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RESEARCH PAPERS

Customer-based Retailer Brand Equity and its Drivers and Shopper Outcomes : A Comparison among Demographics and Retail-formats : *Rashmi and Hamendra Dangi*

Developing a Usage Model of Emojis in Social-Media Marketing : *Megha Sharma and R. C. Dangwal*

Doctors' Perception of TOC and Organisation's Performance : An Exploratory Study in a Hospital : *Hardeep Chahal and Fayza Chowdhary*

Prevalence of Small-size Premia in the Stock Market : The Curious Case of India : *Savita Aggarwal and Ramesh Chander*

Measuring the Influence of Green-Marketing Practices on Firms' Competitive Advantage : A Study of Selected Food and Beverage Companies : *Mohd. Amir and Atul Dhyani*

Managerial Hierarchy and Ethical Behavioural Practices : A Study in BHEL : *T. S. Tomar*

Corporate Frauds and the Auditor's Responsibility : *Sanjeev Gupta*

CASE STUDY

Ankur's Dilemma: An Indian Expatriate in Denmark : *Shreshtha Dabral and Sameer Pingle*

BOOK REVIEWS



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SHOBHIT UNIVERSITY, MEERUT

Shobhit University, notified by the Government of India as a Deemed-to-be University, under Section 3 of the University Grants Commission Act, 1956, was envisaged and inspired by Babu Vijendra Kumar *ji*, an eminent agriculturist and social worker from Gangoh (Saharanpur) of U.P. It is a NAAC-accredited University that seeks to attain high-quality teaching, applied research, and human values. The University seeks to go beyond the established standards for nurturing technocrats and prospective managers who have a global vision and insight in their chosen field.

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School of Business Studies (SBS) is an integral part of Shobhit University, Meerut. It has inherited the academic legacy of the NICE Management College (established in 1995), and together with autonomy in curriculum-designing and flexibility for foreign collaboration, through academic exchange, credit-transfer mechanism, and increased institution-industry interface. It offers MBA programmes with several specialisations, including marketing, finance, human resource management, and production and operations management. It also offers M. Phil. and Ph.D. programmes in management.

NICE JOURNAL OF BUSINESS

NICE Journal of Business is a half-yearly journal, earlier published by NICE Management College, Meerut, and now brought out by the School of Business Studies, Shobhit University, Meerut. It provides a platform to research scholars, practising managers, and academicians in business management, commerce, economics, and allied fields, to present their research findings and share their views and experiences.

The Journal aims at disseminating research output and providing information about recent developments in the relevant fields, by way of research articles, book reviews, Ph.D. thesis abstracts, case studies, and bibliographies, on topics related to business and allied areas. It is listed in *Cabell's Management Directory* (USA), and is included in *EBSCO's Database* and in *Ulrich's Directory of Periodicals*.

Original contributions received for publication in the Journal are subjected to a blind review, by experts in the relevant field.

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From the Editor's Desk

I am delighted to place before you this issue of *NICE Journal of Business*. The journal provides an outlet for research and scholarship on business-related themes and topics. Each issue of the journal brings to you the latest and authoritative insights into the dynamic and fascinating world of business.

This issue contains research papers on topics of current interest in business and management. There are seven research papers, one case study, and three book-reviews, reflecting diverse interests in the vast field of business. These pertain to customer-based retailer brand-equity, usage model of emojis in social media marketing, small-size premia in stock market, doctors' perception of TOC in hospitals' performance, influence of green-marketing practices on firms' competitive advantage, corporate frauds and auditors' responsibility; and managerial hierarchy and ethical practices.

In the opening paper, Dr. Rashmi and Dr. Hamendra Dangi make a demographic-based and retail format-based comparison for customer-based retailer brand equity and its drivers and outcomes. They analyse the equity index for hypermarket and supermarket stores and arrive at interesting conclusions.

With the explosion of social media usage, emojis have become a trending topic in digital marketing research. Megha Sharma and Prof. R. C. Dangwal develop the usage model of emoji in social media marketing, which has been tested on a sample of 360 respondents, chosen from the town of Srinagar, Uttarakhand. Their study has revealed that five factors, namely, entertaining, humorous, personalised, easy to understand and convincing, constitute an effective usage model of emojis in social media marketing.

The study by Prof. Hardeep Chahal and Fayza Chowdhary attempts to measure the doctors' perception of the Theory of Constraints in enhancing the hospitals' performance by managing its major constraints. Qualitative methodology is used to collect data from the doctors from a city hospital. The authors identified waiting line as a problem and shortage of human resources as a constraint, that impact service quality and performance of the hospital.

Savita Aggarwal and Prof. Ramesh Chander attempt to explore the prevalence of small-size value premia in the Indian stock market during the study period, April 2005 - March 2018. Curiously, the study outcomes reported in this paper have failed to document pervasiveness of the said value premia. However, some instances of the prevalence of value premia could not be ruled out at the bottom of the small-cap universe.

In the present competitive business environment, companies have realized the significance of green marketing as a tool for gaining competitive advantage. Mohd. Amir and Atul Dhyani examine the influence of green marketing-mix practices adopted by selected food and beverage companies on their competitive advantage. Their study reveals that the food and beverage companies have got the

desired benefits by adopting green-marketing practices.

Dr. T. S. Tomar investigates the ethical behavioural practices of the employees of a large public-sector manufacturing company. He observes that the ethical practices and managerial hierarchy of employees are significantly correlated. The conclusions of the study are likely to improve the ethical attitude of employees working in Indian PSUs.

In an incisive paper, Dr. Sanjeev Gupta examines the concept and types of corporate frauds and surveys the major corporate frauds committed in India in recent years. The findings are not only interesting but useful for the policy-makers and regulatory bodies.

Lastly, Dr. Shreshtha Dabral and Dr. Sameer Pingle present a case study, 'Ankur's Dilemma: An Indian Expatriate in Denmark', which revolves around the dilemma faced by a young engineer in a multinational company which is in the process of expanding globally. He faces challenges in adjusting himself with the new culture and company policies. He faces problem while working with a cross-cultural team, and having a Danish boss. Dissatisfied with the biased performance-appraisal, he is contemplating on taking a lower position at Hyderabad or becoming an expatriate in a neighboring country.

The section on book-reviews contains three items, all written by experts in the relevant field. The books reviewed pertain to important areas of business, namely, behavioural research, business ethics, and demonitisation in India.

I place on record my gratitude to the eminent scholars and expert book-reviewers, for their valuable contribution.

Many experts devoted their time and talent in reviewing the papers by making critical comments and suggestions for improving their quality. I am indebted to all of them.

I express my deep sense of gratitude to Dr. Shobhit Kumar, Chairman, NICE Society; Kunwar Shekhar Vijendra, Chancellor, and Prof. Amar P. Garg, Vice-Chancellor, of Shobhit University, Meerut, for their support to this academic endeavour intended to promote, preserve and disseminate business research. In fact, the journal was the brain-child of Kunwar Shekhar *ji*, when it was launched in early 2006. Since its inception, he has taken keen interest in it.

D.P.S. Verma
Editor

CUSTOMER-BASED RETAILER BRAND EQUITY AND ITS DRIVERS AND SHOPPER OUTCOMES

A Comparison among Demographics and Retail-formats

Rashmi* and Hamendra Dangi**

Abstract

Purpose: *The study seeks to make a demographics-based and retail format-based comparison for customer-based retailer brand equity, and to identify its drivers and its outcomes. A comparison of customer perception of retailer's marketing activities, retailer's equity and shopper responses is made across two retail formats – supermarket and hypermarket. This is followed by a comparison of the above variables across different demographic groups (based on age, gender, education, income, shopping frequency, and socio-economic class).*

Methodology: *A questionnaire-based survey of 705 shoppers of grocery and general merchandise yielded the data on customer perception pertaining of retailer brand equity and its drivers and outcomes. This data was collected over the period between August and December 2016 and was analysed on SPSS.*

Results: *Shoppers at different retail formats differed from each other in their perception for all the equity drivers and shopper outcomes, although the same equity drivers and shopper outcomes were, respectively, the most positively and least positively evaluated for both the retail formats. Demographically, different sets of customers perceived different equity drivers as the more favourable ones. This was observed in the case of supermarkets and hypermarkets, respectively. Male and female shoppers were found to differ significantly with respect to their evaluation of retail equity, perception of service level, and shopping intention.*

Managerial Implications: *A group of customers may perceive one or more of the store's retail-mix elements more favourably than other groups. A retail chains may select to target that specific group of shoppers. Similarly, shoppers of a particular retail format may evaluate retailer efforts more positively as compared to shoppers of another retail format. In either case, it is beneficial for the marketing managers of retail chains to know how the different drivers and outcomes of retailer brand equity hold varying importance for different target segments.*

Originality/value: *The studies on retailer brand equity conducted in India are scarce. Most of the studies have validated the measures and models in developed Western markets.*

Limitations/ Future Research: *The equity index has been analysed for hypermarket and supermarket stores. Future studies can expand or modify the index to adapt it to other types of retailers and retail formats.*

Key words: *Customer-based retailer brand equity, Equity drivers, Marketing activities, Retail chain, India, Hypermarket, Supermarket*

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INTRODUCTION

In the face of stiff competition, retail chains are gearing their marketing efforts towards differentiating their product-service bundles. Retailers are building their names as brands, along the lines of product brands. The preference received by a retailer over and above a similar competitor is essentially its equity among the shoppers. This equity can be created through a number of ways, including marketing actions (Yoo, Donthu and Lee, 2000). A retailer may, then, enjoy favourable outcomes of equity. We expect this process of equity-creation and its consequences to be affected by customer demographics and retail-formats. For instance, a particular group of customers may have more favourable perceptions of a store's retail-mix elements. Similarly, the shoppers of a particular retail format may evaluate retailer efforts more positively as compared to the shoppers of another retail format. In this study, we consider two retail-formats of general merchandise and grocery which are increasingly popular in Indian cities and towns – supermarket and hypermarket.

REVIEW OF LITERATURE

There is significant literary evidence on antecedents and consequents of retailer brand equity (RBE). Some documented antecedents of retailer equity are: retailer image, store access, in-

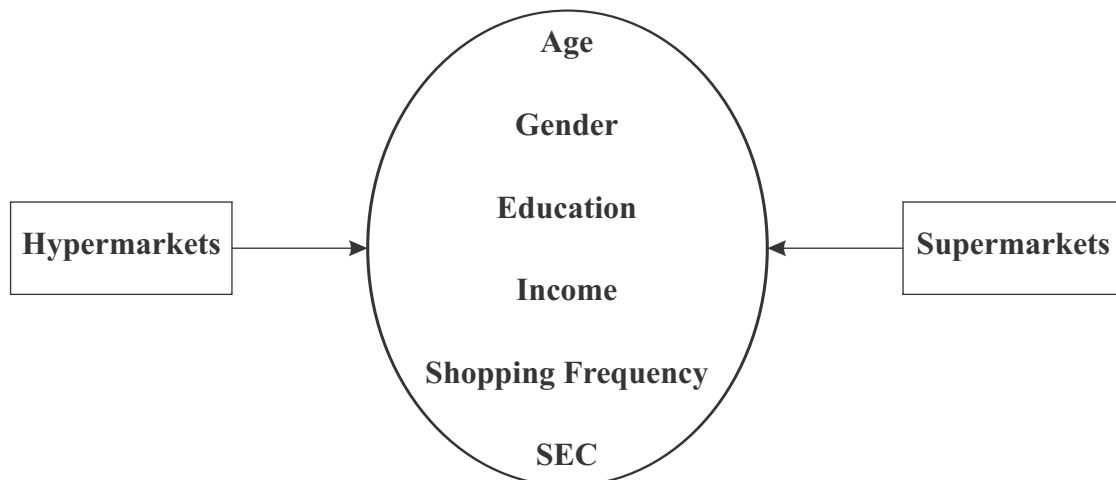
store atmosphere, perceived price, promotion, within-category brand/item assortment, cross-category product/service assortment, advertising, store design, convenience, employee service, physical facilities, service level, product quality, patronage programmes, community involvement (Ailawadi and Keller, 2004; Jinfeng and Zhilong, 2009; Allaway *et al.*, 2011).

Retailer equity has been reported to lead to following consequents: purchase intention, share of spending, attitude towards negative word-of-mouth communication, consumer satisfaction and customer loyalty (Martenson, 2007; Decarlo *et al.*, 2007; Das, 2014; Gil-Saura *et al.*, 2013). But, there is scanty work on the influence of other variables on customer responses. For instance, Swoboda *et al.* (2009) studied the moderating role of consumer involvement and shopping motives on the relationship between the retail equity and its antecedents.

OBJECTIVE OF THE STUDY

This study seeks to compare customer perception of retailer's marketing activities, retailer's equity, and shopper responses across two retail formats – supermarkets and hypermarkets (**Figure 1**). This is followed by a comparison of the above variables across different demographic groups based on age, gender, education, income, shopping frequency, and socio-economic class.

Figure 1: Demographic and Retail Format-based Comparison



RESEARCH METHODOLOGY

An empirical study conducted in the Delhi-NCR region in India used a convenience sample of shoppers intercepted outside different stores of two supermarket chains namely (Reliance Fresh and Easyday) and two hypermarket chains namely (Big Bazaar and More Megastore). All the four retail chains are popular and present across India (**Appendix 1**).

The questionnaire was administered to 705 shoppers. Each respondent answered questions about exactly one retail chain. A total of 227 respondents were surveyed for Big Bazaar, 169 for More Megastore, 155 for Reliance Fresh, and 154 for Easyday.

The survey questionnaire included six antecedents of Retailer Brand Equity (RBE): sales promotion (*four* items), advertising spending (*two* items), Pricing (*three* items), service level (*five* items), product assortment (*six* items) and store layout (*six* items). Three consequents of RBE were measured: Customer Satisfaction (*five* items), Shopping Intention (*four* items) and Resource Premium (*six* items). Overall, RBE was measured through *five* items. The pool of items was generated based on the literature. Items were measured on a 5-point Likert

scale - 'strongly disagree' (1) to 'strongly agree' (5). The model of structural relationships between RBE and its six antecedents and between RBE and its three consequents, was validated before proceeding with the objective of the study.

