.127 + .254 - 80.971 + 11386.132 - 86.387$ .....Equation 3

The outcome of the analysis indicates that gross domestic product (p = .000), exchange rate (p = .000), trade openness (p = .000) and interest rate in USA (p = .005) significantly impact the inward flow of foreign direct investment to India. While one of these variables – interest rate in USA is beyond the control of Indian regulatory authorities, the other three variables may be actively managed to encourage the flow of FDI to India.

Conclusion

The present study extracted six variables from extant literature and examined their impact on the inward flow of FDI to India. Of the six study variables, four were found significant in the model. These four variables are gross domestic product, exchange rate, trade openness and interest rate in USA. Figure 1 captures the outcome of the study.



Source: Authors' study

Figure 1. Proposed model: Significant determinants of inward foreign direct investment

Discussion

Comparison with Extant Literature

On comparison with existing literature, we find that most of the results of the present study are in tandem with the results of previous studies (Chakrabarti, 2001; Mottaleb, 2007; Narayan, 2014; Sofilda et al., 2015). On the other hand, a few findings of the current study also contradict some of the contentions of previous studies (Doytch and Eren, 2012; Siddiqui and Aumeboonsuke, 2014). In this regard, let us discuss each of the six study variables one by one.

Gross Domestic Product (GDP) – Previous scholars claim that the gross domestic product of a country has a significant positive impact on FDI inflow into a country (Mottaleb, 2007; Narayan, 2014; Okafor, 2015; Sofilda et al., 2015). The results of the present study support this finding. Consequently, the results of the present study contradict the findings of the studies that indicate that the gross domestic product of a country has no significant bearing on inward FDI (Moses et al., 2013; Faroh and Shen, 2014).

Inflation (INF) – While a number of previous studies have established the rate of inflation as a significant determinant of inward FDI (Aw and Tang, 2009; Lokesh and Leelavathy, 2012; Uwubanmwen and Ajao, 2012), the present study could not support this contention. Contrary to the findings of previous studies, the present study could not establish inflation as a significant determinant of FDI inflow into a country.

Interest rate (IR) – The present study examined the impact of two different interest rates – interest rate in India and interest rate in USA on FDI inflow into India. While the interest rate in India did not emerge as a significant determinant of FDI inflow, the interest rate in USA was found to have a significant impact on FDI inflow to India.

Previous scholars have established a significant relationship between interest rate in the host country and FDI inflow to the country (Siddiqui and Aumeboonsuke, 2014; Faroh and Shen, 2015). The results of the present study refute these findings and indicate that interest rate in the host country does not significantly impact FDI inflow into the country. Further, extant literature indicates that the US interest rate significantly impacts the extent of FDI inflow to emerging economies (Byrne and Fiess, 2011; Ghosh et al., 2012). The present study supports these finding. Also, as hypothesized by previous researchers (Calvo et al., 2001), an inverse relation exists between the interest rate in US and FDI inflow to India.

Exchange rate (ER) – The relation established by the present study between exchange rate and FDI inflow is in synchronization with the results of previous studies (Tsen, 2005; Bo, 2009; Wafure and Nurudeen, 2010; Sofilda et al., 2015). Just as, the previous literature suggests a significant negative relationship between exchange rate and FDI inflow (Froot and Stein, 1991), so too the current study establishes a significant inverse relation between the two variables.

Trade Openness (TO) – Once again the results of the present study support the findings of previous studies. Previous studies indicate that the extent of trade openness significantly and positively impacts the FDI inflow to a country (Chakrabarti, 2001; Aw and Tang, 2009; Bandekar and Sankaranarayanan, 2014). The current study too establishes the same.

Policy Implications

The results of the study have clear policy implications. In order to attract FDI, India should work on spurring economic growth. A higher growth rate or increase in GDP will on its own enhance the inflow of FDI to India. Previous scholars opine that GDP is a proxy for market size (Doytch and Eren, 2013). As such, an increase in GDP can be sought by encouraging local production and job creation (Faroh and Shen, 2015). The developmental effects of investment in local production and employment are likely to accelerate GDP and by consequence, an inward FDI flow.

Another policy move that can actively attract FDI is a more liberal and open policy towards foreign trade. Recent surveys have indicated that India does not fare well on the parameter of trade openness (Sandhu, Singh and Mankotia, 2015; World Bank, 2015; Sandhu and Sehgal, 2016). Therefore, a more open trade policy is recommended. It will go a long way in stimulating the flow of FDI to India.

Lastly, though not under the control of Indian regulatory authorities, interest rate in the US is a significant determinant of FDI flow to India. In the light of this understanding, Indian policy makers should put a definite framework in place to rebut the negative impact of any increase in US interest rate

on FDI flow to India. For example: maintaining a significant difference in the US and Indian interest rate can retard capital flight from India in the event of increase in US interest rate.

Study Limitations and Future Research

Although the study variables were carefully selected on the basis of a rigorous review and all the dependent variables together account for 97.5 per cent of the variation in the dependent variable, future researchers may conduct this study with other possible determinants of FDI. They may also examine the factors that significantly contribute towards the outflow of FDI from India.

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Analysis of Volatility Spill over between Oil Price and Exchange Rate in India: GARCH Approach

Shekhar Mishra and Dr. S.S. Debasish

Abstract

The present paper endeavours to analyse the volatility spill over between crude oil price and exchange rate for India using daily data for time period June 2003 to March 2016. To examine the impact of oil price on exchange rate of Indian Rupee against U.S. Dollar, Generalised Autoregressive Conditional Heteroskedasticity (GARCH) and Exponential Generalised Autoregressive Conditional Heteroskedasticity (EGARCH) models have been employed. The analysis reveals that an increase in oil price return leads to depreciation of Indian Currency with respect to U.S. Dollar. The study establishes that positive and negative oil price shocks have similar effects, in terms of magnitude, on exchange rate volatility and also have permanent effect on exchange rate volatility.

Keywords: *GARCH, EGARCH, Crude Oil Price, Exchange Rate.*

JEL Classification: E45; G11; G15

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India is considered to be one of the fastest growing economy in the world. Macroeconomic indicators such as interest rates, inflation, IIP, gold prices, stock prices, exchange rate etc play a crucial role in determining the growth as well as economic strength of any country in Global Arena. The exchange rate regime in India has evolved from pegged exchange rate to present floating exchange rate regime where exchange rate is determined by market forces of demand and supply. These market forces in turn are influenced by number of macroeconomic variables like inflation rate, stock prices, IIP, interest rates etc. With the increasing level of international trade and capital movements, exchange rate has become one of the important determinants of country's economic strength and has witnessed increased level of volatility during recent times. There are various factors which determine the exchange rate with international crude oil price being one of the most important factors. Crude oil being one of the most important resources of energy used in economic activities is also considered as a comparative advantage and one of the strategic resources for country.

The variation in crude oil price is considered as one of the important determinant of global economic performance and world economy. Variation in crude oil price has a significant impact on cost of production thereby influencing the price of commodity and thus impacting the demand. Change in oil price also result into shift of income from oil importing nations to oil exporting nations which in turn is bound to have impact on exchange rates. This phenomenon necessitates the crude oil price dynamics and its influence on exchange rate.

The present paper aims to examine the relationship and volatility spill over between India's foreign exchange rate and crude oil price over the period of 13 years from year 2003 to year 2016. The study would be instrumental in understanding the extent by which the India's foreign exchange rate is influenced by Global crude oil price change.

Literature Review:

The following section is dedicated to explore the work done so far in this area of study. Literature review will help to explain the general idea of this study and further understanding the relationship between exchange rate and macro economic variables with major emphasis on crude oil prices.

The earlier studies done by Golub(1983) and Krugman(1983) postulated that, an oil importing country may experience exchange rate depreciation when oil prices rise and vice versa. Similarly, Blomberg and Harris (1995) explained the possible effect of exchange rates on oil prices, by implying one price for all tradable goods law. Through their study the authors suggested that as oil is homogenous, world tradable and US dollar priced commodity, a depreciation in dollar increases the purchasing power of foreigners, which in turn increases the crude oil demand thereby pushing oil prices upward.

Amano and Van Norden (1998) conducted an empirical study to analyze relationship between US dollar real effective exchange rate and crude oil prices by applying co integration analysis and error correction model on monthly data for the period 1972 to 1995 and found that oil prices were the reason for US dollar exchange rate shocks. Similarly Benassy- Quere et al.(2007) observed the impact of oil on real effective exchange rate of dollar between 1974 to 2004 and revealed that approximate 10% rise in oil prices resulted into nearly 4.3% appreciation of the dollar in the long run. Raurava (2004) studied the role of oil prices and real exchange rate for Russian economy by applying VAR and co integration tools on quarterly data. The study concluded that an increase in oil price was related with the depreciation in ruble in the long period. Ghosh (2011) examined the relation between crude oil price and exchange rate in India over a period of one year from July 2007 to Nov 2008 and found that an increase in return on oil prices results into depreciation of Indian rupees in relation to dollar.

Cavalcanti and Jalles (2013) by making use of dataset from 1975 to 2008 revealed that the negative oil shocks results into appreciation of local currency of Brazil. Huang and Guo (2007) showed that real oil price shocks suggested a smaller appreciation for the real exchange rate of China by conducting four dimensional structural VAR model. Yousefi and Wirjanto (2004) studied the effect of changes in the US dollar on the development of OPEC oil prices by making use of general method of moments. The author's study suggested a negative correlation between changes in dollar and development of oil prices of OPEC.

Narayan et al. used GARCH family models to study the relationship between oil prices and exchange rate between the US dollar and Fijian dollar. Daily data for the period from 2000 to 2006 was used for this purpose and it was found that Fijian dollar appreciated due to rise in oil prices. Akram (2009) by using structural VAR model gave evidence that a weaker US dollar leads to higher oil prices and significantly accounts for oil price volatility. Cifarelli and Paladino (2010) undertook a trivariate GARCH –M model having stock prices, oil prices and dollar exchange rate and found that there exist a negative relation between oil prices and exchange rate changes.

Study by Turhan et al. (2013), showed that an increase in price of oil results into significant appreciation of domestic currency against the US dollar between 2003 to 2010. Lizardo and Mollick (2010) showed that a rise in real oil prices can lead to significant depreciation of dollar in relation to the exporting country such as Russia, however, the oil importing country's currency may depreciate in relation to US dollar in the same situation. Similarly Krichene (2005, 2006) in his study concluded that an appreciation of dollar may lead to both rise and fall in oil prices.