Variables

The variables considered in the study were: perceptual variables related to consumer perceptions of retailer's marketing efforts and equity; behavioural variables related to shoppers' intentions; and demographic variables.

Perceptual Variables

Customers' perception of various marketing activities of the focal retail chains were measured for the following retail-mix elements: sales promotion, advertising spending, pricing, service level, product assortment and layout. Since these activities drive equity (Yoo, Donthu and Lee, 2000), another perception that was measured was that of the retailer brand equity.

Behavioural Variables

Retailer brand equity causes the following outcomes with respect to the shopper behaviour or intentions as summarised in **Table 1**.

Table 1: Behavioural Variables Used

Variable	Description	Source
Customer Satisfaction	'Summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with prior feelings about the consumer experience'	Oliver (1997)
Shopping Intention	'An intention to shop at the stores of a particular retail chain in the future'.	-
Resource Premium	'Premium that consumers are willing to expend in order to shop with the retailer, reflecting financial considerations, distance traveled, brand or size preferences compromised, or services foregone'	Ailawadi and Keller (2004)

Demographic Variables

Age: Research suggests increase in brand loyalty as customers' age (Cole and Balsubramanian, 1993).

This could cause younger consumers to have more favorable perceptions of sales promotions. It could also translate into lower Resource Premium scores for younger shoppers as their (retailer) preference

is not as strongly formed as older shoppers. Age is measured in years as below 20, 21-30, 31-50, and more than 50, keeping in mind the family stage cycle of Indians.

Gender: We are unable to conjecture how the two genders will differ in their perceptions.

Education: Higher education customers are expected to experience greater opportunity costs for their time. This could mean lack of willingness to devote time searching for good deals. Thus, they could report lower perceptions for Sales Promotion and Resource Premium, and higher perceptions for variables that reduce their time investment such as Service Level, Product Assortment and Layout. Educated customers are less price-sensitive (Hoch, 1996). Consequently, they may assign neutral or favorable scores to retail chain's pricing. Education is measured as secondary/senior school, diploma, college (graduate/post-graduate), and professional degree (graduate/post-graduate).

Monthly Household Income: High-income customers are expected to be less willing to compromise on their brand and size preferences

and travel greater distance to a store. This could cause lower score for Resource Premium and more favourability to Product Assortment. Income was measured as below Rs.30, 000, Rs.30, 000 – Rs.60, 000, and above Rs.60, 000.

Visit Frequency: Shoppers who visit the retail store more frequently are more probable to be looking for sales promotion. Regular shopping trips could also be a result of higher perceptions of Retail equity and could express as higher Customer Satisfaction. Visit frequency was measured as weekly, twice every month, once a month, once in two months.

Socio-Economic Classification: According to the new SEC of Indian customers (**Appendix 2**), items owned by the household and chief earner's education were considered together to group respondents as A1, A2, A3, B1, B2, B3, C1 and C2. This combined and indirect effect of income and education could yield various results.

The overall demographic characteristics of the sample are shown in **Table 2**.

Table 2: Respondents' Profile: Sample Characteristics (n=705)

	N (number)	Percent
Gender	705	100
Male	269	38
Female	436	62
Age Category (years)	705	100
Below 20	124	18
21-30	256	36
31-50	214	30
More than 50	111	16
Monthly Household Income	705	100
Under Rs.30,000	110	16
Rs. 30,000-Rs.60,000	263	37
Over Rs. 60,000	332	47
Education of Household's Chief Earner	705	100
Secondary/Senior school	76	11
Diploma	58	8
College (Graduate/Post-graduate)	276	39
Professional Degree (Graduate/Post-graduate)	295	42

Contd..

SEC	705	100
A1	376	53
A2	187	27
A3	76	11
B1	38	5
B2	18	3
B3	0	0
C1	5	1
C2	5	1
C3	0	0
Visit Frequency	705	100
Weekly	89	13
Twice every month	161	23
Once a month	274	39
Once every two months	181	26

The distribution of respondents according to the retail formats and the demographic factors is shown in **Table 3**.

Table 3: Distribution of Respondents by Retail Format and Demographic Factors

Demographic Variable	Category	No. of Respondents	
		Supermarket	Hypermarket
Age (years)	Below 20	63	61
	21-30	108	148
	31-50	78	136
	More than 50	60	51
	Total	309	396
Gender	Male	123	146
	Female	186	250
	Total	309	396
Monthly Household Income	Below Rs.30,000	43	67
	Rs.30,000-60,000	127	136
	Above Rs.60,000	139	193
	Total	309	396
Education of Household's Chief Earner	Secondary/Senior school	33	43
	Diploma	34	24
	College (Graduate/Post-graduate)	126	150
	Professional degree (Graduate/Post-graduate)	116	179
	Total	309	396

Contd...

Visit Frequency	Weekly	41	48
	Twice every month	78	83
	Once a month	108	166
	Once in two months	82	99
	Total	309	396
SEC	A1	142	234
	A2	90	97
	A3	39	37
	B1	19	19
	B2	12	6
	C1	3	2
	C2	4	1
	Total	309	396

Retail-Format Based Analysis

Customer Perception of Marketing Activities

The mean scores of each retail-mix element for supermarket and hypermarket categories were examined using the Compare Means Analysis (Table 4). A comparison across the two retail formats revealed that the shoppers of hypermarkets had higher positive perceptions than the supermarket shoppers for all the equity drivers. Layout emerged as the most positively perceived equity drivers among supermarket shoppers as well as the hypermarket shoppers. This suggests that the

retail managers should design their store layout to ensure comfortable movement of the shopping cart. They should divide the store into separate departments and locate them appropriately around the store, along with proper signages to guide the shopper.

Advertising spending received the least positive evaluations among equity-drivers in the case of both the supermarkets and the hypermarkets. This suggests that the retail managers should allocate their marketing budget according to these findings.

Table 4: Comparing Mean Analysis: Retailer Brand Equity Drivers

Retailer Brand Equity Driver	Hypermarket stores (N=396)		Supermarket stores (N=309)	
	Mean	S.D.	Mean	S.D.
Sales Promotion	3.79	0.64	3.56	0.89
Advertising Spending	3.39	0.84	3.14	0.99
Pricing	3.46	0.65	3.45	0.84
Service Level	3.65	0.63	3.42	0.84
Product Assortment	3.60	0.58	3.46	0.82
Layout	3.88	0.55	3.65	0.79

Shopper Outcomes

The mean scores of each shopper outcome for the supermarket and the hypermarket categories were examined, using the Compare Means Analysis

(Table 5). Shoppers of the two supermarkets had higher positive perception as compared to the hypermarket shoppers for shopper outcomes, except customer satisfaction. Customer satisfaction was the most positively perceived

EDU	A	3.38	43	0.72	3.91	43	0.56	3.34	43	0.76	3.45	43	0.62	3.72	43	0.69	3.69	43	0.60	3.93	43	0.51	3.71	43	0.62	3.55	43	0.68	2.98	43	0.67
	B	3.18	24	0.86	3.86	24	0.70	3.10	24	1.00	3.47	24	0.53	3.70	24	0.76	3.75	24	0.61	3.83	24	0.59	3.65	24	0.57	3.34	24	0.81	3.19	24	0.76
	C	3.23	150	0.70	3.79	150	0.63	3.44	150	0.90	3.49	150	0.69	3.63	150	0.61	3.56	150	0.58	3.88	150	0.58	3.68	150	0.61	3.44	150	0.75	2.84	150	0.75
	D	3.23	179	0.66	3.75	179	0.66	3.40	179	0.80	3.45	179	0.66	3.66	179	0.63	3.61	179	0.58	3.89	179	0.55	3.65	179	0.60	3.43	179	0.72	2.91	179	0.75
	Total	3.25	396	0.69	3.79	396	0.64	3.39	396	0.85	3.46	396	0.66	3.66	396	0.63	3.61	396	0.59	3.89	396	0.56	3.67	396	0.60	3.44	396	0.74	2.91	396	0.74
SEC	A1	3.23	234	0.70	3.75	234	0.66	3.36	234	0.86	3.42	234	0.65	3.61	234	0.63	3.57	234	0.57	3.89	234	0.57	3.65	234	0.61	3.37	234	0.76	2.84	234	0.74
	A2	3.29	97	0.68	3.82	97	0.64	3.47	97	0.81	3.57	97	0.65	3.79	97	0.65	3.61	97	0.66	3.95	97	0.54	3.73	97	0.56	3.57	97	0.64	2.97	97	0.75
	A3	3.12	37	0.67	3.95	37	0.62	3.16	37	0.92	3.33	37	0.57	3.58	37	0.69	3.72	37	0.56	3.77	37	0.59	3.55	37	0.60	3.43	37	0.80	3.04	37	0.71
	B1	3.34	19	0.62	3.71	19	0.57	3.76	19	0.71	3.54	19	0.77	3.76	19	0.62	3.76	19	0.51	3.93	19	0.53	3.80	19	0.64	3.66	19	0.75	3.13	19	0.68
	B2	3.60	6	0.63	4.08	6	0.38	3.33	6	0.75	3.89	6	0.78	3.60	6	0.18	3.81	6	0.51	3.69	6	0.22	3.53	6	0.83	3.58	6	0.56	2.75	6	0.73
	C1	3.70	2	0.99	4.38	2	0.18	4.25	2	0.35	4.33	2	0.00	3.50	2	0.42	3.75	2	0.12	3.92	2	0.35	4.00	2	0.57	4.25	2	0.35	4.25	2	0.35
	C2	2.60	1		3.00	1		2.50	1		2.67	1		2.80	1		3.17	1		3.00	1		2.80	1		2.75	1		3.33	1	
Total	3.25	396	0.69	3.79	396	0.64	3.39	396	0.85	3.46	396	0.66	3.66	396	0.63	3.61	396	0.59	3.89	396	0.56	3.67	396	0.60	3.44	396	0.74	2.91	396	0.74	
FREQUENCY	A	3.22	48	0.66	3.81	48	0.75	3.35	48	0.88	3.53	48	0.67	3.68	48	0.66	3.77	48	0.64	3.95	48	0.58	3.75	48	0.64	3.54	48	0.80	2.84	48	0.68
	B	3.24	83	0.68	3.84	83	0.68	3.46	83	0.83	3.53	83	0.71	3.59	83	0.66	3.63	83	0.60	3.81	83	0.55	3.67	83	0.57	3.57	83	0.70	2.94	83	0.85
	C	3.29	166	0.71	3.79	166	0.61	3.36	166	0.90	3.48	166	0.64	3.74	166	0.63	3.60	166	0.58	3.97	166	0.56	3.72	166	0.61	3.51	166	0.75	2.94	166	0.73
	D	3.19	99	0.69	3.73	99	0.62	3.38	99	0.75	3.34	99	0.63	3.56	99	0.59	3.52	99	0.55	3.79	99	0.53	3.54	99	0.59	3.17	99	0.66	2.87	99	0.71
	Total	3.25	396	0.69	3.79	396	0.64	3.39	396	0.85	3.46	396	0.66	3.66	396	0.63	3.61	396	0.59	3.89	396	0.56	3.67	396	0.60	3.44	396	0.74	2.91	396	0.74

In the case of gender, female supermarket shoppers consistently had more positive perception than male supermarket shoppers for all equity drivers as well as the shopper outcomes. Similarly, female hypermarket shoppers consistently had more positive perception than the male hypermarket shoppers for all variables, except the product assortment.

With respect to age, the oldest class (customers aged over 50 years) of supermarket shoppers had the most positive perception for the majority of variables. The classes of hypermarket shoppers showed a mixed result. The hypermarket shopper belonging to the age-group of 31-50 years had the most positive perception of the majority of variables (retailer brand equity, sales promotion, service level, layout, shopping intention, and resource premium).

On the basis of income, the middle category (earning a monthly household income of Rs.30,000 to Rs.60,000) supermarket shoppers had the most positive perception for the majority of variables. Among the hypermarket shoppers, most positive perceptions was held by the upper category (earning a monthly household income above Rs.60,000) for the majority of variables (retailer brand equity, advertising spending, pricing, layout, customer satisfaction, shopping intention, and resource premium).

Among the education categories, a customer perception was mixed. While the shoppers having education up to the secondary/senior school had the most positive perception for the Retailer brand equity and Sales Promotion of supermarkets, customers educated up to the diplomas level had

the maximum positive perceptions for advertising spending, pricing, product assortment, customer satisfaction, and resource premium among all supermarket shoppers. The respondents with a professional degree holder had the most positive perceptions towards the service level and the layout of supermarkets. As far as the hypermarket shoppers are concerned, the most positive perception was held by the shopper's education up to the school level in relations to the majority of variables.

As regards the visit frequency, supermarket shoppers who were most regular (weekly) in their shopping trips had the most positive perception of the Retailer's brand equity, sales promotion, advertising spending, pricing and shopping intention. The supermarket shoppers who were the least frequent (Only visit every two months) in their purchasing had the most positive perceptions of service level, product assortment and resource premium. Among the hypermarket shoppers, the most positive perceptions were held by shoppers who were fairly regular in their shopping visits (twice every month) for the majority of variables.

Among the socio-economic classes (SEC), supermarket shoppers belonging to SEC B2 had the most positive perception of the majority of variables. Each SEC of the hypermarket shoppers reported better positive perception of one variable or the other.

Comparing Differences between Demographic Groups

As noted above, customer groups based on demographics differed significantly in their

perception. If statistically significant, this difference could have significant implications for retail managers. We used the t-test and the ANOVA to examine whether the customer perception of different groups varied significantly.

Male and Female Customers

Setting Retailer Brand Equity, its drivers and shopper outcomes as the dependent variables and gender as the independent variable, a t-test was run to compare the mean scores of male and female shoppers for each variable. The differences

between perceptions of male and female respondents and whether the difference is significant are shown in **Table 8**. The male and female shoppers were found to differ significantly with respect to their evaluation of the retail equity, perception of service level, and the shopping intention. The results were as expected as the role of gender is widely documented in the literature (See: Darley and Smith, 1995; and Dube and Morgan, 1996).

Table 8. t-Test Analysis based on Gender

	t-test for Equality of Means			
	T	df	Sig. (2-tailed)	Mean Difference
Retailer Brand Equity	-2.028	702	0.043	-0.127
Equity Driving Marketing activities				
Sales Promotion	-1.523	702	0.128	-0.091
Advertising Spending	-1.890	702	0.059	-0.0135
Pricing	-1.475	702	0.141	-0.085
Service Level	-2.269	702	0.024	-0.130
Product Assortment	-1.015	702	0.311	-0.055
Layout	-1.795	702	0.073	-0.095
Shopper Outcomes				
Customer Satisfaction	-0.539	702	0.590	-0.029
Shopping Intention	-2.008	702	0.045	-0.131
Resource Premium	-1.963	702	0.050	-0.127

Note: Difference is significant at the 0.05 level

Young and Aged Customers

We use the ANOVA to compare the differences among the mean scores of the four age categories. **Table 9** shows whether the population mean is different for the different age-groups. Significant differences were noted among the 'young' and the 'old' shoppers as far as the Layout as an equity driver, and resource premium as an outcome was concerned. This implies that the respondents of

different ages had differing perceptions about comfort of movement, use of shopping cart, store departmentation, signage and billing location. They also had differing intentions of compromising on their brand/ size preference and expending extra effort to reach a store of the retail chain.

Table 9: ANOVA based on Age

	Sum of Squares	df	Mean Square	F	Sig.
Retailer Brand Equity	0.894	3	.298	.455	.714
Equity Driving Marketing Activities					
Sales Promotion	1.133	3	0.378	0.635	0.592
Advertising Spending	3.337	3	1.112	1.301	0.273
Pricing	2.032	3	0.677	1.228	0.299
Service Level	4.058	3	1.353	2.480	0.060
Product Assortment	0.625	3	0.208	0.418	0.740
Layout	6.098	3	2.033	4.423	0.004
Shopper Outcomes					
Customer Satisfaction	0.117	3	0.039	0.079	0.971
Shopping Intention	2.656	3	0.885	1.255	0.289
Resource Premium	9.634	3	3.211	4.645	0.003

Note: Difference is significant at 0.05 level

Customer Groups based on Education

On analysing the differences among the perception of differently-educated customers, the ANOVA

showed that these shopper groups had significantly-different intentions with respect to the resource premium (**Table 10**).

Table 10: ANOVA based on Education

	Sum of Squares	df	Mean Square	F	Sig.
Retailer Brand Equity	3.064	3	1.021	1.565	0.197
Equity Driving Marketing Activities					
Sales Promotion	2.793	3	0.931	1.573	0.195
Advertising Spending	2.534	3	0.845	0.987	0.398
Pricing	3.336	3	1.112	2.022	0.109
Service Level	0.495	3	0.165	0.300	0.826
Product Assortment	1.342	3	0.447	0.900	0.441
Layout	2.128	3	0.709	1.525	0.207
Shopper Outcomes					
Customer Satisfaction	0.416	3	0.139	0.283	0.838
Shopping Intention	1.772	3	0.591	0.836	0.474
Resource Premium	5.468	3	1.823	2.614	0.049

Note: Difference is significant at 0.05 level

Customer Groups based on Income

The differences among the mean scores of various equity drivers, equity and outcomes as evaluated by

the three income categories are summarised in **Table 11**.

Table 11: ANOVA based on Income

	Sum of Squares	df	Mean Square	F	Sig.
Retailer Brand Equity	0.634	2	0.317	0.484	0.617
Equity Driving Marketing activities					
Sales Promotion	0.588	2	0.294	0.495	0.610
Advertising Spending	2.934	2	1.467	1.717	0.180
Pricing	1.255	2	0.627	1.137	0.321
Service Level	0.983	2	0.491	0.895	0.409
Product Assortment	0.716	2	0.358	0.720	0.487
Layout	2.026	2	1.013	2.180	0.114
Shopper Outcomes					
Customer Satisfaction	1.194	2	0.597	1.222	0.295
Shopping Intention	0.508	2	0.254	0.359	0.699
Resource Premium	1.238	2	0.619	0.881	0.415

Note: Difference is significant at 0.05 level

As shown in the table, there is no significant difference among the perceptions of the shoppers belonging to the three income groups. This implies that the 'richest', 'less rich', and 'least rich' customers did not have any significant disagreement with respect to the retail chain equity, all its antecedents and all its outcomes.

Customer Groups based on Socio-economic Classification

We coded the responses into seven groups based on

SEC. The results are shown in **Table 2**.

The ANOVA results show that customers belonging to different SECs differ significantly with respect to their perceptions about all the six equity driving marketing activities of the retail chains (**Table 12**). These customers also had significantly different mean scores for Shopping Intention and Resource Premium.

Table 12: ANOVA based on SEC

	Sum of Squares	df	Mean Square	F	Sig.
Retailer Brand Equity	7.088	6	1.418	2.185	0.054
Equity Driving Marketing activities					
Sales Promotion	8.756	6	1.751	2.993	0.011
Advertising Spending	9.995	6	1.999	2.358	0.039
Pricing	11.733	6	2.347	4.350	0.001
Service Level	8.725	6	1.745	3.229	9.007
Product Assortment	8.597	6	1.719	3.522	0.004
Layout	8.455	6	1.691	3.696	0.003
Shopper Outcomes					
Customer Satisfaction	4.034	6	0.807	1.658	0.142
Shopping Intention	13.881	6	2.776	4.015	0.001
Resource Premium	20.820	6	4.164	6.147	0.000

Note: Difference is significant at 0.05 level

Customer Groups based on Visit Frequency

The comparison of shoppers grouped on the basis

of how frequently they visited the retail chains' stores is shown in **Table 13**.

Table 13: ANOVA based on Visit Frequency

	Sum of Squares	df	Mean Square	F	Sig.
Retailer Brand Equity	0.424	3	0.141	0.215	0.886
Equity Driving Marketing activities					
Sales Promotion	1.256	3	0.419	0.705	0.549
Advertising Spending	0.641	3	0.0214	0.249	0.862
Pricing	2.331	3	0.777	1.409	0.239
Service Level	1.422	3	0.474	0.863	0.460
Product Assortment	1.065	3	0.355	0.713	0.544
Layout	2.919	3	0.973	2.097	0.099
Shopper Outcomes					
Customer Satisfaction	0.927	3	0.309	0.631	0.595
Shopping Intention	7.290	3	2.430	3.477	0.016
Resource Premium	0.348	3	0.116	0.165	0.920

Note: Difference is significant at 0.05 level

As shown in the table, the four shopper-groups varied significantly with respect to their intention on incurring a resource premium to shop at the particular retail chain.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

As is evident from Tables 8 to 13, there are

differences among the different categories of respondents with respect to the selected equity drivers and equity outcomes. The summary results are presented in **Table 14**. This, though, was not the case for shoppers belonging to different income categories. Grouping of customers based on the socio-economic classification threw significant variation in the perception for the most variables.

Table 14: A Summary View of Differences in the Perception of Various Shopper Groups

Shopper Category → Shopper Perceptions	Gender	Age	Education	Income	SEC	Visit Freq
Equity Driving Marketing Activities						
Sales Promotion						
Advertising Spending						
Pricing						
Service Level						
Product Assortment						
Layout						
Shopper Outcomes						
Customer Satisfaction						
Shopping Intention						
Resource Premium						

Note: Difference is significant at 0.05 level

By understanding the demographic factors which influence the customer perception of retailer's marketing activities, retail managers can build their retail brand more effectively. For any given Marketing Activity or Shopping Outcome, the shaded cells indicate the demographic variable according to which shoppers are differing from each other. For instance, among hypermarket shoppers, customers from the highest income bracket reported most positive perceptions for different marketing activities of the retail chains. This indicates that the hypermarket is well-received by high-income customers. Retail managers can consider this while creating the target market and positioning plans. They can decide between targeting female shoppers vs. male shoppers, younger customers vs. older customers, high-income households vs. low-income households, frequent visitors vs. occasional visitors, etc.

The findings are based on the perceptual variables and perceptions can be altered. While choosing retail strategies, the managers should first assess the customer perceptions for their favourability. Moreover the managers should design the marketing activities to maintain favourable perceptions. Alternatively, managers should employ retail-mix elements like store advertising and sales promotions to modify unfavorable perceptions.

Limitations and Future Research Direction

A limitation of the study that is pertinent for retail managers is that it captures the customer's intentions with respect to the shopper outcomes. It is possible that the intentions would not translate into actual behaviour. This may not be problematic while working with differences in means.

The present study involved only two categories of retail brands, vis-à-vis supermarkets and hypermarkets. Studies in future can be conducted to examine other retail formats of grocery and general merchandise, such as specialty store chains, department store chains, and warehouse clubs.

Since the survey was conducted in one city (Delhi-NCR), generalisability of the results can be improved by testing across a larger number of cities. Individual chain-level analysis can also be attempted for each retail brand.

Our sample was intercepted outside the retail stores. The respondents had freshly made purchases. Future studies can eliminate the recency bias through online surveys. Studies can also be conducted on the impact of situational variables, such as the day of the week, time of the day, festive season (relevant in a culturally and religiously-diverse country, like India) on perceptions of the different customer segments considered here. The customer segments can be created on the basis of other criteria, like shopping experience, and the online purchasing proficiency (all the retail chains used in this study also sell through their online channel).

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Appendix 1: Notes on Chosen Retail Brands

Retail Chain	
Big Bazaar	Big Bazaar is a company- Future Group's flagship format. With 164 stores in a total space of 7.2 million square feet (Future Retail Ltd, 2014), it is amongst the fastest growing hypermarket chains globally. Store footprint is spread evenly throughout the country with 39 stores in north India, 45 in south India, and 44 and 36 stores in west and east India respectively. The retail brand has been conceptualized as outlets with the look, touch and feel of an Indian bazaar, and the choice, convenience and hygiene of an international modern retailer. Big Bazaar was the first Indian store in the hypermarket format. The stores sell food, groceries, general merchandise, fashion apparel, home needs and electronics.
More Megastore	Aditya Birla Retail Ltd. (ABRL) owns the 'More' brand of retailing. ABRL operates branded outlets in the supermarket and hypermarkets formats, covering an area of 2 million square feet. Its hypermarkets 'more. MEGASTORE' are designed as one-stop shopping destination for the whole household. In addition to fresh produce, grocery, personal and home care, and general merchandise, More Megastores also have apparels, consumer durables and IT products. 15 hypermarkets operate in Hyderabad, Delhi, Thane, Vadodara, Indore and Karnataka.

Contd...

Easyday	Bharti Retail Ltd. owns and operates stores under the brand name Easyday. It runs three formats – neighborhood stores (called Easyday), compact hypermarket stores (called Easyday Market), and large hypermarket stores (called Easyday Hyper). Starting in 2008 with its first Easyday store in Ludhiana, and first Easyday Market in Jalandhar, the retail chain now has 210 stores.
Reliance Fresh	Reliance Retail Limited has a pan-India presence in various retail formats, including the supermarket format, run by Reliance Fresh Limited.

Appendix 2: (New) Socio-Economic Classification of India

			Chief Earner: Education (Q2)							
Items owned / have access at home	Circle	Tick	No. of Durables (TRANSFER FROM Q1)	Illiterate	Literate but no formal schooling/ School-Upto 4 years	School-5 to 9 years	SSC/HSC	Some College (incl a Diploma but not Grad	Graduate/ Post Graduate: General	Graduate/ Post Graduate: Professional
				1	2	3	4	5	6	7
Electricity Connection	01	✓	None	E3	E2	E2	E2	E2	E1	D2
Ceiling Fan	02	✓	1	E2	E1	E1	E1	D2	D2	D2
LPG Stove	03	✓	2	E1	E1	D2	D2	D1	D1	D1
Two Wheeler	04	✓	3	D2	D2	D1	D1	C2	C2	C2
Colour TV	05	✓	4	D1	C2	C2	C1	C1	B2	B2
1a Refrigerator	06	✓	5	C2	C1	C1	B2	B1	B1	B1
Washing Machine	07		6	C1	B2	B2	B1	A3	A3	A3
Personal Computer / Laptop	08		7	C1	B1	B1	A3	A3	A2	A2
Car/Jeep/Van	09	✓	8	B1	A3	A3	A3	A2	A2	A2
Air Conditioner	10		9+	B1	A3	A3	A2	A2	A1	A1
1b Agricultural Land	11	✓								
NUMBER OF STANDARD 11 OWNED		8								

Source: The Market Research Society of India, 2011

Grow old along with me, the best is yet to come.

Robert Browning



Years ago, people who sacrificed their sleep, family, food, laughter and joy of life, were called 'saints'.
But now, they are called 'shareholders'.