Finally, Reboredo (2012) in his study found that although the interdependence between the oil prices and exchange rate has rose significantly after the trouble of global financial crises, it is in general weak and there is no extreme market dependence between oil prices and exchange rates.

From the review done of various studies conducted in this regard, it is revealed that the oil price and exchange rate relationship is important from various perspectives. There exist a relationship between both however the extent to which they depend on each other is not explain with conformity. This paper will make an attempt to study the relationship and volatility spillover between crude oil prices and rupee dollar exchange rate in India for past 13 years by making using of GARCH family models.

Methodology of Modelling the Volatility Spillover between Crude Oil Price and Exchange Rate:

The time series data used in the analysis consists of daily data for exchange rate of Indian Rupee against U.S. Dollar and global price of OPEC Crude Oil. The sample period taken has been from the year 2003 to year 2016 and the source of data has been official website of Reserve Bank of India i.e. www.rbi.org.in and Quandl.com. The return on exchange rate is calculated as follows:

$$R_T = 100*\text{Log}\,(e_t/e_{t-1}) \qquad \text{(Equation 1)}$$

Where e_t is the exchange rate of Rupee against U.S. Dollar at time t and e_{t-1} represent the exchange rate of Rupee against U.S. Dollar at time t-1. Similarly the return on global price of OPEC Crude price is also calculated as follows:

$$o_T = 100*\text{Log}\,(o_t/o_{t-1}) \qquad \text{(Equation 2)}$$

Where o_t is the global price of OPEC Crude Oil at time t and o_{t-1} represent the global price of OPEC Crude Oil at time t-1.

The o_T and R_T would be used for analysing the volatility spillover between the global crude oil price and exchange rate.

The modeling or estimation of Volatility Spillover between Crude Oil Price and Exchange Rate is done by General Autoregressive Conditional Heteroskedasticity (GARCH) Models. Table 1 represents the summary statistics of each of the variables used in analysis. From Table 1 it can be inferred from statistics relating to Skewness, Kurtosis and Jarque-Bera that the variables are non normal in nature. Volatility of the oil price return is also found to be greater than that for return on the Exchange Rate

Table 1: Summary Statistics of the Variables

	Exchange Rate Return	Oil Return
Maximum	0.058707	0.18261
Minimum	-0.060972	-0.22982
Std. Dev	0.0056758	0.020574
Skewness	-0.071043	-0.0031504
Kurtosis	14.815	12.467
Jarque-Bera	23979.9 (0.00)	16980.5 (0.00)

Figures in the parenthesis are probability values.

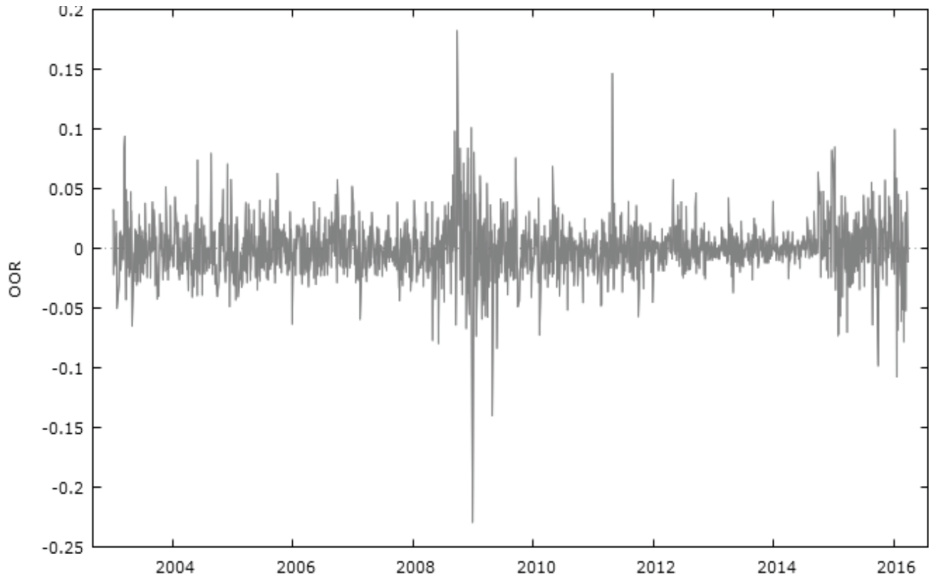

Figure 1 (a) Graphical representation of OPEC Crude Oil Return

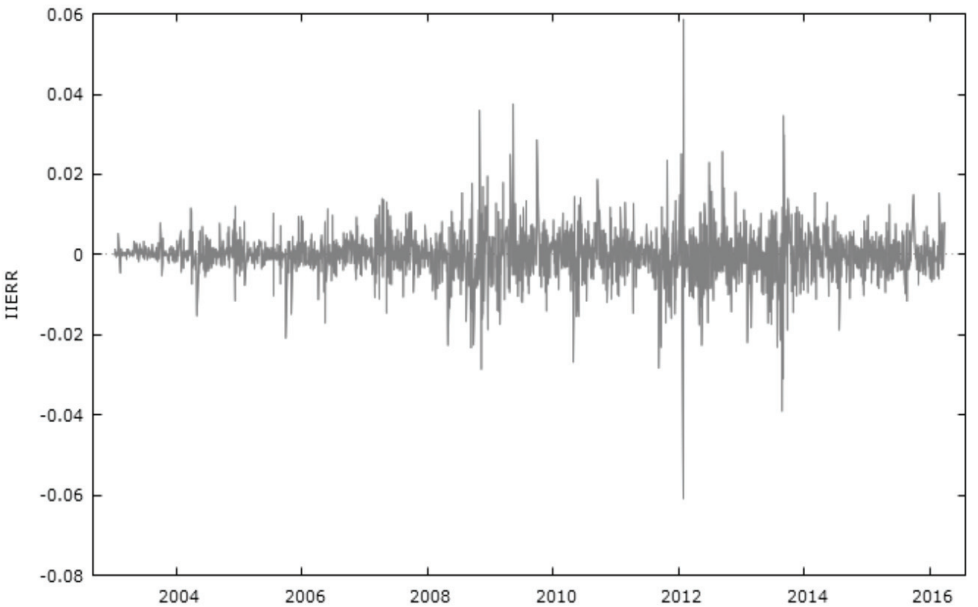

Figure 1 (b) Graphical representation of Exchange Rate Return

Time series plot of exchange rate return and Global Crude Oil price return reveals that both the series display volatility and volatility clustering. The quantile - quantile plot of two series as shown in figure 2(a) and 2 (b) suggests that both the series show similar distributions.

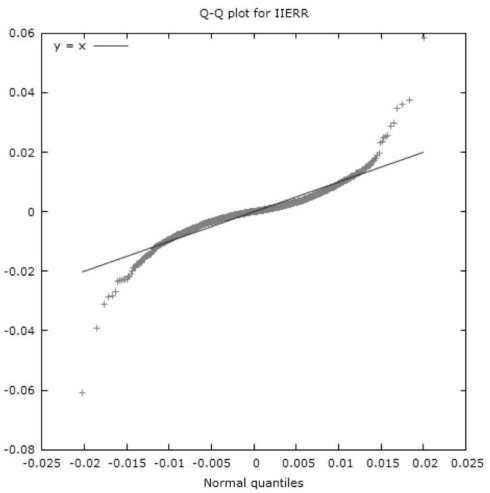

Fig 2(a).Q-Q Plot of Exchange Rate Return

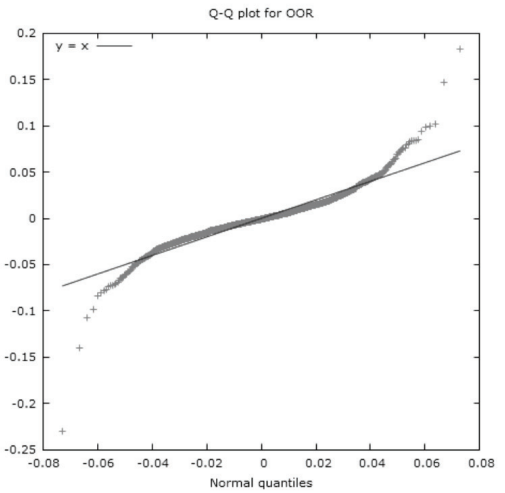

Fig 2(b).Q-Q plot of Crude Oil Price Return

The mean equation can be written as

$$R_T = C + \theta O_t + \varepsilon_t \qquad \text{(Equation 3)}$$

Where ε_t is the white noise error term.

The variance equation for GARCH (p,q) has the following form:

$$\sigma_t^2 = \omega + \sum_{i=1}^{p} \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^{q} \delta_j \sigma_{t-j}^2 \qquad \text{(Equation 4)}$$

For GARCH (1,1) model, ω>0, $|\delta_1| < 1$ and $(1 - \alpha_1 - \delta_1) > 0.$

EGARCH (p,q) models can be written as

$$\log(\sigma_t^2) = \omega + \sum_{i=1}^{p} \alpha_i \left|\frac{u_t - i}{\sigma_t - i}\right| + \sum_{k=1}^{r} \gamma_k \frac{u_t - k}{\sigma_t - k} + \sum_{j=1}^{q} \beta_j \log\left(\sigma_{t-j}^2\right) \qquad \text{(Equation 5)}$$

The mean of the volatility equation is denoted by ω and size effect by α which indicates how much volatility increases irrespective of the direction of the shock. The estimate of β allows for evaluation of the persistence of shocks. According to Nelson (1991), absolute value of β<1 ensures stationarity and ergodicity for EGARCH (p,q). the sign effect, which examines whether shocks have asymmetric or symmetric effects on volatility. Positive shows that positive shocks give rise to higher volatility than negative shocks and vice versa.

Empirical Analysis and Discussion:

Initially to ascertain stationarity of variables, Unit Root Test is conducted. Table 2 presents the results of Unit Root Tests based on Augmented Dickey Fuller (ADF) Test and Phillips Peron (P-P) Test.

Variables	ADF	P-P
Level (Constant and No Trend)		
O_t	-42.54	-42.53
Ex_t	-54.72	-54.63
(Constant and Trend)		
O_t	-42.60	-42.59
Ex_t	-54.77	-54.67

In ADF and PP Test the null hypothesis is the series has unit root against the alternative of stationarity. The outcome of the tests as mentioned in Table 2 reveal that both the series are stationary in nature and rules out the possibility of any co integration relationship.