Anonymous

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DEVELOPING A USAGE MODEL OF EMOJIS IN SOCIAL-MEDIA MARKETING

Megha Sharma* and R. C. Dangwal**

Abstract

Purpose: *This paper is based on a study conducted to identify the constructs for measuring the usage of emojis in social-media marketing instrument through validity and reliability analyses.*

Research Methodology: *The study is exploratory in nature and is based on a judgmental sample of 360 respondents, chosen from the city of Srinagar-Garhwal in the Uttarakhand state, through a self-administered questionnaire, which was pilot-tested. The data were analysed using the exploratory factor analysis, descriptive statistics, and Cronbach's alpha, with the help of the SPSS software (version 21).*

Findings: *The five factors related to the usage of emojis in social-media marketing were identified after running the analyses, i.e., 'entertaining', 'humourous', 'personalised', 'ease of understanding' and 'convincing'. These constructs constituted a usage model of emojis in social -media marketing.*

Policy Implications: *This study is probably the first in India to develop a usage model of emojis in the social-media marketing. This might help the marketers in projecting their content in an effective way by using emojis.*

Limitation/ Future Research: *The study was conducted in a small geographical area with a small sample. The limitation of time, cost, sample-size and possible bias of some respondents in answering the questions might have affected the findings.*

Originality/ Value: *This study would add value to the growing literature by empirically testing the usage factors of emojis in social-media platforms. It also validates a usage model of emojis in social-media marketing.*

Key words: *Emojis, Social media marketing, Usage model*

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INTRODUCTION

The ability to represent emotion through textual interfaces has expanded over time and the interpretations of their intended meanings have turned out to be increasingly vague with a wide assortment and demographically-diverse consumer being able to access emojis in a variety of conversational contexts.

Over the past few years, the use of emojis has increased. According to one estimate, six billion emojis are used every day. Moreover, emojis, which originally existed only on the Internet, also began to invade the offline world too. In social media and instant messaging, emojis are more frequently used to express emotions as compared to emoticons (Vidal, Ares & Jaeger, 2016).

According to Casper Grathwohl, President of Oxford Dictionaries, emojis are flexible, immediate and rich form of communication that transcends linguistic borders.

Shigetaka Kurita invented emoji in 1999, which was intended for a Japanese user base. The principal emoji were basic and motivated by manga art and kanji characters— only 12 pixels by 12 pixels. Apple hid an emoji keyboard in the first iPhone in 2007 to attract Japanese customers, but the North American users quickly became aware of the keyboard. Presently, emoticon is accessible in practically all informing applications, available in almost all messaging apps, and while different apps have distinct emoji styles, emoji can be translated across platforms thanks to Unicode. That's why an iPhone user can get the smiling pile of poo emoji from someone using a Samsung Galaxy.

Marketers use 'shorthand digital language' to communicate their business messages with customers. In written discourse, emojis has communicative power to reduce ambiguity –(Kaye, Malone, & Wall, 2017). Since communication is essential in our everyday lives, it is important to understand how people adapt to the new context of

communication. However, the use of this aspect of communication is under-diagnosed. In marketing, linguistics research has focused primarily on the effects of word choice, such as the effect of creative writing on the reader's mind. However, to the best of our knowledge, no survey with cross-sectional approach has been conducted to better understand emojis' use in the context of social media marketing. In this study, the target population is millennials (young consumers), i.e. the individual born between 1982 and 2003. We focus on this target group because this generation was found as the one with the highest emoji usage (Emoji Research Team, 2016).

REVIEW OF LITERATURE

A review of available literature paves the way to a well-developed research work. An attempt has been made here to provide a brief review of the relevant studies on the usage of emojis in social media marketing.

Emojis

Emoji is an omnipresent element that can induce people to co-operate and trust each other. Communication content also matters – especially for emojis messages. The powerful effect of emojis also suggests that the more information a person receives about a counterpart, the greater the likelihood of triggering stereotypes. Computer-mediated communication is an essential ingredient in the modern trust decision, while emojis have intrinsic and efficient qualities that could make them more valuable than the simple text –(Babin, 2016).

Emojis are used to indicate the message tone, create alignments and structure interactive exchanges between participants. Participants use emojis to link a textual comment to an image, a video, a website link, etc., that was sent earlier or later (Al Rashdi, 2018). Emoticons are utilised as a replacement for the individual non-verbal interactions (Bosch & Revilla, 2018).

Usage of Emojis

The participants who watched messages with high emojis reported increased attention to the messaging. This suggests that the use of emojis may be a promising strategy for influencing attention for some topics. If a topic lacks the participants' interest, emojis might be a useful way to draw young adults and get them to watch the message (Willoughby & Liu, 2018).

The users felt that emoticons had a positive effect on enjoyment, perceived information wealth, personal interaction and perceived usefulness. Emoticons, however, were not only pleasant to use, but also a valuable addition to communication methods (Huang, Yen, & Zhang, 2008). The user's playfulness or enjoyment also affects the adoption of a technology (Schepers & Wetzels, 2007). Perceived utility has a direct impact on the intention of individuals to use IT (Webster & Martocchio, 1992).

Emoji contributes to managing the facial sensitivities of participants by contributing to the adequate expression of speech acts in a socially appropriate manner. Emojis are used in traditional forms of phatic communion (like greetings and goodbye) as well as in creative and joking ways (Sampietro, 2019).

A higher proportion of female messages contained at least one emoticon when accounting for the number of messages sent. The females also produced a higher concentration of emoticons compared to the males in relation to words' (Tossell *et al.*, 2012).

Emoticon usage is predicted primarily by age and gender in which females use emoticons more than males and emoticon usage decreases with age. Taken together, gender and age explain the variance in the use of emoticons more than eight times that of the Big Five personality scores of the user (Oleszkiewicz *et al.*, 2017).

The millennials use emojis primarily in dialogic

contexts such as instant messaging apps and less as e-mails in task-oriented communication contexts (Bosch & Revilla, 2018).

Emoticons are used more in socio-emotional contexts than in task-oriented situations, since it is better to show one's emotions and feelings to a friend than to a colleague (Derks, Bos, & Grumbkow, 2007). The users are well aware of the context and tend to change the frequency of their emoji usage depending on the specific communication platform (Kaye, Malone & Wall, 2017).

Appropriateness of the product context may be an influential factor in the association of emotional terms with the consumption of a product, and more so when the frequency of consumption of the product by a person is also affected in some way by the use and interdependence of the food product and the emoji used (Vora, Bendre, & Mathure, 2017). On Facebook, companies take advantage of emojis to make customers feel like they're listening and caring about them. They respond in emojis' language to the customer, use emojis in each comment and show emotions in the language of the consumer (Barysevich, 2017).

Research Gap and Rationale of the Study

Although the usage of emojis is now two-decades old, there is a paucity of literature in this field. According to Speier (2015), the importance of emojis and their popularity has recently been noticed by marketers and has integrated them digitally into their promotional strategies for mobile apps, e-mails, and social-media platforms. Therefore, the findings of the study can create a new viewpoint for the usage of emojis in social-media marketing and add contribution to the existing literature on the subject.

OBJECTIVES OF THE STUDY

The study seeks to propose a usage model of emojis in social media marketing for practical adoption. The specific objectives are to test validity and

reliability of the instrument and to identify the determinants of the emoji usage.

RESEARCH METHODOLOGY

The paper is based upon a study conducted on young consumers of the city of Srinagar, in the state of Uttarakhand. For the study, 360 respondents were selected through the judgmental sampling technique.

The Data

The primary data were collected from the judgmental sample of 360 respondents, aged 18 to 30. A structured questionnaire was prepared to quantify the perception of young consumers regarding the emojis in the social media. The questionnaire was administrated by the researcher herself. The secondary data was obtained from various articles, journals, and books on the subject.

The Scale

Likert's five-point scale was used along with mixed form of questions, which entailed some negative or some positive responses, including a neutral one. In this instrument, 1 represented 'strongly disagree' and 5 denoted 'strongly agree' in terms of the opinion of the respondents against the respective statements. There were 31 statements at the time of running of validity and reliability analyses.

Testing of Validity

The elements of validity of the instrument were tested on the grounds of internal and external validities. While the internal and external items belonged to the dimension concerned, the external validity was further divided into the content and construct validities. The content validity was

determined by the opinions of the experts and the EFA was conducted to evaluate the construct validity using the Social Sciences Statistical Package (SPSS) software.

The EFA is a technique used to identify variables groups or clusters. Its speciality lies in building a questionnaire to measure an underlying variable. The EFA breaks down the original data into a linear set of variants. It determines a particular item's contribution (statement) to the component (factor). Furthermore, EFA is a psychometrically-sound procedure; it is less complex conceptually and has various similarities with the discriminant analysis (Field, 2009). Therefore, it was considered appropriate to operate the EFA for the study. The orthogonal rotation (varimax) was applied to the data because it assumes all the factors are independent and unrelated. The application of rotation attempts to maximise the dispersion of loadings within the various factors (Field, 2009).

Testing of Reliability

The most widely-used Cronbach's alpha coefficient technique was used in the study to check the reliability status of both the main scale (instrument) and the sub - scale (factors). It measures the internal consistency or reliability of a data set; this is one of the considerations to judge the suitability of a data set for statistical analysis (e.g., factor analysis).

The Sample

The data collected through the questionnaire was classified according to the demographic characteristics of the respondents. The data were collected for the four variables, namely, gender, age, education, and marital status. The sample profile is shown in **Table 1**.

Table 1: Description of the Sample

Demographic Variable	Frequency	Percentage
Gender		
Male	174	48.3
Female	186	51.7

Contd...

Age (Years)		
18-22	312	86.7
23-26	22	6.1
27-30	26	7.2
Education		
Matric	4	1.1
Intermediate	66	18.3
Undergraduate	224	62.2
Master's Degree	56	15.6
Any other	10	2.8
Marital status		
Married	34	9.4
Unmarried	326	90.6

Data were collected for the four variables, that is, gender, age, education and marital status. As shown in the table, the female respondents formed the majority (51 per cent) while the males were 48.3 per cent. Moreover, most of the respondents were aged between 18- 22 years (86.7 per cent). Data on marital status shows that a huge majority of the respondents was unmarried (90.6 per cent) and that the larger part of the sample (62.2 per cent) was

undergraduates.

Coding of the Statements (Variables)

The statements used for model development in the study, along with their corresponding codes are presented in **Table 2**.

Table 2: Statements (Variables) used for Developing the Model

	Statements	Code
1	'I like brands using emojis in marketing messages'.	emj1
2	'It helps me more accurately express what I am thinking'.	emj2
3	'It makes it easy for me to understand marketing ads/messages'.	emj3
4	'They create more personal connection with me'.	emj4
5	'Emojis are a better fit than words in marketing ads'.	emj5
6	'They are more contemporary way to communication'.	emj6
7	'I feel happy as they are funny'.	emj7
8	'Sometimes, I find emojis ads confusing'.	emj8
9	'I always read or watch emojis ads'.	emj9
10	'It allows quick information about the content'.	emj10
11	'It is funnier than traditional ads'.	emj11
12	'They are convincing in nature'.	emj12
13	'I feel that emojis ads display personalized content to me'.	emj13
14	'I find emojis ads are matched to my expectations'.	emj14
15	'I think they take my preferences into account in their ads.	emj15
16	'I find them best way of conveying their message'.	emj16
17	'I find emoji ads silly and immature'.	emj17
18	'I find them aesthetics'.	emj18
19	'I find them attractive in nature'.	emj19
20.	'I find them interesting'.	emj20

Contd...

21	'I find it relatable to corresponding ads'.	emj21
22	'I find that ads with emojis give emotional touch with respective brand'.	emj22
23	'I find ads with emojis more engaging than traditional one'.	emj23
24	'I find them creative'.	emj24
25	'I find ads with emojis more convincing than traditional one'.	emj25
26	'I find emojis ads useful'.	emj26
27	'I find that without the emojis, it is hard to express emotions using text only'.	emj27
28	'I feel curious to see emojis ads'.	emj28
29	'I find them entertaining'.	emj29
30	'I find them enjoyable'.	emj30
31	'Emojis ads are more clear than others'.	emj31

RESULTS AND FINDINGS

The results and findings of the study are given under two headings:

1. Exploratory Factor Analysis; and
2. Reliability Analysis.

1. Exploratory Factor Analysis

In order to overcome the difficulty of managing a large number of variables, factor analysis with varimax rotation was used to reduce the large number of variables into a manageable number. First of all, Kaiser-Meyer-Olkin (KMO) above 0.50 and significant Bartlett's sphericity test (BTS) were considered as indicators of suitability for using the EFA (Malhotra& Dash, 2015). Variables

were extracted by observing communalities and factor loadings above 0.50. However, significant items recording communalities above 0.30 were also considered for retention. In the study, EFA was applied on 31 items, which got completed in four iterations. In the first round, five factors with factor loadings below 0.50 were removed. In the subsequent rounds, nine factors with communalities below 0.30 are dropped. Finally, 17 items were retained. The results of the EFA take the basis of different tests, matrices, and graphs presented in this section to extract the underlying factors from the instrument.

(i) **KMO and Barlett's Test:** The adequacy of the sample size for the EFA is shown in **Table 3**.

Table 3: Results of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.768
Bartlett's Test of Sphericity	Approx. Chi-Square
	Df
	Sig.
	1274.290
	136
	0.000

As shown in the table, the value of KMO is 0.768, which is considered as large (Field, 2009, p 659). The Barlett's test value (0.000) is highly significant ($p < 0.001$), which confirms the presence of some kind of relationship between the variables, signifying that the EFA is appropriate (Field, 2009, p.600).

(ii) **Total Variance Explained:** The portion of the total variance explained under the five categories has been summarised in **Table 4**.

The first part of the table, which includes the initial Eigen value, displays the Eigen values for all the 31 items (statements) along with their respective variance percentages. According to the rule of Kaiser, five factors were retained here, having the Eigen value of more than 1 (Field, 2009). The second part of the table represents the five factors extracted in terms of the percentages of variance together with their respective values. The third and final part of the table show the effect of varimax rotation on the factors extracted. Before the rotation, it is evident that the first factor accounted

for significantly more variance than the remaining four (23.936 per cent compared to 9.658, 7.937, 7.101 and 6.516), but after rotation, it accounted for 13.663 per cent of the variance compared to 11.497, 10.762, 9.709 and 9.516 per cent respectively. Therefore, it can be stated that the rotation has the

effect of optimising the factor structure, one consequence of which is the equalization of the relative importance of the five factors. These five factors (components) accounted for 55.14 per cent of the total variance.

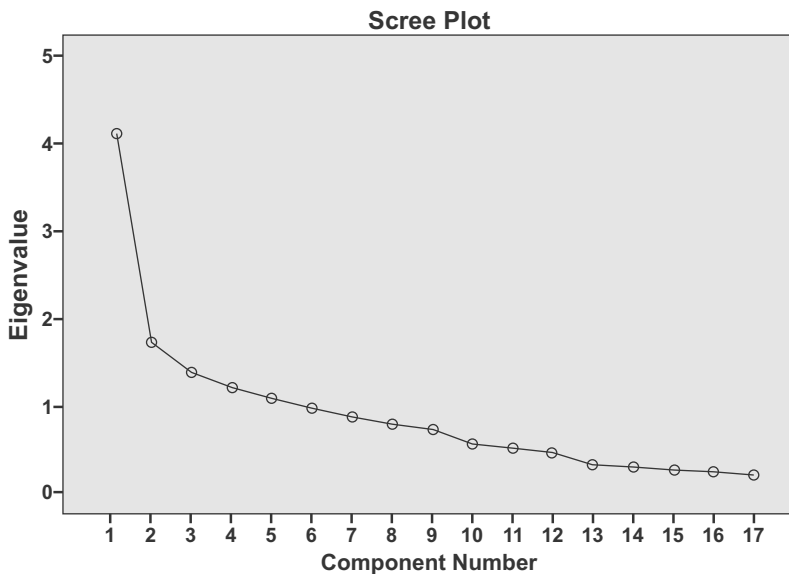
Table 4: Results of Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Rotation Total	% of Variance	Cumulative %
1	4.069	23.936	23.936	4.069	23.936	23.936	2.323	13.663	13.663
2	1.642	9.658	33.593	1.642	9.658	33.593	1.955	11.497	25.161
3	1.349	7.937	41.530	1.349	7.937	41.530	1.829	10.762	35.922
4	1.207	7.101	48.631	1.207	7.101	48.631	1.651	9.709	45.632
5	1.108	6.516	55.147	1.108	6.516	55.147	1.618	9.516	55.147
6	1.013	5.959	61.106						
7	0.928	5.460	66.566						
8	0.851	5.009	71.575						
9	0.806	4.740	76.314						
10	0.674	3.963	80.278						
11	0.630	3.705	83.983						
12	0.593	3.486	87.469						
13	0.475	2.791	90.261						
14	0.461	2.713	92.974						
15	0.417	2.453	95.427						
16	0.407	2.391	97.818						
17	0.371	2.182	100.000						

Extraction Method: Principal Component Analysis.

(iii) **Scree plot:** The process of factors-extraction, using the graphical method, is shown in **Figure 1**.

Figure 1: Scree Plot



As shown in the figure, on the sixth component, the point of inflection occurred, after which the line slope changes dramatically. The five factors extracted here are placed on the left of the point of inflection (Field 2009, p.640). Thus, the Scree plot also proves the extraction of five factors for these data.

(iv) **Rotation Component Matrix:** After applying the varimax rotation, the loadings of five

extracted factors are shown in **Table 5**.

Table 5: Results of Rotated Component Matrix^a

	Component				
	1	2	3	4	5
emj30	0.757				
emj29	0.720				
emj24	0.672				
emj26	0.628				
emj19		0.775			
emj11		0.646			
emj20		0.639			
emj22			0.763		
emj13			0.610		
emj18			0.555		
emj15			0.535		
emj5				0.751	
emj3				0.607	
emj2				0.575	
emj10					0.699
emj12					0.594
emj25					0.540

Extraction Method: *Principal Component Analysis*.
 Rotation Method: *Varimax with Kaiser Normalization*.
 a. *Rotation converged in 6 iterations.*

For the analysis, the factor loadings of over 0.50 were taken. The items that cluster on the same suggest that Component 1 represents the Entertaining (including items emj30, emj29, emj 24 and emj26). Component 2 stands for the Humorous (with items emj19, emj11, emj20), Component 3 embodies the ‘Personalised’ (items emj22, emj13, emj18 and emj15), Component 4

represents the ease of understanding (items emj3, emj2 and emj10), and Component 5 stands for the Convincing (items emj10, emj12 and emj25).

(v) **Communalities:** The values of communalities are shown in **Table 6**.

Table 6: Values of Communalities

	Initial	Extraction
emj2	1.000	0.494
emj3	1.000	0.428
emj5	1.000	0.624
emj10	1.000	0.588
emj11	1.000	0.492
emj12	1.000	0.572
emj13	1.000	0.382
emj15	1.000	0.720
emj18	1.000	0.377
emj19	1.000	0.675
emj20	1.000	0.541
emj22	1.000	0.666
emj24	1.000	0.594
emj25	1.000	0.489
emj29	1.000	0.606
emj30	1.000	0.627
emj26	1.000	0.502

Extraction Method: *Principal Component Analysis*.

As shown in the table, for all the variables the values, after extraction, is greater than the required minimum value of 0.3. Hence, the communalities also support these data.

(vi) Anti-image Correlation: The anti-image correlation is shown in **Table 7**.

Table 7: Results of Anti-image Matrix

emj2	emj3	emj5	emj10	emj11	emj12	emj13	emj15	emj18	emj19	emj20	emj22	emj24	emj25	emj29	emj30	emj26
0.809 ^a	-0.118	-0.228	-0.107	0.013	-0.112	0.008	0.043	0.055	0.045	-0.220	-0.079	0.038	0.035	-0.114	0.022	-0.162
emj3	0.716 ^a	-0.157	-0.091	-0.025	0.009	-0.051	-0.092	0.001	-0.058	0.114	-0.049	-0.155	0.105	0.028	-0.176	0.117
emj5	-0.228	-0.157	0.730 ^a	0.031	0.082	-0.201	-0.047	-0.165	-0.104	-0.115	0.103	0.058	0.125	-0.123	-0.065	0.001
emj10	-0.107	-0.091	0.031	0.709 ^a	-0.097	-0.120	0.005	0.147	-0.136	-0.014	0.072	-0.231	-0.047	-0.230	0.037	-0.057
emj11	0.013	-0.025	0.082	-0.097	0.818 ^a	-0.177	-0.044	-0.051	0.101	-0.189	-0.101	0.053	-0.096	-0.051	0.029	-0.027
emj12	-0.112	0.009	-0.201	-0.120	-0.177	0.803 ^a	-0.004	0.139	-0.022	0.026	-0.147	-0.074	-0.028	-0.061	-0.056	0.031
emj13	0.008	-0.051	-0.047	0.005	-0.044	-0.004	0.728 ^a	-0.042	-0.038	-0.024	-0.017	-0.240	0.134	-0.034	-0.037	0.045
emj15	0.043	-0.092	-0.165	0.147	-0.051	0.139	-0.042	0.614 ^a	-0.098	-0.283	-0.024	-0.302	-0.035	0.157	0.010	0.048
emj18	0.055	0.001	-0.104	-0.136	0.101	-0.022	-0.038	-0.098	0.771 ^a	-0.086	-0.138	-0.160	0.083	-0.061	0.073	-0.083
emj19	0.045	-0.058	-0.115	-0.014	-0.189	0.026	-0.024	-0.283	-0.086	0.762 ^a	-0.262	0.165	-0.059	-0.178	-0.090	0.051
emj20	-0.220	0.114	0.103	0.072	-0.101	-0.147	-0.017	-0.024	-0.138	-0.262	0.788 ^a	0.031	-0.238	0.012	-0.010	-0.117
emj22	-0.079	-0.049	0.058	-0.231	0.053	-0.074	-0.240	-0.302	-0.160	0.165	0.031	0.683 ^a	-0.078	-0.029	0.003	0.012
emj24	0.038	-0.155	0.125	-0.047	-0.096	-0.028	0.134	-0.035	0.083	-0.059	-0.238	-0.078	0.814 ^a	-0.080	-0.081	-0.148
emj25	0.035	0.105	-0.123	-0.230	-0.051	-0.061	-0.034	0.157	-0.061	-0.178	0.012	-0.029	-0.080	0.799 ^a	-0.036	-0.021
emj29	-0.114	0.028	-0.065	0.037	0.029	-0.056	-0.037	0.010	0.073	-0.090	-0.010	0.003	-0.081	-0.036	0.803 ^a	-0.433
emj30	0.022	-0.176	0.001	-0.057	-0.027	0.031	0.045	0.048	-0.083	0.051	-0.117	0.012	-0.148	-0.021	-0.433	0.782
emj26	-0.162	0.117	-0.079	0.128	-0.037	0.057	-0.066	-0.043	-0.013	-0.007	0.026	-0.138	-0.262	-0.201	-0.106	0.810 ^a

As shown in the table, the values on the diagonals of the anti-image correlation (greater than 0.5), also confirm the validity of all the statements (variables).

1. Reliability Analysis

The five extracted factors, viz., entertaining, humorous, personalised, ease of understanding and convincing are used as sub-scale of usage of emojis in social media marketing. Cronbach's alpha values were calculated for each sub - scale, and finally for the entire emojis usage model as a whole.

Entertaining: This consists of total four statements (variables) and for this dimension the Cronbach's alpha is 0.722. A minimum value of 0.7 is considered suitable for Cronbach's alpha in social sciences, whereas the higher values showed good reliability of the scale (Field, 2009), so the entertaining dimension is highly reliable.

(i) Humorous: This includes three statements (variables) and the corresponding alpha value is 0.620, showing moderate reliability of the scale (Hilton, McMurray, & Brownlow, 2014).

(ii) Personalised: This has three statements and for this construct, the value of Cronbach's alpha is 0.561. Thus, acceptable reliability is assured for this construct too (Hilton et al., 2014).

(iii) Ease of understanding: This has three statements and for this construct, the value of Cronbach's alpha is 0.523., again indicating moderate reliability of the construct.

(iv) Convincing: This includes three statements (variables) and 0.540 is the corresponding alpha value, again indicating moderate scale reliability.

(v) Usage of Emojis: The Cronbach's alpha value for all 17 statements in the emoji usage scale is 0.792, indicating an overall good reliability of the whole instrument, taken as a whole.

Hence, after applying the EFA and the reliability analyses, it is confirmed that the emojis instrument is valid and reliable with 17 statements and five dimensions (sub-scale). Finally, it is found that the proposed emojis usage model is fit and suitable for further application. Moreover, 'entertainment' is also proven to be the most important attribute of emoji use, followed by humour, personalisation, conviction, and ease of understanding.

Abridged EFA Results for the Emojis Usage Scale

In order to have glance of the extraction of the five dimensions of the newly developed emojis model, the EFA results are summarized in **Table 8**. The

table contains the results of the rotated factor loadings, Eigen values, percentages of variance (before and after rotation) and Cronbach's alpha values for the five extracted factors (sub-scales).

It is evident from the table that the five factors that have emerged from the EFA are entertaining, humorous, personalised, and easy to understand,

and convincing. Likewise, these five factors extracted (sub-scales) maintain acceptable reliability with Cronbach's alpha values, respectively. Moreover, the overall reliability of the entire instrument is high. Hence, the analysis confirms the high validity and reliability of this model.

Table 8: Summary of the EFA Results for the Emoji Usage in Social Media Marketing

Items	Rotated Factor Loadings				
	Entertaining	Humorous	Personalised	Ease of understanding	Convincing
emj30	0.757				
emj29	0.720				
emj24	0.672				
emj26	0.628				
emj19		0.775			
emj11		0.646			
emj20		0.639			
emj22			0.763		
emj13			0.610		
emj18			0.555		
emj15			0.535		
emj5				0.751	
emj3				0.607	
emj2				0.575	
emj10					0.699
emj12					0.594
emj25					0.540
Eigen values	4.069	1.642	1.349	1.207	1.108
% of Variance (before rotation)	23.936	9.658	7.937	7.101	6.516
% of Variance (before rotation)	13.663	11.497	10.762	9.709	9.516
Alpha	0.722	0.620	0.561	0.523	0.540

Table 9: Final Statements after EFA

	Statements	Code
1	'It helps me more accurately express what I am thinking'.	emj2
2	'It makes it easy for me to understand marketing ads/messages'.	emj3
3	'Emojis are a better fit than words in marketing ads'.	emj5
4	'It allows quick information about the content'.	emj10
5	'It is funnier than traditional ads'.	emj11
6	'They are convincing in nature'.	emj12
7	'I feel that emojis ads display personalized content to me'.	emj13
8	'I think they take my preferences into account in their ads'.	emj15
9	'I find them aesthetic'.	emj18
10	'I find them attractive in nature'.	emj19
11	'I find them interesting'.	emj20
12	'I find that ads with emojis give emotional touch with respective brand'.	emj22

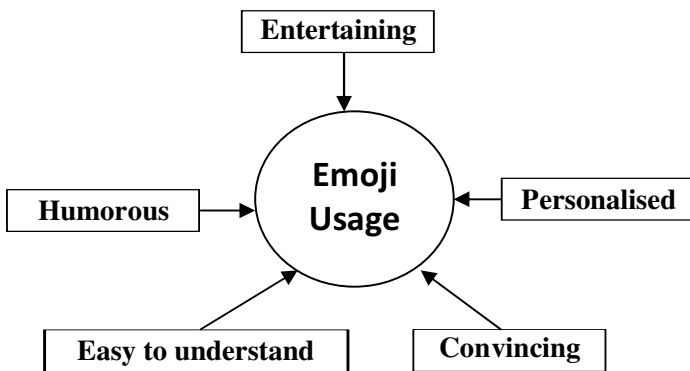
Contd...