Afterwards the influence of Global Crude Oil on Exchange Rate volatility is estimated using Ordinary Least Squares (OLS) technique, results of which is presented in Table 3.

Table 3: Estimation of the Models

Parameter/Model	OLS	GARCH (1,1)	EGARCH (1,1)
Mean Equation			
c	-0.00012 (0.00011)	0.00013 ($7.37e^{-05}$)	0.0001 ($7.79e^{-05}$)
θ	-0.045 (0.0053)	-0.0015 (0.0019)	-0.015 (0.0015)
Variance Equation			
ω	--	$1.31e^{-07}$ ($1.37e^{-05}$)	-0.455 (0.0282)
α_1	--	0.0765 (0.0037)	--
δ_1	--	0.927 (0.0030)	--
α	--	--	0.22 (0.009)
γ	--	--	-0.015 (0.005)
β	--	--	0.97 (0.0022)
Diagnostics			
Q Statistics (6)	32.033 [$1.61e^{-05}$]	21.282 [0.002]	19.655 [0.003]
Q Statistics (24)	60.5918 [$5.27e^{-05}$]	40.939 [0.017]	38.662 [0.030]
Q Statistics (36)	72.9232 [0.000234]	50.904 [0.051]	49.159 [0.071]
ARCH LM (6)	426.119 [$6.75118e^{-089}$]	0.0106 [0.5921]	0.012811 [0.5183]
ARCH LM (24)	448.079 [$9.44137e^{-080}$]	0.0181 [0.3610]	0.019774 [0.3151]
ARCH LM (36)	450.807 [$3.90486e^{-073}$]	0.0047 [0.8108]	0.005896 [0.7641]

From the analysis it was observed that variable O_T was statistically significant at 5% level in significance in ex_t equation. From the diagnostics tests, the residuals were observed to be free from serial correlation upto 36 Lags based on LJung Box Q-statistics. The ARCH-LM test up to 36 lags appeared to be statistically significant, indicating towards the presence of ARCH effect.

To deal with ARCH effect present in residual series, GARCH class models viz. GARCH(1,1) and EGARCH(1,1) models with optimal orders based on SBC criteria have been estimated using maximum likelihood estimation procedure, assuming the errors to be normally distributed. As observed in Table 3, the mean equation of GARCH (1,1) model reveals that an increase in oil price has negative impact on nominal exchange rate. A 10% increase in oil price leads to 0.15% depreciation of Indian currency against U.S. Dollar. The residual series were observed to be free from autocorrelation and ARCH effects.

Apart from GARCH (1,1) model, the estimates of EGARCH(1,1) Model is also presented in Table 3. From the mean equation it is observed that O_t is statistically significant at 5% level of significance and a 10% increase in oil price return would lead to 0.15%depreciation in exchange rate of Indian Rupee against U.S. Dollar. With respect to variance equation, the measure of asymmetry, ã is found to be statistically insignificant which implies that within sample period, shocks to exchange rate have symmetric effect. The volatility persistence term, â is positive and statistically significant at 5% level of significance. The coefficient being close to 1, which implies that shocks have permanent effect on exchange rate volatility. The residual diagnostic tests reveal the residual series being free from auto correlation and ARCH effects.

Conclusion:

The present paper analyse the volatility transmission between global crude oil price and exchange rate for Indian currency against U.S. Dollar using daily data from year 2003 to year 2016. To study the time varying volatility relationship between return of oil price and exchange rate of Indian Rupee against U.S. Dollar, GARCH and EGARCH models are employed. The study reveals that an increase in the oil price return leads to depreciation of exchange rate of Indian Rupee against U.S. Dollar and the outcome is in accordance with theoretical consistency being, an oil importing country. Contrary to other studies the present analysis reveals that shocks to exchange rate have symmetric effect i.e positive and negative effect have similar effects, in terms of magnitude on exchange rate volatility in India. At last the study establishes the presence of permanent effect of oil shocks on exchange rate volatility of Indian Rupee against U.S. Dollar. The present study would help to give significant understanding to the policy makers in India to deal with exchange rate volatility caused by the fluctuations of international crude oil price.

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Construct Validity and Preferential Values: Mutual Fund as Investment Avenue

Dr. Vishal Vyas, Dr. Priyanka Jain, and Dr. Ankur Roy

Abstract

This study has made an attempt to measure the construct validity to determine the means of awareness, information sources, and the factors that an individual investor takes into consideration before choosing mutual fund as an investment option. The study also examines the preferential features related to the fund selection behavior of investors towards mutual funds. Confirmatory factor analysis was applied on the data collected from a sample of 254 mutual fund investors (based in Rajasthan, India) through a pre-tested questionnaire. Results suggest that model fit statistics are reasonably acceptable and investors service is an important preferential feature considered by the investors followed by intrinsic fund quality, sponsors reputation and performance and credibility of image.

Keywords: *Mutual fund, Confirmatory Factor analysis, Construct validity, Investor's behavior*



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India is undoubtedly emerging as the next big investment destination, riding on a high savings and investment rate, as compared to other Asian economies. As per a report authored by PWC "The World in 2050," the average real GDP growth in India would likely to be in the range of 5.8% between 2007-2050.The Indian mutual funds industry is witnessing a rapid growth as a result of infrastructural development, increase in personal financial assets, rise in foreign participation, growing competition and risk in the stock market, higher tax rates and increasing inflation. With the growing risk appetite, rising income, and increasing awareness, mutual funds in India are becoming a preferred investment option compared to other investment vehicles like Fixed Deposits (FDs) and postal savings that are considered safe but give comparatively low returns, according to "Indian Mutual Fund Industry."

The Indian mutual fund industry is undergoing a metamorphosis, which inadvertently marks a point of inflection for the market participants. Income and growth schemes made up for majority of Assets under Management (AUM) in the country. Individual investors make up for

96.86% of the total number of investor accounts and contribute 36.9% of the net assets under management.

The present share of mutual funds in household financial assets is over 5% in the USA, 8% in Germany, 3% in Japan, 3% in Italy and about 5% in India. The Asian financial markets, considered to be emerging markets, are undergoing impressive growth and spectacular progress, making them the focus of both professional and academic interests. Due to its multiple advantages as an investment avenue, it creates interest in researchers and academicians to do research on it.

Mutual Fund

There are lots of investment avenues available today in financial market for an investor with an investable surplus. They can invest in bank deposits, corporate debentures, and bonds featured with low risk and low return. They may invest in stock of companies where the risk is high and the returns are also proportionately high. The recent trends in the stock market have shown that an average retail investor always lost with periodic bearish trends. People began opting for portfolio managers with expertise in stock markets who would invest on their behalf. These investors have found a good shelter with the mutual funds.

A mutual fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is then invested in capital market instruments such as shares, debentures and other securities. The income earned through these investments and the capital appreciation realized is shared by its unit holders in proportion to the number of units owned by them. Thus a mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost.

Literature Review

Mutual fund investments bring a new era in the history of investment world. On one side it reduces the tax burden of the investors, and on the other hand it gives a considerable amount of return without having a large amount of risk. Due to its multiple advantages as an investment avenue, it creates interest in researchers and academicians to do research on it.

The areas of interest for researchers are mutual fund performance and its two determinants, viz., return and risk (Capon et al., 1996). Although studies have indicated a positive relationship between performance and flow (Sirri & Tufano, 1992; Gruber, 1996), yet purchase or selection of mutual funds has been considered a multi-framework (Cook & Hebner, 1993) decision by many researchers (Campenhout, 2007). A brief literature review regarding the fund selection behavior of individual investors are as follows:

Woerheide (1982) studied the impact of varied factors considered by an investor during fund selection procedure. Factors like fund size (Pollet & Wilson, 2008), effectiveness of marketing program (Crosby & Stephans, 1987; Carroll, 1990), past performance of funds (Grindblatt & Titman, 1989; Kane et. al., 1991; Patel et. al., 1992), historical risk and returns, turnover, fund manager's age, fund management reputation (Sikdar & Pal,1996), load, fund expense, fund family reputation, transparency in the accounting statement, tax concession, origin of managers, fund manager's experience, investment style (Sharma, 2012), fund advertisement expense, asset under management (Mishra & Kumar, 2011), credibility of the fund, diversification of portfolio, minimization of risk (Saibaba and Vipparthi, 2012) and miscellaneous features of the fund (Chawla, 2014), are found to be have a great impact on purchase decision. It has been reported that generally money flows into the fund that gives positive return (Trainor, 2012) in comparison to those funds having negative return during a particular period of time (Bogle, 1992 and Ippolito, 1992). Even sometimes the decisions are based on short-term future performance and fund-specific information (Zheng, 1999).

Rajeswari and Ramamoorthy (2002 cited in Rao, 2011), suggested that the most important factor is fund's performance followed by brand name of scheme. Among sponsor related factor, sponsor's expertise in money management and in customer services, disclosure on investment objectives and mutual fund advertising are important one (Jones et al. 2007). These advertising disclosures signal consumers to closely scrutinize selling messages and broaden cognitive frames of reference, thereby leading consumers to fewer inappropriate generalizations of product risks (Andrews et al., 1998).

Investors trust firms to provide products and services that are safe, perform as expected and are accurately

communicated regarding product risks (Torres et al. 2007). If the required disclosures are not appropriate, then investors may perceive little risk associated with the mutual fund investment. As a result, the lack of risk perception of a mutual fund product may create decision scenarios where investors may lead to suboptimal financial behavior, especially in conditions where risk perception is a crucial facet of investment decision making (Kozup et al. 2008). However, methods and periodicity of valuation in advertisements significantly influence investors' perceived investment risk (Wang, 2009) and expected return and further help them in making investment decisions (Jordan and Kaas, 2002). It is the investor's expectations and parameters that caused dissatisfaction and henceforth, they demand innovative products (Walia and Kiran, 2009) and value addition in existing services (Prasada and Sahia, 2006).