13	'I find them creative'.	emj24
14	'I find ads with emojis more convincing than traditional one'.	emj25
15	'I find emojis ads useful'.	emj26
16	'I find them entertaining'.	emj29
17	'I find them enjoyable'.	emj30

The Proposed Model of the Study

On the bases of analyses carried out, five constructs, namely entertaining, humorous, personalised, ease to understand and convincing represent the usage model of emojis. This model symbolizes a holistic approach to the concept of usage of emojis. The entertaining element of emojis, humorous way of conveying any message, personalised way of connecting with consumers, easiest way of understanding any marketing message and convincing power of emojis are the five components of usage of emojis in social media marketing noted in the present study. **Figure 2** demonstrates the proposed model of the study.

Figure 2
The Proposed Model of usage of Emojis in Social-Media Marketing



CONCLUSION AND POLICY IMPLICATIONS

To sum up, both the analyses - EFA and Cronbach's alpha- reveal five underlying scales in the tested instrument. The EFA was performed with orthogonal rotation (varimax) on 31 items (statements). In addition, the adequacy tests, Eigen values, communalities, anti-image correlation, and Scree plot checked the extraction of the five

components (factors). It can also be concluded that this instrument, which includes 31 statements, requires 14 items to be removed and has been fully validated for further application.

The study and its findings have considerable implications for marketers and various business firms which makes use of social media. Emoji has emerged as the new language of marketing in last few years. Using emojis in social media marketing offers diverse benefits to advertisers and marketers. Firstly, emojis are an effective form of non-communication that enables the convenience and efficiency of digital communication while linking the human emotion articulated in the off-line world. Secondly, it helps in improving customer retention as it provides range of personalised features which can communicate very well through live chat, social media, etc. Thirdly, through using emojis in marketing practices, marketer can make message more convincing, entertaining and easy to understand for the audiences. Finally, the fun-factor of using emojis makes the customer experience more enjoyable and helps in keeping customer engaged with message. In a nutshell, the present study endeavours to build up usage model of emojis in social media marketing, which may be adopted by marketers, researchers and academicians in their respective fields. The model will encourage the marketers/ advertisers to reach out existing and potential consumers in an effective manner through recognising, investigating and understanding the diverse usage dimensions of emojis.

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DOCTORS' PERCEPTION OF TOC AND ORGANISATION'S PERFORMANCE

An Exploratory Study in a Hospital

Hardeep Chahal* and Fayza Chowdhary**

Abstract

Purpose: *The study seeks to measure the doctors' perception of the Theory of Constraints (TOC) in enhancing the organisational performance through managing a hospital's constraints.*

Research Design/Methodology/Approach: *Qualitative data was collected from patients and doctors. At the outset, the data was collected from 30 ASCOMS outdoor patients to identify the constraints that impact healthcare service quality. Later, multiple rounds of discussions with selected academicians and medical practitioners were conducted to design an interview schedule. The final data was collected through an in-depth interview, using the structured interview schedule from ten doctors of the hospital.*

Findings: *The study led to the identification of waiting line as a problem and the shortage of human resources as a constraint, impacting service quality and organisational performance of the hospital. The study revealed a moderate level of the TOC orientation (TOCO) among the doctors of the hospital.*

Originality/Value: *This study is different from others as it seeks to measure TOCO-WL from the doctors' perspective in managing the constraint and its related problems. The philosophy of being rational, logical, and having involvement of all levels of employees, paves the way to achieve the organisational goal with optimum utilisation of resources.*

Policy Implications: *In order to get the best results, the management must ensure the theoretical and practical knowledge of TOC (mindset, measurement and methodology) and its careful application and monitoring in the organisation.*

Limitations: *Being exploratory in nature, the study is based on a small sample and that too in a non-TOC organisation. However, it paves the way for the measurement and validation of the TOCO-WL scale in the future.*

Key words: *Theory of Constraints, Hospital, Doctors' perception, Mindset, Measurement, Methodology, Organisational performance*

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INTRODUCTION

Healthcare sector is facing major challenges and is under an increasing pressure to achieve an optimum balance between quality healthcare services, cost efficiency, and effectiveness (Matopoulos & Michailidou 2013 and Lee *et al.*, 2011). Amidst other factors, bottleneck is considered as one of the critical factors that impacts productivity vis-à-vis service quality and cost. Lack of synchronisation among varied operational stages in a process is considered as a root cause of bottlenecks affecting organisational productivity. For example, surgeons and theatre staff may not be able to operate as all beds have been filled with patients admitted unnecessarily (Knight, 2011).

In operations management (OM) literature, various industrial methodologies have been crystallised into several distinct philosophies- Lean thinking, TQM, Kaizen, Value stream mapping, etc., for controlling bottleneck to deliver better quality at rational cost. One amongst these philosophies is the 'Theory of Constraint' (TOC). The TOC provides a systematic direction in managing constraints in the organisations while simultaneously focusing on employees, processes, and performance measurements to enhance organisational performance. Being an upcoming OM philosophy, TOC focuses on triple organisational dimensions that include employees' mindset, work-flow process, and organisational performance indicators.

Many scholars, including Gupta *et al.* (2013), Gupta & Cox (2012), Gupta *et al.* (2010), Gupta and Boyd (2008), Moss (2007) and Boyd and Gupta (2004) have considered mindset, methodology and measurement (3M's) to represent the tenet of TOC. Although there is a plethora of literature on the TOC and its impact on business performance empirical research that measures 3Ms and their impact on organisational performance is quite thin, primarily because of the lack of psychometrically-developed scale (Sahi *et al.* 2016 and Gupta *et al.*, 2013).

In the context to the healthcare sector, Knight (2011) noted the positive impact of the TOC on organisational performance. He noted that utilisation of bottleneck impacts the overall productivity and that too without compromising the quality of care or making staff work harder. Similarly, Lubitsh *et al.* (2005) established a positive impact of the TOC on waiting lists and patient throughput. They observed that the TOC can customise local needs and conditions so that ownership of change initiative can be promoted. Therefore, the TOC has the potential to affect system-wide changes rather than local efficiencies, as all stakeholders are engaged in identifying both problems and their solutions. Though Lubitsh *et al.* (2005) conducted a long-term study to measure the impact of the TOC on National Health Scheme performance using real parameters, but it did not focus on the measurement of TOC. Similarly, a recent study by Sahi *et al.*, (2016) on the development of the throughput orientation (TO), which represent a systematic approach to implement and realise the benefits of TOC, but follows a narrow approach to develop 3Ms items, and that too particularly for methodology and measurement dimensions. And secondly, the study is conducted in banking context and, hence, the TO scale used in this study is not appropriate to measure the TOC orientation in the healthcare sector.

Thus, this study is intended to contribute to management literature from two perspectives. First, being an exploratory study, it provides a platform to understand the application of the TOC in the context of healthcare settings. Second, researchers such as Narasimhan (2014) and Anderson *et al.* (1989) have suggested that research efforts should be focused on developing empirically grounded and testable theories in OM. Hence, our research paves the way to the development of the TOC.

REVIEW OF LITERATURE

Theory of Constraints (TOC)

TOC is a systematic theory based upon

identification and management of organisational constraints (Goldratt & Cox, 1993, and Goldratt & Cox, 1984). It emphasises the importance of improving system performance through smarter utilisation of existing resources, especially by exploiting the bottleneck before increasing the system's capacity. This theory specifically focuses upon achieving the financial goal of making money now and in the future (Goldratt, 1994). A number of articles on TOC are available, ranging from seminal work proposing an initial domain and specific dimensions (Spencer & Cox, 1995 and Goldratt 1987) to review of literature (Kim *et al.*, 2008) to real case studies (Gupta, Boyd & Sussman, 2004) to hypothetical studies (Gupta *et al.*, 2013) and to empirical studies (Sahi *et al.*, 2016 and Taylor & Churchwell, 2004). Most of the studies, including, Taylor & Sheffield (2002), Hunink (2001), and Womack & Flowers (1999), have applied TOC's five focusing steps (FFS) and Thinking process (TP) tools in managing organisational constraints to achieve financial goals in the manufacturing sector.

A few studies, such as Sahi *et al.*, 2016 and Gupta *et al.*, 2013 (banks), Kohli & Gupta, 2010 (small business), Eden & Ronen, 1993 (insurance) have applied the TOC to measure its impact on financial performance of service organisations. Scholars have also extended its scope to include non-financial goals. For instance, studies, such as Groop *et al.* (2010), Straton & Knight (2010), Sadat (2009), Gupta & Kline (2008), Schaefers *et al.* (2007), Lubitsh *et al.* (2005) etc. have measured TOC impact on non-financial performance measures, like service quality and satisfaction. However, these researchers have also used other TOC tools like buffer management (BM), process of on-going improvement (POOGI), and the FFS to

achieve non-financial goals.

The literature is not rife with attempts to theory development process. Boyd & Gupta (2004) initiated and made consistent efforts to contribute towards the theory development process. They have simplified the TOC implementation by introducing the 3Ms namely, mindset, measurement, and methodology. They argued that every organisation's performance is limited due to the resource or policy or market constraints, which can be managed by implementing a change process at three levels of mindset of the organisation, measure that derive the organisation, and the methodology applied within the organisation. These three M's can be considered as the vital components of the TOC for constraint identification and management in achieving organisational performance (Boyd & Gupta, 2004). Later, Gupta *et al.* (2013) used the throughput world-thinking (TWT) terminology reflecting the TOC mindset, measurement and methodology. They observed that the TWT ensures that all departments work together as a whole unit to optimise the system constraint(s) prevailing in the company. This subsequently help in achieving organisational goal to make money without violating necessary conditions (satisfying market needs and providing a satisfying work environment to employees now and in the future)" (p. 5). The concept was further examined by Sahi *et al.* (2017), who have empirically measured 3Ms and named it as throughput orientation (TO) scale in the banking sector. The relevant literature on mindset, measurement and methodology is discussed here. A summary of the 3Ms used by scholars in different manufacturing and service sectors is given in **Table 1**.

Table1: Summary of Selected Studies on TOC

GOAL/MINDSET	
Manufacturing Sector	Service Sector
Apolloni <i>et al.</i> , (2003) To evaluate the suitability of the loading/unloading system of the bottleneck.	Wadhwa (2010) To increase the percentage stock of the healthy population.

Contd...

Smith and Pretorius (2010) To maximise profit.	Sadat (2009) To increase the quality and quantity of lives both now and in the future.
Scoggin <i>et al.</i> (2003) To design and produce good quality and quantity of generators.	Gupta and Kline (2008) To make money now and in the future.
Gupta (2001) To increase throughput.	McNutt and Odwazny (2004) Providing safe-care while thinking of money only as an operating expense-something to be reduced.
Garrison & Mitchell (1997) To increase productivity.	Breen <i>et al.</i> (2002) To provide quality healthcare to a particular population now and in the future.
Gardiner and Blackstone (1991) To maximise the long-run profit.	Hunik (2001) To maximise life expectancy and quality of life at an acceptable cost to society.
Manufacturing sector/Financial measurement	Service sector/Non-financial measurement
Finch & Luebbe (1995) Net Profit= Throughput- Operating expenses Inventory turns=Throughput / Inventory Productivity= Throughput/ Operating expenses.	Groop (2012) Throughput=Service time, the time spent interacting with customers creation of health outcomes Inventory=All the time not spent producing throughput Operating Expenses=Total cost of the system.
Gupta <i>et al.</i> (2010), Gupta & Boyd (2008) and Gupta (2003) Net Profit= Throughput- Operating expenses Return on Investment= Throughput- Operating expenses/inventory Productivity= Throughput/ Operating expenses Turnover= Throughput/Inventory.	Knight (2011) Throughput=In healthcare the goal is not, simply to make money as in business, but to provide affordable, high quality and timely care. Wadhwa (2010) Throughput =Number of patients treated or the hours of service provided. Sadat (2009) Throughput=Total QALY gained Operating Expenses = Total QALYs wasted. Inventory= Total quality adjusted-time invested in health (QALY=Quality adjusted life year) Breen <i>et al.</i> (2002) Throughput= Difference in goal units before and after an intervention. Inventory=The goal units absorbed by the system.
Manufacturing sector	Service sector
Gupta <i>et al.</i> (2013) and Gupta (2001) FFS	Sadat (2009) FFS and DBR
Gupta <i>et al.</i> (2002) FFS & BM	Groop <i>et al.</i> (2010) and Gupta & Kline (2008) POOGI
Mabinet <i>al.</i> (2006) and Scoggin <i>et al.</i> (2003) TP	Straton&Knight(2010) BM
Straton & Knight (2010) BM	Reid (2007), Lubitsh <i>et al.</i> (2005), Silvester (2004), Womack & Flowers (1999) and Motwani&Vogelsang (1996) FFS

*FFS-Five focusing steps, BM= Buffer management, TP= Thinking process, POOGI= Process of ongoing improvement, DBR= Drum buffer management