Capon et al. (1996) reported that fund's past performance is not only the criteria for fund selection whereas; purchase decisions are also influenced by published performance rankings, mutual fund advertising (Jain and Wu, 2000), advice from commission-based financial advisors, financial magazines, journals, newspapers brokers or agents, friend's recommendation (Alexander et al.1998; Gupta and Chander, 2011), direct mails, references of business associates and colleagues (Das et. al., 2008). Relevant advertising improvise and generate awareness regarding financial products and services (Ford et al. 1990; Panda and Tripathy, 2001) and as a result sources of information get transformed into selection criteria (Wilcox, 2003). This specific information enhances the personalized beliefs about a financial product and its factual characteristics (Karrh, 2004) related with fund quality, schemes and price (Jones et. al. 2007). According to Donnor and Oxenstierna (2007) company related factors like reputation and availability is more valued by inexperienced investors due to paucity of necessary knowledge about complex financial products. Whereas, experienced investors value fund specific attributes and demands company's good reputation in market to recognize it. Additionally consumer welfare perspective advertising disclosure (Sharma, 2006) is expected to improve the quality of investment decisions and maximize the utility of consumers' financial behavior (Karniouchina et. al, 2009). This prevents misleading impressions from ad claims and reducing deceptive ad information (Stewart and Martin, 2004).

From the perspective of importance investor looks for the factors like safety (Singh and Kaur, 2007), liquidity (Rathnamani, 2013) and capital appreciation (Jambodekar, 1996) and they prefer those funds which provides a reasonable proportion of all the aforesaid attributes (Saha and Dey, 2011). To meet out these objectives investors prefer information regarding income schemes and open-ended schemes over growth schemes and close-ended schemes during prevailing market conditions. Investors also seek for liquidity, simplicity in offer documents, online trading, regular updates through SMS and stringent follow up of provisions laid by AMFI (Saini et al. 2011; Lim et al., 2013; Lee et al. 2013). Moreover, investors are risk averse, exhibit representativeness, status quo bias, and are conservative and image conscious. Such investors are more inclined towards sponsor related services than professional investors (Awan and Arshad, 2012).

Demographic (Rehman et al. 2011), psychological and socio-economic factors (Rao, 2011) such as age, investment objectives (Ajaz and Gupta, 2012), occupation (Chaturvedi and Khare, 2012), expectations, income level (Syama, 1998), and risk appetite (Pasewark and Riley, 2010) are found to influence individual's investment decisions (Shanmugham, 2000). However, active fund investors used their selection ability for fund selection (Goetzman, 1993; Grubber, 1996). It is proposed in a study that trust promotes people's intentness of taking risk while investing and it is enhanced by financial literacy (Lachanse and Tang, 2012). As individual's financial knowledge is relevant to risk perceptions and investment decisions. Contrary to this, inferences drawn from a study in Turkey revealed that age, marital status and society criterion make no difference in the choice of all investment alternatives (Aren and Aydemir, 2015).

From the above literature review it is clear that investors seek out a wide range of information prior to investment decisions and increasingly utilize marketing communications (e.g., advertisement, prospectus, direct mail, etc.) as an information intermediary at the time of purchase (Investment Company Institute 2010). Different investment avenues are available to investors. Mutual funds also offer good investment opportunities to the investors. Like all investments, they also carry certain risks. The investors should compare the risks and expected yields after adjustment of tax on various instruments while taking investment decisions. Investors' expectation is a very important factor that needs to be analyzed by all investment alternatives. The investors may seek advice from experts and consultants

including agents and distributors of mutual funds schemes while making investment decisions.

The present study focuses on understanding the preferential features in the mutual fund as savings instrument among individual investors. The study attempts to measure the construct validity in order to identify the factors perceived to be important by the investors before investing in any mutual fund as well as their sources of information.

The study examines the factors persuading the attitude of investors while making decisions related to mutual fund investment. Further, it also evaluates the investment objectives of investors, factors i.e. fund scheme quality, fund sponsor quality and the investors expected services that could influence their fund scheme selection decisions and the features that investors look for in a mutual fund products. The emphasis of the study is to distinguish the perception of investors towards mutual funds as an investment tool.

Significance of study

The findings of this study will add in consumer behavior theory by deepening the understanding of how these perceived factors impact the investors' investment decisions for mutual fund purchase. As mutual fund industry spends heavily on developing, maintaining, distributing and promoting funds to these investors. Thus, assumption about investor behavior is very decisive for them. The findings of this study will help mutual fund marketers to scheme and deliver different products, formulate different advertising and promotion strategies and use different distribution innovations for mutual fund investors.

The strategic marketing decisions of the mutual fund companies would be more effectively framed if they are supported by such a detailed study of the investors' preference and expectations. This would further ensure the success of MFs. This study will add value to the body of knowledge in this field, from the point of view of researchers and academicians.

Objectives of the Study

The present study has the following objectives:

- To measure the construct validity,
- To determine the sources of mutual fund information among the individual investors,
- To understand the preferential features of the mutual fund as saving instrument among investors,
- To evaluate the intrinsic fund qualities that would affect the selection of MFs,
- To assess the influence of credibility of image on the investors and
- To evaluate investor related services that would affect the selection of mutual funds.

Research Methodology

All the scale items were either developed specifically for this study or adapted from existing scales. This study deals with the identification of factors which are significant for individual investors' decision towards mutual fund investment. The required data was collected through a pretested questionnaire administered with a combination of simple random and judgment sample of 254 educated geographically dispersed investors of Rajasthan state. Judgment sample selection is due to the time and financial constraints. Respondents were screened and inclusion was purely on the basis of their knowledge about financial markets, MFs in particular. This was necessary, because the questionnaire presumed awareness of some basic terminology about mutual funds.

The questionnaire comprised the following sections:

- The first section asked respondents to rate the importance of information sources while considering investment in a mutual fund.
- The second section asked respondents to rate the importance of selection criteria (intrinsic fund qualities, fund sponsor qualities, investor services) in choosing a mutual fund investment.
- The third section secured data on mutual fund investment behavior

The data was subjected to confirmatory factor analysis (CFA) to test the model-fit and unidimensionality of scale items. CFA involves the specification and estimation of hypothesized model of factor structure being measured by latent variables to account for covariance among a set of observed variables. The measure of preferential features related to the fund selection behavior of investors and the factors perceived to be important by the individual investors towards mutual funds investment was studied on five factor

model mainly based on an existing scale reported in the literature. The various factors considered for the study is described in the following sections.

Data and information

Information from reliable source and dissemination of the same plays an important role in mutual fund selection. Although research is limited, but a strong relationship has been found between information source and purchase decision. The factor has been named as 'Data and Information' based on the extant literature (Rajeswari and Moor, 2002; Das et al., 2008; Gupta and Chander, 2011). Past research reveals that mutual fund purchase decisions involve both interpersonal (formal and informal sources) and impersonal (mass communication) sources. Investors may use various sources to gain awareness regarding investing in mutual funds. They can derive information from asset management companies, distributors, offline and online databases (web portals), seminars or conferences (often arranged by distributors or offices of asset management companies), and books, magazines, newspapers, reports, and journals about mutual funds.

Intrinsic fund quality:

Fund qualities and specific schemes affect the selection of mutual funds. Investors demand intrinsic fund qualities as their primary requirement before investing in MF scheme (Jones et al., 2007). In order to analyze fund-related quality we have taken six variables, such as fund performance and reputation, expense ratio, portfolio of investment, fund size and load factors as major determinants of the factor.

Credibility of image

Investors generally look forward to reputation and credibility of fund managers, innovativeness of scheme and credit ratings attach with the fund (Rajeshwari and Moorthy, 2002; Sharma, 2006; Das et al., 2008). Investors assess the fund manager's ability in terms of market timing and selectivity (adequate knowledge of financial markets, business cycles, macroeconomic performance, stock market conditions and performance, and psychology of the market). Four variables formed part of the construct.

Sponsor's reputation and performance

The sponsor is akin to a promoter of a company. In the offer document of any mutual fund scheme, financial performance for the last three years is included which substantiates the track record of the company. In order to analyze Sponsor's Reputation and Performance we have taken six variables, including reputation of sponsoring firm, sponsor's expertise in managing money, sponsor's past performance in terms of risk and return, sponsor's agency and network, sponsor's research and infrastructure, to measure this construct.

Investor services

Investors value a scheme by the quality of services they receive from the company after investment. They are interested to know the latest NAV, portfolio of investment and disclosure of deviation from the stated objectives, etc. SEBI and AFMI have prescribed disclosure norms as significant factors in investor services. These include disclosure of investment objectives, periodicity of valuation, method and periodicity of schemes sales and repurchases, disclosure of NAV on every trading day, and disclosure of deviation of investments from the original pattern. Investors give importance to services like investor's grievance redressal machinery or fringe benefits (i.e. free insurance, credit cards, loans on collateral or tax benefits) and prefer MFs to avoid bad deliveries and unnecessary follow-up with brokers and companies. In order to analyze investor services we have taken seven variables as part of the study. Investor's responses were collected on a five point Likert scale for all the variables.

Results of Data Analysis

IBM AMOS 19 software was used to perform CFA, for evaluating the construct validity of the five factor model with 28 items. CFA enables the researcher to explicitly test the predetermined model specifying the number and composition of the factors. The analysis yields different statistics for determining how well the model fits the data, or explain the co- variation among the variables. These statistics are referred as "fit statistics." The fit statistics test all the parameters simultaneously (Stevens, 1996). These fit statistics are evaluated to determine whether the predetermined model best explain the relationships between the observed and latent variables or not. The primary statistical problem is one of optimally estimating the parameters of the model and determining the goodness-of-fit of the model to sample data on measured variables.

Several indicators of fit were used in judging the goodness-of-fit of the model, which included Non-Normed Fit Index

(NNFI), also known as Tucker–Lewis Index (TLI; Bollen, 1989), goodness-of-fit index (GFI; Jöreskog and Sörbom, 1984), Comparative Fit Index (CFI; Bentler, 1990), and Standardized Root Mean Square Residual (RMSEA). A series of simulation studies by Hu and Bentler (1999) suggested that a cut off value close to 0.06 for RMSEA and a cut off value close to 0.95 for other indexes are supportive of a good fit of the model in relation to the data. In addition to these indicators, the CMIN/DF was used in order to lessen the sensitivity of the CMIN test to sample size. As a rule of thumb, CMIN/DF values of 3.0 or less signify a good fit of the model (Carmines and McIver, 1981; Hu and Bentler, 1999; Kline, 2005). The use of several indicators follows Bollen's (1989) recommendation of examining the extent to which the pattern of indicators is supportive of the model rather than relying on a single indicator of fit.

Five factor models were tested and the model was significant and fitted the data quite well. The pattern of goodness of fit indicators provided reasonable support for the hypothesized five factor structure. Table 1 displays the overall fit summary provided in CFA output.