Mindset

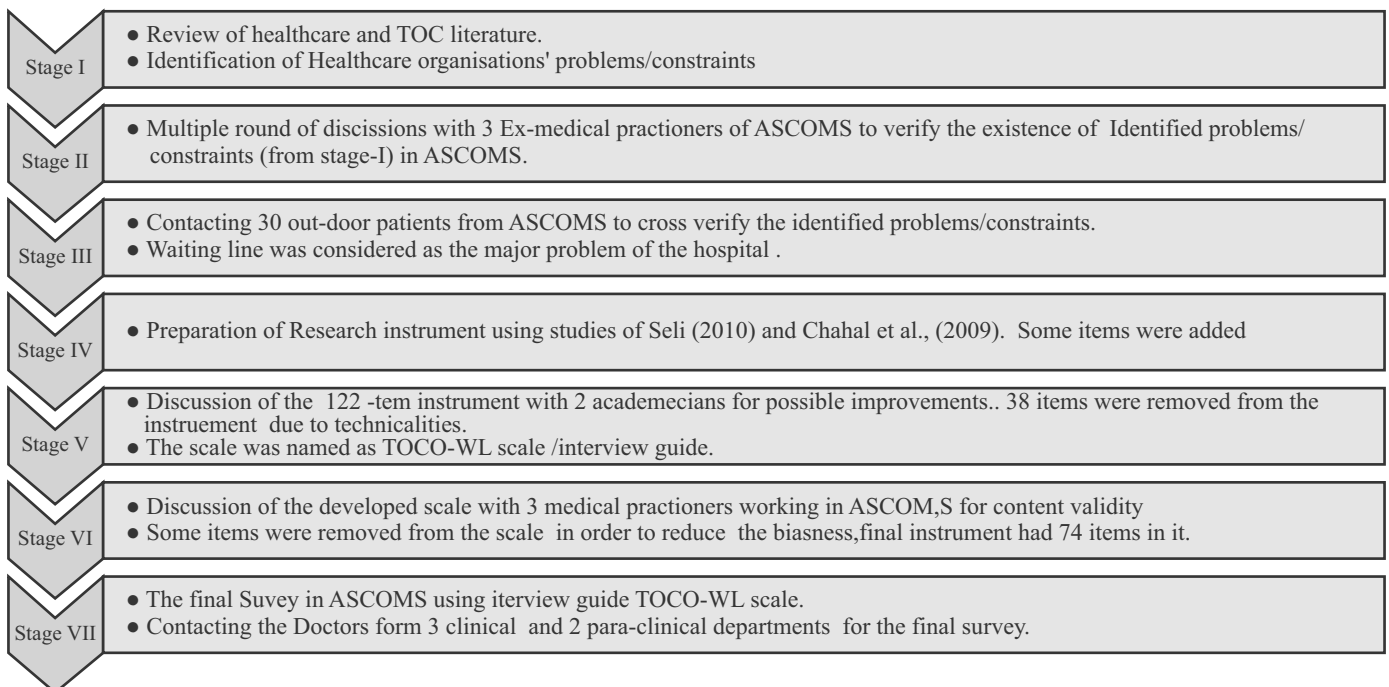
According to Goldratt (1994) the mindset dimension (the first M) comprises of positive attitude of the employees towards organisational goal. The positive mindset is built only when employees feel satisfied and secured (Apolloni *et al.*, 2003; Gupta, 2001; Scoggin *et al.* 2003; Finch & Luebbe, 1995). Studies, namely, Gupta *et al.* (2013), Gupta *et al.* (2010), Gupta & Kline (2008), and Boyd & Gupta (2004) considered mindset in terms of two necessary conditions: (1) providing safe and secure environment to the employees for today and future; and (2) satisfying the present and future market needs of today and future. Sahi *et al.* (2016) empirically measured the mindset in banking sector, using items related to job security, and customer satisfaction, customer value.

Methodology

The methodology (the second M) of managing constraint given by Goldratt is widely accepted in the OM literature. Goldratt (2009, 2008, 1994 and 1984) has focused on buffer management, five focusing steps (FFS), process of ongoing

improvement and thinking process tools to manage constraints systematically. These tools have been actively used by various researchers in manufacturing (Gupta *et al.*, 2013; Gupta & Cox, 2012; Gupta *et al.*, 2010; Pass & Ronen, 2003 ; Chakraborty, 2001;Gupta, 2001; and Schmenner,1986), and service (Groop *et al.*, 2010; Straton & Knight, 2010; Sadat, 2009; Gupta & Kline, 2008, Reid, 2007; Lubitsh *et al.*, 2005; Taylor & Sheffield, 2002; Hunink , 2001; Womack & Flowers, 1999, etc.) sectors. Researchers like Kohli & Gupta (2010) and Gupta *et al.*, (2002) Sadat (2009), Lubitsh *et al.* (2005), Silvester *et al.* (2004) etc., have exclusively used FFS tool in their studies to identify and manage organisational constraints, and concluded that the FFS successfully reduces the impact of identified constraints. All researchers have unanimously accepted the applicability of the FFS in constraint identification and management. The FFS comprises of five steps related to constraint identification, exploitation, subordination, elevation and inertia. The brief meaning of the FFS is given in **Figure1**.

Figure 1: Methodology of the Study



Goldratt (1990) argues that every business unit has at least one constraint and, at most, a few, physical (i.e., shortage of staff) or non-physical (i.e. a policy/procedure, demand) constraints. Further, to exploit the constraint and to subordinate it with non-constraint departments, he also observed that strategical and tactical decisions should be made across functional areas. Following this step, organisation can also invest elevation to manage the constraint further and eliminate it ultimately. Once the constraint is elevated, the process starts again with the identification of a new constraint. Details on application of TOC tools are given by Stratton & Knight (2010) and Watson & Toni (2003).

Measurement

Goldartt (1994) and Goldratt & Cox (1993) suggested three performance measurement indicators (the third M) which include the throughput (rate at which the system generates money through sales), inventory (all the money invested in purchasing the goods the system intends to sell), and the operating expenses (all the money the system spends in turning inventory into throughput). Gupta *et al.* (2010); Gupta & Boyd (2008); Gupta (2003) and Finch & Luebbe (1995) measured organisational performance using aforesaid three measurement indicators in the manufacturing sector from the financial perspective, while the researchers like Groop (2012); Sadat (2009) and Schaefers *et al.*, (2007) have used these measures from the non-financial perspective in the service sector to measure the organisational performance. However Knight (2011) sought to define the measurements (throughput), from both the financial and the non-financial perspectives, in the healthcare sector. While the financial perspective focuses upon generating more goal (making more money now and in the future) units whereas the non-financial perspective reflects affordable, high quality, and timely care.

Among the various studies conducted from the non-financial perspective, the measurement

indicators used by Knight (2011) are more appropriate for perception-based research. Recently, Sahi *et al.* (2016) has developed the TO scale in which the measurement dimension has been dealt from the financial perspective using subjective parameters.

Research Context

This study examines the TOC orientation from doctors' perspective in a private hospital, Acharya Sri Chander College of Medical Sciences (ASCOMS) of Jammu city in North India. It is the state's biggest private hospital established in the year 1994 in order to provide the best medical services to the people of the state. The hospital has the capacity of 507 beds and provides clinical and specialised medical services. The hospital is also running a medical college having teaching faculty of 45 professors, 22 associate professors, 45 lecturers and assistant professors, 30 senior residents and 103 junior residents and tutors. The non-teaching staff comprised of 674 para-clinical staff, 72 menial staff and 35 security guards. The total man power of ASCOMS consisted of 781 employees.

ASCOMS is well- equipped with all the state-of-art medical technology, but still it is facing severe service quality issues relating to hygiene, costs, waiting line, etc. Such issues are also recognised in the healthcare literature, for instance Chahal & Kumari (2012) conducted a study in the same hospital to understand the patients' perception with respect to the hospital's functional, affective and social dimensions. The study observed that healthcare providers should focus on the hospital's hygiene, quality of treatment, good human resource and cost of services in order to enhance the service quality of the hospital. In addition to the internal factors, consistent growth in the number of private healthcare organisations also adds to the service quality and organisation performance issues. Further, as observed and discussed with the healthcare stakeholders, ASCOMS needs to strengthen its image with respect to service quality.

Hence, TOC-based initiatives can help ASCOMS to deliver quality services (goal) by overcoming organisational constraints.

OBJECTIVES OF THE STUDY

The major objective of the study is to assess the doctors' perception towards the TOC philosophy (mindset, measurement and methodology) in enhancing the organisational performance through managing the hospital's constraints. In order to accomplish the objective, three research questions (RQs) related to the 3Ms of TOC, namely, the mindset, measurement and the methodology are sought to be answered:

- RQ 1: Do employees hold a positive mindset towards the organisation?
- RQ 2: Does TOC-based methodology influence doctors in their decision-making?
- RQ 3: Are TOC measurements useful in judging the organisational performance?

RESEARCH METHODOLOGY

The present study is exploratory and qualitative in nature and seeks to measure doctors' perception of TOC philosophy in enhancing service quality and organisational performance in a hospital. The study was conducted in seven stages (**Figure 1**).

The first stage comprised constraint identification, followed by discussions with medical practitioners. The next stage comprised confirmation of the constraint identified, which was done by interviewing out-door patients of the hospital. At the subsequent stage, a scale was prepared keeping in view the identified constraint. In the final stage, TOC scale was used to analyse the perception of doctors for constraint management.

Stage I

At the first stage, the existing literature was reviewed to analyse the major issues of the healthcare sector. Majority of the studies found patient flow as one of the major problems affecting service quality. Stratton and Knight, (2010) found faulty patient flow, particularly during accidents and emergencies, as a vital cause behind the poor performance of hospitals. Groop *et al.* (2010) identified peak time as a constraint in a public hospital leading to inefficient process management. Sadat (2009) and Lubitsh *et al.* (2005) found huge waiting lines as a major problem in hospitals. Similarly, Taylor & Churchwell (2004) identified reduced funds as a core problem in a psychiatry hospital. Based upon review of literature, major constraints identified in the hospitals were related to patient flow, waiting time, sanitation & hygiene and deficient funds, which negatively impact service quality of the hospitals.

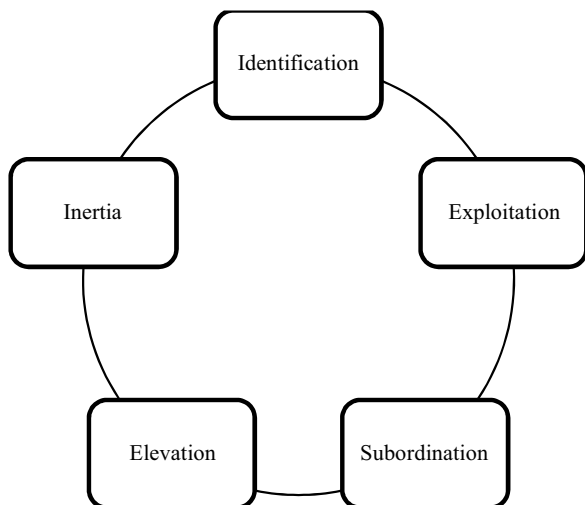
Stage II

At the second stage discussions with three medical practitioners were carried out to select the most critical constraint out of the identified constraints in the previous stage. Medical practitioners having knowledge of the ASCOMS were selected for interviewing in this stage. After multiple rounds of discussions with doctors, waiting line was found to be the major constraint in the hospital which hampers service quality and its performance.

Stage III

At the third stage, using purposive sampling 30 outdoor patients (i.e. patients who were visiting the hospital for examination and prescription but were

Figure 2: Five Focusing Steps (FFS)



not hospitalised) were contacted to cross verify the problem identified by the medical practitioners (done in stage -II). Patients, who were visiting the hospital for last two years, were selected and each patient was interacted for 5-10 minutes. Patients were asked to give their opinion on the ASCOMS hospital's waiting line issue. The respondents' responses were recorded in an I-pod for content analysis and interpretation. Out of thirty patients, twenty two (73.33%) remarked that waiting line is

the major issue in hospital, which needs to be addressed to improve service quality of the hospital. The comprehensive patient responses are given in **Table 2**. The respondents also remarked that lack of skilled staff, absence of queue system, shortage of consultation rooms etc. are some major reasons behind waiting line problem and in TOC language, these are referred as 'resource constraint'.

Table 2: Out-Patient Response to Healthcare Problems

S.N.O.	Constraint	Response (%)	Reasons Behind the Constraints
1	Waiting Line	73.33%	Shortage of staff, Lack of skilled staff, absence of queue management, few consultation rooms, OPD starts late, lack of waiting area, frequent breaks and preference to influential patients.
2	Sanitation & Hygiene	10%	Washrooms and wards not maintained.
3	Location	6.67%	Hospital situated in outskirts of the city and transportation problem.
4	Behaviour	6.67%	Supporting staff and nurses/SSN are rude.
5	Cost	3.33%	Diagnostic tests are expensive.

*OPD: Out-patient department

Stage IV

At the fourth stage a TOC instrument was prepared to generate information pertaining to the service quality of the hospital by focusing on the waiting line problem. The instrument was prepared on the basis of literature reviewed on TOC and interviews carried out with outdoor patients (stage -III). Later discussions were held with the doctors for confirming content validity of the interview guide. Specifically, modified items from Sahi *et al.*, (2016), Seli (2010) and Chahal *et al.*, (2009) for mindset; for measurement Chahal *et al.*, (2009) and Seli (2010) for methodology were taken. In addition self developed items were also used in the three dimensions. This process resulted in 30 items for mindset, comprising 20 items related to doctors and 10 items related to the supporting staff and nurses (SSN). Measurement dimension comprised of 21 items related to throughput and 10 items each for inventory and operating expenses. Methodology items were spread across four sub-dimensions namely, identification (15), exploitation (19), subordination (17) and elevation (20).

Stage V

At the fifth stage, developed instrument with total 122 items was discussed with two academicians for further improvements. As a result 38 items were deleted (i.e. 7, 10 and 22 items from mindset, methodology and measurement respectively). The items were deleted to avoid biasness of the respondents. The interview guide so finalised was given a name Theory of Constraints Orientation-Waiting Line Guide (*TOCO-WL*).

Stage VI

At this stage, the interview guide was discussed with three medical practitioners working in the ASCOMS hospital for the past fifteen years. The medical practitioners reviewed the interview guide thoroughly and suggested to remove few items pertaining to SSN under mindset and items related to the financial statement's transparency, funds usage etc. under measurement; reason being beyond the scope of doctors' knowledge. After bringing the above modifications the interview guide (*TOCO-WL*) was finalised for the final data

collection. The interview guide comprised of 74 items spread over mindset with 6 items, methodology with 49 items and measurement with 19 items. Each statement was anchored with 5 as strongly agree, 4 as agree, 3 as neutral, 2 as disagree and 1 as strongly disagree.

Stage VII

In this stage, final interview was carried out with the help of the interview guide, i.e., *TOCO-WL*. The data were collected from the doctors of five departments' comprising 3 clinical (Gynaecology, Medicine and Paediatrics) and 2 para-clinical (Pathology and Radiology). Para-clinical departments were included in the study in order to understand the inter-departmental relationship. From each department one senior doctor and one junior doctor were selected on the basis of convenience sampling to gather the data. In all, 10 doctors were interviewed and the time spent with each respondent ranged from 30 to 45 minutes. The

interviews were conducted within the hospital premises in the month of April, 2015. The anonymity of the doctors was given prime consideration.