The overall model Chi-square is 341.529 with 340 degrees of freedom (CMIN/DF = 1.004). The p-value associated with this result is 0.466. This p-value is insignificant using Type 1 error rate of 5%. Thus, Chi-square goodness of fit statistic indicates that the observed covariance matrix matches the estimated covariance matrix within sampling variance. The value of RMSEA, an absolute fit index is 0.004. The value appears quite low and within the prescribed bounds for 90% confidence interval. The CFI is an incremental fit index and showing the value as 0.998, which exceeds the fit index guidelines for a model of this complexity and sample size. Thus, this result supports the model as well. The CFA results suggest the measurement model provides the reasonably good fit. In addition, other index values such as TLI = 0.998, GFI = 0.916, AGFI = 0.9 and RMR = 0.079 are supportive. While these model fit statistics are reasonably acceptable, item level inspection revealed measurement problems ranging from small to severe (Table 1) and inter-correlations (Figure 1) that raise concern with the five factor model.

Table1: Summary of confirmatory factor analysis

Variable Label	Final Standardized Loadings	Variance		Average Variance Extracted (AVE)	Composite Construct Reliability (CR)
		Squared Multiple Correlation (Explained variance)	Error		
DI1	0.487	0.237	0.763	0.24995	0.50227
DI2	0.475	0.225	0.775		
DI3	0.466	0.217	0.783		
DI4	0.619	0.384	0.616		
DI5	0.432	0.187	0.813		
IFQ1	0.482	0.232	0.768	0.25834	0.56044
IFQ2	0.519	0.270	0.730		
IFQ3	0.581	0.338	0.662		
IFQ4	0.38	0.145	0.855		
IFQ5	0.558	0.311	0.689		
IFQ6	0.505	0.255	0.745		
CRI1	0.494	0.245	0.755	0.24739	0.45612
CRI2	0.345	0.119	0.881		

CRI3	0.522	0.273	0.727		
CRI4	0.595	0.354	0.646		
SRP1	0.410	0.168	0.832	0.24023	0.54021
SRP2	0.492	0.242	0.758		
SRP3	0.495	0.245	0.755		
SRP4	0.457	0.209	0.791		
SRP5	0.573	0.328	0.672		
SRP6	0.499	0.249	0.751		
IS1	0.455	0.207	0.793	0.26894	0.61325
IS2	0.505	0.255	0.745		
IS3	0.516	0.266	0.734		
IS4	0.589	0.346	0.654		
IS5	0.512	0.262	0.738		
IS6	0.533	0.284	0.716		
IS7	0.511	0.261	0.739		
Model Fit: Chi Square = 341.529 (df = 340), p = .466,RMSEA = 0.004, RMR= 0.079, NFI = 0.695, AGFI = 0.9, GFI = 0.916, TLI = 0.998, and CFI = 0.998					

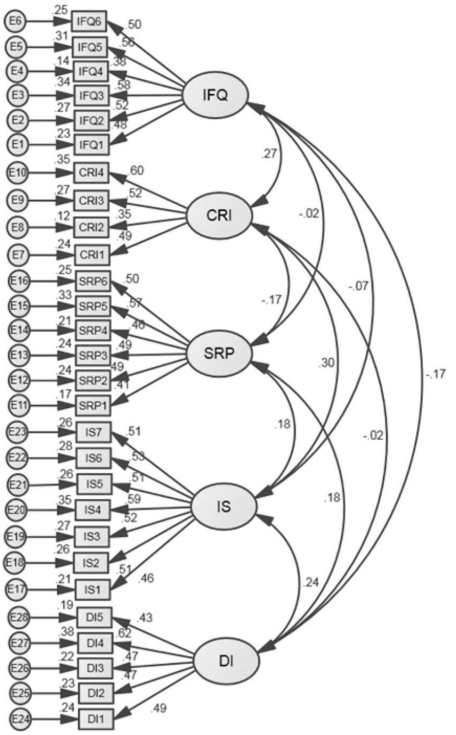

Figure 1: Five factor model of confirmatory factor analysis

At the extreme lies the case of the "Data and Information" none of its indicators had loadings of 0.70 or higher, suggesting that most of the variance for the five indicators remains unexplained. The range of unexplained variance ranged from 61% to 81%. Reliability is an important consideration that has, to this point, been unaddressed. The reliability of the scale sets the upper bound for the relationship between predictor and criterion measures (Nunally and Bernstein, 1994). If treated as a scale, there liability of this benchmark would be somewhat low (rxx = 0.50).

Moderate measurement problems were also reported for "Intrinsic Fund Qualities." Out of six indicators, however four have showed acceptable correlation with the benchmark. For rest of the items, most of the variance was not captured by the construct. If treated as a scale, this benchmark would have reported a moderate reliability (rxx = 0.56).

None of the four indicators of "Credibility of Image" had loadings close to 0.60; only two are somewhat close to the benchmark, indicating that about only half of their variance was explained by the construct they are supposed to measure. What defined this benchmark the most was innovativeness of the scheme and fund manager's ability. Evidently, the strong indicators compensated for the relative weakness of the remaining items. If treated as a scale, the reliability for this benchmark is very low (rxx = 0.45).

Of the six indicators of "Sponsor's Reputation and Performance." only one has considerable correlation with the construct. Evidently, the strong indicators of this benchmark compensated for the relatively low indicators. If treated as a scale, the reliability of this benchmark was moderate (rxx = 0.54).

Out of the seven indicators of benchmark "Investors Service" six are somewhat acceptable. These have considerable correlations with the construct, ranging from 0.50 to 0.58. Of the six benchmarks under Investors Service, Disclosure of NAV on every trading day of the construct is best measured. If treated as a scale, the reliability of this benchmark was relatively high (rxx = 0.61).

Findings

Investors may use different sources as per their convenience to gain awareness regarding investing in MFs. The factor has been named as 'data and information' and reveals that the investors desire for having more information and knowledge regarding the fund schemes. Mutual fund investors consider 'Books/Magazines/Journals' i.e. published material as the most important source of information (Alexander et al., 1998). The next in importance for the investors is 'Company AMC literature'. As investors wish to derive information from the asset management company in terms of a systematic process of maintaining, upgrading, and operating assets, with sound business practice and economic rationale, and providing tools to facilitate a more organized and flexible approach to them for effective decision making. For analyzing the schemes on various parameters (like return and risk parameter) investors are looking forward to offline and online databases such as company's website and other databases such as value research online, AMFI website, etc. as they give them an insight about the financial health and performance of the industry. Results reflect that investors are desirous to attend seminars or conferences often arranged by distributors or offices of asset management companies for awareness and marketing. This throws light that MF investors spend time on analyzing and examining relevant information from different sources before taking any crucial decision. Findings are consistent with the past studies in this field (Das et al., 2008).

It is found that investors demand intrinsic fund qualities in terms of consistent performance and reliability as their primary requirement before investing in any MF scheme in order to gain a confidence that they wouldn't lose money (Donnor and Oxenstierna, 2007). It seems that investors are ardent to evaluate the investment option on fund-related qualities such as fund performance and reputation, expense ratio, portfolio of investment, and load factors as their core concerns. Results suggested that for investors the most important intrinsic fund quality is fund expense ratio. Investors are concerned about composition of expense ratio such as management and marketing fees, legal expenses, transfer agent fees, investment advisory fees, and transaction costs. Second important concern for them is exit load, the charge collected by a MF from an investor for selling the units. The exit load percentage is deducted from the NAV at the time of redemption. The investors favor a low exit load for selling the units in MF. Fund's reputation/ brand name is also important concern in the evaluation of intrinsic worth of the funds as they give investors a secured

feeling to be associated with it. Moreover, when it comes to the fund size bigger is not necessarily better from investor's point of view. The key to a fund's investment quality, in terms of the amount of money under management, lies in the compatibility of a fund's asset size and its investment style. This is because a big-sized fund is considered to reflect the other investors' faith in it. Logic dictates that if a particular fund is attracting such high inflows, it must be doing a good job of managing it. However, it does not indicate that funds' performance will be superior. It has been found that scheme's portfolio of investment is least important for the investors at the time of evaluating the intrinsic fund qualities.

Fund's image in terms of credibility is also one of the factors which are of utmost important in the process of decision making for investors. The knowledge of fund manager is one of the key factors to consider when analyzing the investment quality of any particular fund. This is so because he is the one who is responsible for implementing a fund's investing strategy and managing portfolio trading activities. Investors judged his ability in terms of his adequate knowledge in the areas of working of financial markets, business cycles, stock market conditions and performance and his understanding of psychology of the market. Investors also assess novel features of funds on the basis of innovativeness of the scheme. Investors give importance to the ratings given by credit rating companies which help them to assess the credit quality of a particular scheme before making an investment decision. The ratings provide an investor with an opinion on the overall credit quality.

Many investors look for wide sponsorship in a stock before investing, believing that the endorsement of well-known investors adds a measure of safety to their investment decisions. The sponsor brings in capital and creates a mutual fund trust and sets up the AMC. The sponsor makes an application for registration of the mutual fund and contributes at least 40% of the net worth of the AMC. In other words, every MF needs a sponsor before it can commence operations. So, it is indispensable for the investors to have knowledge of the basic structure of a mutual fund which helps them in understanding their rights as well as the obligations of the fund. For investors most important aspect is the research domain, depth and the infrastructure of sponsors. Sponsor's past performance in terms of risk and return is quite important for them as it reflects sponsor's acumen in terms of understanding of market forces. Well-developed agency and networking of sponsors is also important parameter for investors. A strong brand name is a smart marketing tool. Successful brand-building promotes profitability by "adding values" that customers are prepared to pay for. For investors, sponsor's brand name is important because a brand is a persistent, unique business identity intertwined with associations of personality, quality, origin, and liking and is so powerful that it can overcome almost any other competitive advantage. Sound track record and a general reputation of fairness and integrity of sponsors in all their business transactions are least important for investors.

Services provided by AMCs is another important criterion for the investors during the decision making process. Industry designed a range of customized products and services to make the investments simpler and convenient for investors. From investors point of view the most important among them is the disclosure of NAV on every trading day, as NAV reflects the liquidation value of the fund's investments on that particular day after accounting for all expenses. Second important aspect that investors look forward is the comprehensive mechanism (adjudication, prosecution proceedings, directions, etc.) for the redressal of grievances against intermediaries and listed companies. Disclosure of methods and periodicity of schemes sales and repurchases is another significant measure for the investors. Findings suggest that for investors it is imperative that industry should follow a proper mode of disclosure in investment deviation if any from the original pattern as it generates a feeling of being informed. It is also found that investors prefer MF as an investment option because the services provided by the industry helps them to avoid problems of bad deliveries and follow up with brokers and companies. Disclosure of periodicity of valuation is also one of the substantial factors for investors, whereas results revealed that disclosure of investment objective is least important for them. Findings are consistent with the existing literature (Kapil Sharma, 2006; Saini et al., 2011).

Suggestions

AMC/AMFI/Sponsors should effectively convey the message that among the available multiple investment options, MFs are better geared to offer the balanced mix of return, safety and liquidity to the investors. Negative

perceptions about MFs require to be tackled through appropriate investor education measures.

E-commerce is gradually showing signs of gaining acceptance and electronic sale of financial products is especially gaining volumes. There is a likelihood of the volumes reaching a significant size, thereby spawning a new distribution paradigm. Therefore AMCs should establish friendlier and easily accessible 'Automated Response Systems.' These systems should not only effectively convey information on products and services but also efficiently redress investor grievances.

Spreading financial literacy is imperative for growth in the mutual fund industry. Measures and initiatives undertaken should be structured with a long term horizon in mind, aiming to introduce innovation in products. The investor education programs should be customer oriented with emphasis on the risk appetite of investors rather than simply a demonstration of the range of products.

To address under-penetrated population the industry should start taking appropriate measures. People in smaller towns and cities still have inhibitions about investing into mutual funds. The rural strata of society looks for such investment alternatives which primarily have a nominal initial investment, and the terms and conditions attached with them must be simple to understand. Most of the investors in this segment are not in a position to consider the pros and cons of the investment schemes, along with the risks attached to and therefore disclosures should be made very clear and apparent to the investors.

Products should be designed in such a way so that it can encourage income levels of the rural segment and also increase their spending capacity. Taking a step towards inclusive growth, fund houses need to conduct investor awareness programmes from time to time, in order to scale greater heights, and achieve greater penetration.

Lack of an efficient distribution network and inaccessibility in smaller towns and cities could be overcome by partnering with banks. An entirely new distribution channel can be created consisting of professional advisors who will exert substantial influence on what products investors will buy.

Moreover, competitive scenario demands tectonic changes in business models for sustaining profitability. Use of technology is must to come up with a feasible cost-benefit business model. Fund houses need to assign an increased budget for investment in technology. It will not only help them in streamlining their distribution networks but also improvise business efficiency.

Conclusion

This study is conducted to assess the financial behavior of investor while investing in fund schemes, which fund qualities or companies services they prefer most while investing in funds, what type of behavior they depict. Findings are consistent with existing literature. The study highlights the various components of the sources of information construct, investor services, sponsor's performance, credibility of image and their relative importance for mutual fund investors. MF industry in India has a large untapped market. There is a great potential for this industry as more people are falling back on professional management of their funds at low cost and minimum risk. This market potential can be tapped by closely scrutinizing investor behavior to identify their expectations and design products to suit their risk appetite and return expectations. Presently, as more and more funds are entering the industry, strategic marketing decisions of these companies are vital for their survival. MF companies, also face competition from saving instruments with varied risk-return combination. Investors become more alert and choosy. Hence, the success of MF depends on complete understanding of the psychology of individual investor. Under such situation, the present exploratory study is an attempt to understand the financial behavior of MF investors in connection with intrinsic fund quality which would help the MFs to gauge the investor expectations and changing perception. Studies similar to this, if conducted on a large scale at regular intervals by organizations like AMFI/SEBI, will help in capturing the changing perceptions and responses. This would provide early warning signals to enable implementation of timely corrective measures. The study will add to the knowledge of asset management companies, policy makers and intermediaries who can take advantage of the same and handle their financial and time resources for managing sources of information accordingly. Results of the study may help in making cost effective strategic decisions and hence would be of interest to both existing and new MFs; Fund managers; and individual investors.

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Political Marketing: The Horizon of Present Era Politics

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Abstract

No other phenomenon grabs our attention as much as that of politics (at least during an exercise such as national polls). It assumes importance that we look for a mechanism which explains politics better. The advent of political marketing has been a step in this direction as it has brought together the principles of marketing applied to the context of politics. The associated concepts of it such as political branding have come to denote the political campaigns of political parties and leaders in the recent elections across various democracies including India. This research paper highlights the various characteristics of political marketing and how they have come to define the present era of politics..

Key Words *: Politics, Marketing, Political Marketing, Political Branding*



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Marketing is a phenomenon which transcends the traditional definitions of business. It permeates through various domains of an organization. Such is its universality that it has come to include the environment in which business is done along with the business itself. No longer is it confined to the inner factors of the firm, rather it has come to deal with the external factors also which indicates the increasingly significant role played by marketing in the exchanges in which an organization engages with its immediate environment. In this regard, it becomes apparent to denote the various phenomena which have come to be associated with marketing. Politics is one of them.

Western democracies have been the first ones to embrace the concept of marketing to mainstream politics. This happened because the practicing politicians came to realize that no longer can politics be treated as an isolated concept and the changes which are happening in the conduct of day-to-day affairs will be reflected in their manifestations in various forms. By the 1980s, there were many thinkers like Kotler (1989) who, by the virtue of defining marketing as an exchange process between an organization and the

environment in which a firm operates, broadened the scope of it and paved the way for politics being seen from the lens of marketing.

This started founding acceptance within various political parties and leaders who realized that given the universal nature of marketing, it is only a matter of time that politics would fall within its ambit. However, at the same time, there were the traditional political thinkers and scientists who were averse to the view that political marketing could be one of the emerging trends related to politics. Their reservation in this regard has been that leaders are not commodities. Also, they are of the opinion that standardization of political outfits and leaders could not be practised to the same extent as is the case with commodities hence the principles of marketing might be of limited use in the case of politics. Though their reservations make sense to a limited extent, still the evolving paradigms of politics and the complexities which have come to characterize our day-to-day conduct of affairs have given much credence to the concept of political marketing.

Marketing is something which is as much about devising the right strategy to identify and then subsequently satisfy the needs, wants, and desires of the customers as it is about promoting the offerings of the organization. This is indeed the case with politics which is as much concerned with understanding the electorate as it is about delivering on the promises made during the pre-poll campaign once the party or leader is elected to power.

What needs to be understood is that strategy or tactic is something which is fundamental or basic in nature as it leads to formation of offerings based on the inputs received from the customer. This is as true of firms as it is for the parties and leaders. The manifestos which are devised and released by parties in the lead-up to election is the outcome of the aspirations of the electorate who make their views known to the politicians through various forums such as pre-poll interactions.

On the other hand, promotion of the product, in the case of politics which is the advertisement, talk shows, rallies, road shows, various symbols, slogans, signages, and host of other paraphernalia, is something which is specific in nature as it is focused primarily on increasing the visibility of the product and convincing the customers to give it a try. Promotion makes people aware of the choices which they have as far as buying a product is concerned. Likewise in politics, promotion leads to bringing to the fore the various political parties and leaders to be elected as the representatives of the electorate and govern them for a certain period of time (in case of India, 5 years).

The changing paradigms in the society are well reflected in the enhanced conscience of the customers. They have become more demanding than ever before. They are armed with the latest technology thereby enabling them to keep a close watch on the activities of political parties and leaders. With time, the electorates have come to redefine the way in which they participate in the political activities. Though the significance of voting on the Election Day is still paramount, the participation is not restricted to voting alone any longer. Thanks to the prevalence of technology in our lives, social networking has ensured that the electorates get a continuous access into the affairs of the political party and the activities of the leaders so that their collective responsibility towards those who have elected doesn't cease to exist once they are voted to power. Additionally, there are other elections too, apart from the central election, to elect representatives at state and local levels. Any political outfit which fails to live up to the expectations of the electorate or doesn't deliver on the pre-poll promises is bound to face the consequences. This is very much evident in the results of various state governments where the results were not a continuation of the last general election. Also, the voter tends to behave in a peculiar fashion in some states. They tend to vote for a national figure like Narendra Modi when supposed to vote for central government but prefer a regional leader such as Nitish Kumar when concerned with forming the state government. Then there are the loyalists who vote for the same political figure no matter which election they are voting in. Jayalalitha and Mamata Banerjee are examples of this.

Purpose

This research paper has been written in the context of defining, explaining and exploring the phenomenon of political marketing as to how it has influenced the contemporary political order in democracies across the globe. Throughout the paper, the various features of politics and marketing would be dealt with thus helping in understanding them better, first separately and then together. The paper would also serve the purpose of bringing out the similarities and differences as they exist between the two phenomena. The paper would help in understanding

how political marketing could be used by political parties and leaders to conduct their affairs in a better way and help them to connect with the target segment thanks to its focused and research-oriented approach whereby it enables the consumer-citizens to understand the various political choices.

Talking further about the purpose of this research paper, one would be in a position to comment whether or not political parties and their leaders could be treated as products which are available in the political marketplace. The purists have not been much convinced with this theory ever since it has been in existence and their point of view has also been incorporated to give this research paper a balanced outlook.

This research paper would help in understanding the various issues which are faced by the political parties and leaders on a host of issues and how they could be tackled if the related concepts are paid attention to. Political marketing is one such aspect which, if understood and executed properly, could help the political parties and leaders in gaining insights into the buying-behavior (read, voting) of consumer-citizens.

For Whom?

This research paper is meant for all those who have an interest not only in the field of politics or marketing but also keen on understanding the nuances as far as consumer behavior is concerned because politics is one such arena where it is of prime importance to gauge the way in which the electorate would behave thereby leading to selection or rejection of a particular party or leader.

Consumerism is at the centre of the phenomenon of political marketing as the concept adopts a consumer-centric approach thereby treating voters as consumer-citizens. Those who are of similar opinion and consider voters not simply as voters but as consumers who buy into the promises of the leaders would find this research paper of value.

Such readers who are interested in viewing politics from a different perspective than it has been viewed traditionally would also find this research paper of interest. The paper would be of significance for those who could relate with a marketing angle to the concept of politics. The paper is meant to serve as a stepping stone for those who wish to accommodate the principles of marketing in the realms of different concepts, in the present case politics.

There is a set of readers who have a tendency of assuming varied points of reference to any given concept. This research paper would serve as an interesting piece of literature for them as it presents an alternative approach to politics as well as marketing thereby highlighting the enhanced paradigms of politics and marketing in the process.

Researchers who keep on looking for meaningful and thought-provoking work in varied areas would find this research paper of value as it brings an unorthodox approach to the fore, especially in the Indian context because though the concept of political marketing is not new to the western democracies, there is a dearth of studies which project politics from a marketing point of view in India.

Research Approach

The present study being conceptual in nature, the research has been conducted by going through the work of experts in the field of political marketing who have contributed to the understanding and evolution of the concept over the years. The researchers have referred to the various schools of thoughts and tried to understand the frame of minds of the contributors.

The researchers have delved upon the various theories and explanations put up by thinkers in the field of political marketing. They have given as much attention to those who are the proponents of this theory as they have focused upon the detractors to the proposition of political marketing thereby striking a balance and avoiding a slanted view to the topic under discussion.

The careful deliberation which has been the result of sifting through the extant literature has helped the researchers in developing their own perspective which is reflected in the application of it in various contexts such as the one which concerns the Indian perspective or the one where they talk about the upcoming US Presidential Election. The paucity of related work highlighting the Indian angle to it is something which is of much interest and significance through the course of the paper.

Exploring the Concept of Marketing

The formal definition pertaining to marketing is that it facilitates the exchange process between a firm and its surroundings. Marketing could also be seen as a concept comprising two components, namely strategy and promotion. Strategy involves decisions on the part of the

organization with regard to providing the products as desired by the customers whereas promotion is about devising a plan with regard to making that product available to the customer which you have decided to make on the first place.

From the above discussion it is quite obvious that formulation of strategy (what is to be made available) is the one which is primary in nature rather than promotion (making it available to the customer). The changes which are happening in the environment should be suitably reflected in the offerings of the organization is the founding principle on which marketing functions. Thus, strategy is something which is generic in nature whereas promotion is specific which is taken care by specialists who often resort to outside agencies for even further specialized works.

In marketing there are two sets of people, one producer and the other consumer. It would be a fallacy to presume that they carry equal weight as it is the producer who is active in nature and makes the product available to the consumer thus deciding on the features of it. People might argue that it is the consumer who decides what the manufacture would make but in reality it is the producer who goes by what they intend to produce (there might be some exceptions to the same but that is what they are, exceptions). Market research definitely helps the producer to gauge the pulse of the consumer but at the same time they would be deciding upon the actual product based on their own primary objective coupled with consumer inputs. The success of marketers lies in pushing their product to the consumer under the guise that it has been produced as per their requirements.

Politics and Marketing : The Alliance

Harrop (1990) talks about how marketing has been instrumental in terms of bringing a new approach to politics. This has happened as a response to changes in the consumer perceptions and subsequent behavior with regard to selecting a political brand. Further he asserts that political marketing is something whose impact could well be seen in the way political outfits conduct their day-to-day affairs. He suggests that a marketing perspective offers a "fresh slant on understanding electoral change."

Another thinker Clemente (1992) is of the view that politics and marketing have got certain similarities to each other. Political marketing provides the fundamental premise for such concepts as political events, issues, public opinion and other aspects on which hinge the performance of a political outfit. He also opines that the ideas as well as opinions could be offered as products if they are well formulated and positioned.

Denton (1988) has focused his views on the phenomenon of political marketing in the context of US Presidential Elections. He has his own take on the Presidency as well as the campaigning which is associated with it. He finds the application of a lot of marketing-driven principles in the presidential campaign and highlights the positioning specifically. The present US Presidential Election campaigning has seen two distinctive styles – a flamboyant, self-centred, eccentric billionaire who surprised even his own supporters by winning the nomination of the Republican Party, namely Donald J. Trump and on the other hand we have the sophisticated-yet-controversial, Secretary-of-State, diplomatic image of Hillary R. Clinton who has won the Democratic Party nomination and is presenting her candidature to become the first-ever female POTUS (President of the United States). Both the candidates have their own ways of campaigning thereby striking a chord with their loyal followers. At the same time, the candidates are relying on various tenets of marketing, such as positioning which when applied to politics leads to desired results.

Reid (1988) opines that just as marketplace is the venue for selecting a certain product owing its benefits at the expense of other similarly-placed ones, likewise electing the leader is the process which is driven by the marketing principles which go a long way in ensuring that the party or leader who follows the tenets of marketing better is more likely to emerge victorious over others.

When it comes to the detractors who are not much convinced with the alliance of politics and marketing, one of the leading names in this regard would be of O'Shaughnessy (1990) critical of clubbing marketing and politics without giving much thought to the differences which exist between these two. The 'strait-jacket' approach which advocates political marketing doesn't find much support from her. She is of the view that the human element of politics is much more complex and dynamic as compared to the products which are available off the shelf in a supermarket. The performance parameters which are used to evaluate a product could not be applied with the same accuracy in the case of politics for the lack of homogeneity and consistency on the part of political brands in terms of

delivering on pre-poll promises. The yardsticks of quality which characterize a product could not be of much relevance in the case of political marketing, O'Shaughnessy is of this view.

Another critic of the notion of political marketing is Mauser (1983) who talks about the dissimilarities which exist between politics and marketing strategy-wise. The features which have come to be associated with marketing could not be simply applied to politics and expected to bear results, this is his opinion. Further he adds that the political market is much smaller as compared to the commodity markets and comes with a limited number of choices. Profit-making is another parameter on which Mauser has based his differentiation between politics and marketing. Marketing is predominantly profit-oriented activity whereas politics is a social-service activity carried for the welfare of the people living in a society.

There are others who are of the opinion that thanks to political marketing, campaigns have become more about style and less about substance, that is, the real issues get lost in the hoopla. They argue that the attentiveness which ought to characterize politics has given way to sheen.

Defining Political Marketing.

Newman (1999) has defined political marketing as

Political marketing is the application of marketing principles and procedures in political campaigns by various individuals and organizations. The procedures involved include the analysis, development, execution, and management of strategic campaign by candidates, political parties, governments, lobbyists and interest groups that seek to drive public opinion, advance their own ideologies, win elections, and pass legislation and referenda in response to the needs and wants of selected people and groups in society.

As can be understood from the above definition of political marketing, which is quite comprehensive in itself, Newman (1999) propounds that the principles of marketing could be well applied to political campaigns whereby the party and the leader could draw upon the findings of it to develop a strategy to win the election and more importantly govern the people.

Scott (1970) and Lane (1993) have defined political marketing based on their observation about marketing being based on the concept of exchange which takes place between the seller and the buyer. Similarly in politics the voter elects their representatives who, in turn, govern them keeping public interest into consideration when elected thus making it a two-way process in which votes are exchanged for governance.

Political market, which lies at the heart of political marketing, has been suitably defined by Gamble (1974) who views it from three angles-the existence of a mass electorate; competition between two or more principal parties vying for the votes of the electorate and a set of rules which define this competition. Going by this perspective, political marketing is about the competition which exists between two or more parties or leaders, who compete on pre-ordained rules and convince the electorate to vote for them.

Henneberg (2002) has defined political marketing building on the definition of commercial marketing as given by Gronoos (1990) which is as follows:

[Seeking] to establish, maintain and enhance long-term voter relationships at a profit for society and political parties, so that the objectives of the individual political actors and organizations involved are met. This is done by mutual exchange and fulfillment of promises.

Thus, political marketing results in long-term relationship between the voter and the political parties. The political parties understand it well that the voters have entrusted them so as to perform for the betterment of the society. Also, political marketing presents a broader perspective whereby the individual ambitions of the leaders should be fulfilled side-by-side with the larger good. The political product is such that it is a mix of the leader's image, policies, brand promise, memory. Also, it is a referendum on the past performance of the leader.

Harrop (1990) is of the opinion that political marketing is basically a type of services marketing. He has based his view on the thought process that when one talks about marketing a party, it should be done in such a way that it projects the ability to govern. This, in turn, implies that political parties are basically service organizations. At the same time, the element of risk which one normally associates with a service firm should also be considered in the case of political parties and they need to reassure the voters about themselves from time to time.

Clemente (1992) is of the view that political marketing is the pre-requisite for understanding the numerous patterns which are linked to political events, issues, opinion of the public and other concepts of contemporary politics. Linking politics with the phenomenon of marketing, he says that ideas as well as opinions, connected to numerous political scenarios, could be marketed similar to products which are sold in the marketplace.

O2 Shaughnessy (1990) talks about the concurrent political environment as the one borrowing from the marketing tenets. She describes the act of casting one's vote being similar to that of making a purchase although it has more to do with the preferences of the voter than anything else.

Lock and Harris (1996) have their own way whilst defining political marketing. As per them, it is the study of processes of exchanges between political entities and their environment and among themselves. The legislators and the government act as external regulators of these processes. At the same time, they are themselves a part of the system. Further, they say that political marketing is concerned with the strategies related to communication and positioning of the political product.

Understanding Political Marketing

People might confuse political marketing with propaganda but it is much more than that. It conceptualizes the voters as consumers. It relies on research to arrive on the right strategy to be followed. Also, political marketing is not something which is to be done during an election only. In fact, the concept of permanent campaign is a derivative of political marketing. It talks about the need to stay connected with the electorate no matter whether there is an impending election or not. Unlike traditional politics when parties approached electorate only during the lead-up to an election, political marketing talks about how it is as much essential for the incumbent as it is for the opposition to gauge the mood of the electorate in-between two elections to devise suitable and timely strategy. This holds even more significance in a democracy like India where one or the other election (national, state-level, local-level) keeps on happening in the country. So it makes all the more sense to stay at the top of the mind of the electorate.

Political marketing is not merely concerned with the advertising, campaigning and election-related terms. It covers a plethora of activities, and includes such important concepts as public relations, policy formulation and virtually any activity which has to do with image of the party or its ability to persuade the electorate. It is a long-term activity which helps in keeping the party relevant to the changes as being experienced in the society so that the party and its leaders could prepare as per the changed scenario. The parties and leaders need to understand that it is the government which is dependent on people for their support and not vice-versa. Political marketing is not a mere trick to get elected. Rather, it has become the very reason of governance. It is the principle around which the policies are formulated and strategies are devised.

In many instances, it has been observed that the knowledgeable and tech-savvy consumer-citizens are as much interested in knowing about the campaign managers as they are about the campaigns being run by them. It is in this scenario that campaigners like Prashant Kishore came into the limelight by helping Nitish Kumar win the Bihar polls so much so that he has been pressed to service to revive the sagging fortune of Congress in the poll-bound state of Uttar Pradesh where the party has been out of power for close to three decades.

Newman and Sheth (1987) have given yet another perspective to understand political marketing. They highlight the aspect that knowing all the political parties, their leaders, manifestos is a complex and difficult task. Under ideal situation, a voter could take a completely informed decision only after full information and deliberation about all of them. However, in reality it rarely happens. Voters tend to avoid the complex nature which surrounds politics and rely on mental short-cuts and cognitive cues to make a decision in this regard. Political marketing helps them in doing so by assisting with their choice.

Bartle and Griffith (2001) have developed an understanding of political marketing on the lines of contribution of marketing with regard to introducing such theories as voter aspiration as well as the applicable tools such as segmentation which help the party and the leader to come closer to the voter backed by research-oriented approach.

Scammell (1999) has his own perspective with regard to understanding the phenomenon of political marketing. He opines that the marketing angle brings a strategic focus to the field of politics. No longer merely promotions suffice in today's complex world. Political marketing deals with the overall strategic objectives of the organization or the party.

An interesting observation by Butler and Collins (1994) with regard to political marketing is quite pertinent to coalition politics, a reality which characterized Indian politics for the better part of the last three decades or so as single-party majority government as the center became a distant reality. The regional parties played the 'kingmaker' resulting in the ascendancy of regional political brands such as Lalu Prasad Yadav, J Jayalalitha, Nitish Kumar, Mamata Banerjee, Sharad Pawar, Mulayam Singh Yadav, Mayawati who called the shots and laid claim to plum ministries and national parties had no choice other than fulfilling their demands in the name of 'coalition dharma'. Butler and Collins talk about *Mutability.* It highlights that the 'purchase', made by the consumer-citizen, is changeable even in the aftermath of the results. This has indeed been the case in the past many elections in India, particularly at the central level. The inability of any party to muster the minimum number of seats to form the government leads to strange combinations which might not have been imaginable in the pre-result scenario. What makes this concept even more interesting is their observation that had the voters known about the post-result coalition; they might not have supported a particular party or leader.

Political marketing has given rise to such concepts as 'continuous campaigning' wherein the political parties and leaders stay in touch with the consumer-citizen round-the-year and not merely during the time of an upcoming election. It has led them to realize the aspect that it is no longer enough for a political party or leader to address political rallies every five years, no matter how good the manifesto or speech is. What is of significance is the aspect that they need to remain connected with the consumer-citizen in the form of social interactions on various platforms. Now, thanks to the 24X7 reach of social networking, every move of the elected representatives is closely followed by their followers as well as detractors. It is in this context that political marketing comes handy.

Political marketing is quite broad in its approach as it helps the leaders and parties to identify with the long-term goals as compared to the short-term ones of simply winning the upcoming elections. It enables the party leadership to introspect with regard to the changes which ought to be effected if the party is to stay relevant and contemporary.

The multi-disciplinary approach which comes along with political marketing (as it deals with such diverse concepts as economic, marketing, politics, cultures, values, beliefs, personalities, society, etc.) gives an impression of it being a super-market from where the customers choose what they like and what they don't. They vote for such political brands which are closest to their own school of thought on various issues.

Is There a Novelty Factor Attached with Political Marketing?

As highlighted by Wring (2002), Kotler and Levy (1969) were among the first ones to have advocated that elections should be one of the new arenas of marketing interests. Wring (2002), in his work, further highlights the thought process of Kelley (1956), considered as one of the firsts to have mentioned the term political marketing and given shape to the emergence of professional campaigning in the United States. Kelley wrote, "The team relies heavily but not entirely upon their own intuitive feel for providing political marketing conditions. They pride themselves on having 'good average minds' that help them to see things as the average man sees them." Kelley propounded taking professional help in terms of building a successful campaign around a candidate.

In fact, as highlighted by Harrop(1990), Schumpeter (1943) conceived political parties as service organizations and based his theory of party competition on this notion. He was of the view that having a certain image of the political party is crucial in a representative democracy (like India) because the voters choose a government and they do not merely compare manifestos.

The marketing purists have not been much convinced with the application of principles of marketing in the realms of politics in the early days. However, it didn't stop thinkers like Kotler (1975) who were at the forefront in terms of developing the theoretical framework for the concept of political marketing. By the early 1980s, many European thinkers gave their own take on political marketing.

Hence, it could be seen that there is not much novelty associated with political marketing as one might think so. In fact, Schumpeter had advocated his theory more than fifty years ago which talked about competing politics (the hallmark of any democratic setup) wherein political parties compete with each other to prove their supremacy over others.

At the same time, in a democracy like India which became independent only 70 years ago (as compared to 200+ years of USA), the concept of political marketing has found

reckoning in the past one decade or so thanks to the advent of modern technical aids which have made it possible for the electorate to explore the various facets associated with the phenomenon of marketing and politics taken together. The advent of permanent campaign has become possible with the rise of technology though one can say that the Grand Old Party of India, namely Congress, has been a political brand since 1885. In fact, such has been its significance and association with the Gandhi family that it is known as the 'first family' of Indian politics. However, the ramifications of political marketing came to be well understood only with the dawn of the twenty-first century to a great extent. Its related concept, political branding was at the helm of affairs during the last general election in the country and the subsequent state elections riding on the success enjoyed by brand Modi during the Lok Sabha election. Regional political brands also came to the fore and started utilizing the might of social networking so as to connect with the electorate in a better way.

Findings

The implications of the concept of political marketing are far-reaching and have been brought to the fore, to a certain extent, during the course of this research paper. The paper highlighted the various aspects related to political marketing and how it has both supporters and detractors who have their separate views on the relevance and logic of considering politics and marketing together.

Political marketing has been effective in terms of enhancing the quality, extent as well as efficiency of the communiqué between the leader and the voter, as has been found during the course of this research paper. This is so because a well-crafted, engaging, informative and creative piece of political advertisement (a product of political marketing) delivers the message in much better way than a listless political statement in the form of a policy document which would hardly find any readers and easily forgotten.

During the length of the paper, it was discovered that voters tend to behave in a certain way, thanks to their preferences and identification with the ideologies of the political parties and leaders of choice. Hence, an integrated approach, as propounded by political marketing, towards communicating the thought-processes of leaders and parties in the form of interviews, speeches, ad campaigns, and similar exercises help the voters to understand the message amidst the entire din.

Political marketing has enabled the political leaders and parties to cut across various segments and get their message coherently by adopting a contemporary approach towards communication and promoting an integrated campaign strategy. A well-thought interview which is being televised nationally [think the different responses to the interviews of Narendra Modi (his first individual interview after becoming PM) and Rahul Gandhi (his first individual appearance in the lead-up to the 2014 General Election) on the prime-time show of Arnab Goswami, the star anchor of Times Now] could generate much awareness about the political ambitions and agendas of a leader and bring them closer (or farther) to the public than countless speeches or public appearances.

Political marketing needs to be viewed within the realms of the broadened political process. This, in turn, is characterized by the way media participates in the overall process, the way the learned and knowledgeable people react and ultimately the way consumer-citizens decide their choices with regard to choosing a certain political party over others.

Further, it came to light that the western democracies have been familiar to political marketing prior to it being introduced, understood and implemented in such democracies like India which have come to realize the significance of it in the light of recent advancements in the field of technology which has made it possible for the electorate to remain in touch with the politicians continuously hence resulting in 'continuous campaigning' wherein the politicians needs to keep the consumer-citizens in good humour whether or not facing an impending election as they need to have a favorable rapport with them all the time. In this regard, various researches conducted in the political market enable the political party and leader to understand the expectations of the consumer and form their manifesto accordingly. With the help of such research, they gather solid data which go a long way in terms of formulating strategy rather than taking ill-informed and prejudiced decisions.

Next, the paper showed how political marketing helps the voters in making informed choices which is a result of the heightened interest and awareness in the conduct of affairs of political parties and leaders. This, in turn, has made the leaders conscious of their actions and they have become wary of the wrong actions which could result in rejection on the part of the electorate.

Value

This research paper is of significance for studying political marketing and the various aspects related to it. A reader who intends to understand how politics and marketing are linked to each other and more importantly how thinkers agree as well as disagree with the two phenomena going together based on their differing perspectives; make this research paper of value. The research paper proves its significance by highlighting application of political marketing in the realms of contemporary political scenario thereby bringing to the fore an integrated wherein communication-related exercises of the party and leader are handled after in-depth research resulting in a campaign which is permanent in nature, that is, it is not dependent upon an election but making its presence felt all around.

Also, the research paper is of value to those who intend to understand whether political leaders and parties could be treated as products or not and what is the underlying merit of the same. They would come to know what characterizes the phenomenon of political marketing and how political parties and leaders stand to benefit if they use it in their overall scheme of things.

The research paper adds to the repertoire of those who intend to understand the phenomenon of modern politics and its related aspects and how it has been influenced by a consumer-behaviour approach. A marketing approach towards politics makes it more contemporary and up-to-the-mark thus making it easier for consumer-citizens to make better choices. Also, because of the heightened interest and information levels, the consumer-citizens feel motivated to exercise their franchise to vote.

Conclusion

The concluding remarks of this research paper are based on the discussion which we had in the earlier sub-headings which highlighted the various concepts related to the two fields of marketing and politics. The research paper brought to the fore the notion of political marketing as has been found in the western democracies for quite some time. The major thinkers who have given their views on political marketing have done so in the past century itself. However, the ramification of the same, and related concepts as political branding, has been realized in India to great extent in the recent years only what with the arrival of technology which has brought the political party and leader closer to the consumer-citizen than ever before.

The research paper also talked about the significant role political marketing can play in making the fortunes of a political party or leader if adopted properly. This is so because the behavior of electorate, and the patterns being formed as a result of it, has made political parties question their conventional methods of connecting with the electorate. This paper would contribute to the understanding of those who intend to learn about the phenomenon of political marketing as well as how it plays a role in the way political parties and leaders conduct their affairs. This research paper also presented the views of those who disagree with the idea that politics and marketing could be seen in unison and as such put up their points.

Overall, the research paper touched upon various aspects related to politics, marketing, political marketing and its related concepts to an extent. Also, it came to the fore that political marketing is not restricted to merely advertisements, road shows, and public appearances but has much more depth to it. The concept highlights whether a political party or leader should position itself in the political marketplace or not and if it is indeed the case then when, where and how the same should be accomplished.

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