RESULTS AND FINDINGS

The filled-in structured interview guides were the transcript for the present study. Being qualitative study, the results were interpreted on the basis of the mean score and t-test. While analysing the results, due consideration was given to the responses of the doctors from both the clinical and the para-clinical departments. The results are discussed below:

Mindset

The overall analysis reveals a positive mindset of the doctors towards the organisation (See **Table 3**).

Table 3: Mean Perception of Doctors in Clinical and Para-Clinical Departments for Mindset Dimension

S.N.O.	Item	CLM	PCLM	GM	t-value	(Sig. 1-tailed)
1	You are satisfied with your job at present.	3.66	3.50	3.58	3.16	0.002
2	You feel job security at present.	3.83	4.25	4.04	5.00	0
3	You feel job security in the near future.	3.16	4.75	3.95	0.237	0.06
4	Working environment of the organisation is satisfactory.	3.50	3.75	3.62	0.745	0.08
5	Incentives received by you from the organisation are satisfactory.	3.66	3.50	3.58	1.19	0.07
6	Promotional and career advancement avenues for the doctors are limited.	3.83	3.25	3.54	2.07	0.040
Total (Average Mean)		3.60	3.83	3.71	2.06	0.044

* CLM= Clinical Mean, PCLM= Para-Clinical Mean, GM = Grand Mean, t-value as 3 (p=0.000)

Specifically, present job security (Mean=4.04), job satisfaction (Mean=3.58), and career advancement avenues (Mean=3.54) were contributing to the positive mindset of the doctors. The results showed a very thin line of difference between the perceptions of the doctors from clinical and para-clinical departments. The mean values of doctors' response for future job security (Mean=3.95), satisfactory working environment (Mean=3.62) and satisfactory incentives (Mean=3.58) were insignificant at 95% level. The grand mean value (Mean=3.71), t-value (2.06) and p-value (0.044) reveal positive mindset of the doctors towards the

hospital. This subsequently reflects the presence of moderate TOC mindset among the doctors.

Methodology (FFS)

The doctors' perception of the TOC methodology is discussed under following four heads:

a. Identification

The final results (stage-VII) reveal presence of waiting-line problem in the hospital (**Table 4**).

Table 4: Mean Perception of Doctors of Clinical and Para-Clinical Departments for Methodology Dimension

S.No.	Methodology	CLM	PCLM	GM	t-value	(Sig. 1-tailed)
I.	Identification	4.16	4.00	4.07	6.66	0.0002
II.	Exploitation					
	Team Spirit (Scenario 1)	3.55	3.88	3.71	3.49	0.033
	Optimum Resource Utilisation (Scenario 2)	3.46	3.3	3.38	1.62	0.146
	Training & Orientation (Scenario 3)	3.49	3.41	3.45	2.38	0.0771
III.	Subordination					
	Cohesiveness	3.63	3.61	3.62	3.77	0.049
IV.	Elevation					
	Tactical Elevation	3.92	3.7	3.81	6.04	0.0025
	Strategical Elevation	3.605	3.58	3.59	3.405	0.033125
	Total (Average Mean)	3.67	3.63	3.65	3.84	0.0467

*CLM: Clinical Mean, PCLM: Para-Clinical Mean, GM: Grand Mean, t-value as 3 (p=0.000)

The doctors' responses highlight the presence of severe waiting line problem in the hospital and that too particularly in clinical (Mean=4.12) rather than para-clinical departments (Mean= 3.83). Shortage of staff i.e. doctors (Mean=4.37) and SSN (Mean=4.16), is the identified constraint and the major reason behind waiting line problem. This is also supported by the fact that hospital has no deficiency of machinery and equipments (Mean=3.91) as revealed by the doctors. Thus in order to achieve hospital's goal (service quality and organisational performance) it is imperative to minimize the impact of this identified constraint, which according to TOC literature is known as resource constraint.

b. Exploitation

To overcome the impact of shortage of staff, three intra-departmental scenarios are identified through interviews and discussions with the doctors, SSN and patients that include team spirit, informal trainings & orientation, and optimum resource utilisation. Team spirit scenario was most preferred by the doctors (Mean=3.71) followed by training & orientation scenario (Mean=3.45,) and optimum resource scenario (Mean=3.38). Further, results reveal that encouragement (Mean=4.29), cooperation (Mean=4.20) and presence of team spirit at all levels (Mean=4.00) in the department can overcome the waiting line problem upto a certain extent. However, the training and orientation scenario and optimum resource

scenario have recorded insignificant response of the doctors as shown in **Table 4**.

c. Subordination

The next stage focuses on inter-departmental cohesiveness which covers the broader perspective that is coordination among different departments of the hospital (Table 4). The doctors' perception reveal that waiting line problem is due to lack of coordination between the clinical and para-clinical departments (Mean=4.20). Inadequate level of team spirit (Mean=2.87) further aggravates the waiting line problem. To overcome waiting line problem doctors perceive that number of coordinated inter departmental activities must be carried out (Mean=3.95) in the hospital. The TOC literature also reveals that cohesiveness is one of the important TOC parameters for the organisational success. The study results also support that by encouraging coordinated inter departmental activities the performance of the hospital as a whole can be enhanced (Mean=3.62).

d. Elevation

The TOC literature discusses elevation stage from financial perspective, unlike previous stages which considered non-financial strategies to reduce waiting line problem. The impact of short term and long term investments using two scenarios namely, tactical elevation (Mean=3.81) and strategical elevation (Mean=3.59), in overcoming waiting line

problem was discussed with the doctors as shown in Table 4. Tactical elevation emphasise upon short term investments in the form of overtime, increased incentives, outsourcing of staff etc. whereas strategical elevation refers to capital investment in the form of recruitments, new state of art equipments etc. The study results signify that tactical elevation plays a vital role in minimising the waiting line problem. Specifically, overtime (Mean=4.20), outsourcing of some services (Mean=3.83) and hiking the incentives of employees (Mean=3.45) are some effective elevation measures to reduce the impact of shortage of doctors. For strategically elevation doctors suggested appointments of more members of staff (Mean=2.37), investment in new technologies (Mean=3.79) etc. can further reduce the waiting line problem.

Measurement

Throughput, inventory and operating expenses, the three performance indicators of the TOC theory are

used by various scholars to measure business performance in manufacturing organisations from the TOC perspective. However, Knight (2011) and Breen *et al.*, (2002) remarked that these three performance indicators can also be conceptualised according to the nature of organisation. Akin to studies such as Wadhwa (2010) and Knight (2011), the present study has considered above mentioned performance indicators from non-financial perspective. The results reveal that the service quality parameters such as well-maintained atmosphere (Mean=4.20), social commitment (Mean=4.10), good image (Mean=4.00), and meeting employees expectations (Mean=3.40 and 3.70) have positive impact on the organisational performance (i.e. throughput) of the hospital. Further, the other two TOC performance indicators that are: operating expenses (Mean=3.71) and inventory (Mean=3.6), reflects moderate use of organisational resources (Table 5).

Table 5: Mean Perception of Doctors of Clinical and Para-Clinical Departments for Measurement Dimension

S.N.O.	Item	CLM	PCLM	GM	t-value	(Sig. 1-tailed)
I.	Throughput					
1	'Internal atmosphere is well maintained.'	4.33	4.00	4.20	9.000	0
2	'Hospital has good impression of its services on other patients.'	4.33	3.50	4.00	3.873	0.002
3	'Hospital fulfills societal commitment effectively.'	4.00	4.25	4.10	3.973	0.0015
4	'Your expectations are fully met with regard to the SSN.'	3.33	3.50	3.40	2.44	0.185
5	'Your expectations are fully met with regard to the colleagues.'	3.5	4.00	3.70	4.58	0.0005
6	'Overall hospital administration is good.'	3.00	3.25	3.10	0.361	0.363
7	'Atmosphere in the hospital is conducive for effective service delivery.'	3.50	3.75	3.60	2.71	0.12
Total (Average Mean)		3.71	3.75	3.72	3.84	0.096
II.	Operating Expenses					
8	'Adequate stock of medicines is available throughout.'	3.66	3.25	3.70	3.28	0.005
9	'Cost of surgical operations is adequate from patients perspective.'	3.00	3.50	3.20	6.12	0.277
10	'Hospital incurs adequate expenditure on conducting test facilities.'	3.00	4.00	4.00	0	0
11	'Salaries to the doctors are proportionate to the services delivered by them.'	4.33	4.00	4.20	9.00	0
12	'Salaries to the SSN are proportionate to the services delivered by them.'	3.66	3.75	3.70	4.58	0.0005
13	'Salary budget is adequate to meet the requirement.'	3.33	3.75	3.50	3.00	0.075
Total (Average Mean)		3.49	3.70	3.71	4.33	0.059

Contd..

III.	Inventory					
14	'Operation theatre is well equipped with up to date equipments.'	4.00	3.25	3.62	4.58	0.0005
15	'Maintenance cost of operation theatre is minimal.'	3.16	3.00	3.10	0.429	0.339
16	'Laboratories are well - maintained and well- equipped.'	3.50	3.50	3.50	2.23	0.026
17	'Maintenance cost of laboratories is minimal.'	3.83	3.75	3.80	2.75	0.011
18	'Funds for transportation facilities like ambulance services, official vehicles is appropriate.'	3.83	4.00	3.91	9.00	0
19	'Assets are properly utilised.'	3.66	3.50	3.67	3.67	0.0025
Total (Average Mean)		3.66	3.5	3.6	3.77	0.063

*CLM= Clinical Mean, PCLM= Para-Clinical Mean, GM= Grand Mean, t-value as 3 (p=.000)

CONCLUSION AND POLICY IMPLICATIONS

The study has revealed that the shortage of human resource is the major constraint that causes acute waiting line problem in the hospital. TOC's 3 Ms (mindset, methodology and measurement) were used to comprehend doctors' perception to minimise the patients' waiting line in the hospital. The study has also revealed moderate TOC mindset of the doctors towards the organisation. The existing job security, safety and suitable working environment are the major factors which contribute to the doctors' mindset. Further, FFS methodology comprising identification, exploitation, subordination and elevation (inertia not measured) is used to measure the doctors' perception in managing the waiting line problem. The doctors confirmed waiting line problem in the hospital and stated that the shortage of doctors and SSN was the root cause of this problem Identification Stage. The exploitation stage focuses on the optimal use of intra-departmental resources for reducing the impact of the constraint. The findings of this stage reflect that waiting line problem can be tackled with three intra-departmental approaches - team spirit, informal training, and orientation and optimum resource utilisation. The doctors suggested that the team spirit is amongst the best strategies to combat the waiting line problem in a department during the exploitation stage. The third stage is subordination which focuses on use of inter-departmental resources for controlling the effects of the constraint. In this regard, the doctors felt that the cohesiveness encourages effective coordination among clinical and para-clinical departments that help in reducing the waiting line.

To further control the effects of the constraint, suggestions based upon strategical and tactical elevations are identified (elevation stage).

For tactical elevation, the doctors specifically remarked that outsourcing, overtime work by staff, temporary engagements of staff while for the strategical elevation, recruitments and investment in state of the art technology will yield better results in overcoming the waiting line problem. All FFS steps are required to be continuously monitored till the waiting line problem is almost exhausted (Inertia-stage). The study has also revealed that the doctors' decisions were directly or indirectly being influenced by TOC ideas (FFS). The measurement perspective highlights the optimum use of organisational resources. The doctors argued that the inventory and operating expenses, if optimally utilised, will result in increased throughput (service quality and organisational performance) of the hospital.

The study has also revealed moderate TOC perception of the ASCOMS doctors. The results also suggest that by applying and continuously monitoring the steps of TOC's 3Ms, hospital can optimally utilise its resources which may result in improved service quality and organisational performance.

It can be concluded that proper awareness and understanding of the TOC philosophy at all levels of management can help hospitals and other service organisations in achieving their respective organisational goals. To successfully apply this philosophy in an organisation, management needs to focus on three aspects. First, while framing the

organisational goal the management must consider the mindset of its employees. Moreover, the goal should be well-accepted by all employees so that they are motivated to accomplish it. Second, management must create benchmarks according to the nature and goal of the service organisation. For instance, the throughput for a healthcare organisation should focus on increasing service quality through optimal utilisation of its resources related to operating expenses and inventory. Third, management should use rational and sound procedural techniques which are understandable and accepted by the employees at all levels, in order to manage the operational problems arising from the constraints.

Challenges, Limitations and Future Research

TOC is recognised as an effective constraint management philosophy for manufacturing organisations; however its implementation in the service organisations is the major challenge in the literature till today. And this is primarily because of non-financial goals associated with service organisations. Measurement of performance indicators - Inventory, Operating expenses and Throughput further adds to the implementation challenge. Researchers like Sadat (2009) and Schaefer *et al.*, (2007) suggested the need for intensive research to define Inventory, Operating expenses and Throughput in context to service organisations. This also highlights the need of context-specific conceptualisation and measurement of the measurement tools.

The present study attempts to overcome the aforesaid two challenges related to TOC implementation in the presence of following limitations-

First, being exploratory in nature, it was primarily based on qualitative methodology to extract and establish items for the measurement of 3Ms. Hence it was conducted on a small sample size. However the study has generated items for the measurement of TOCO-WL and hence provided a platform for further research to be conducted at a larger scale for

the development of the TOCO-WL scale. Moreover, further research on validation of the scale in both public and private healthcare settings, that too using large sample size, needs to be done in the future. Second, TOCO measurement is based on 3Ms only, that is, other managing constraints tools such as thinking process, buffer management, etc., can also be explored along with 3Ms in future studies to contribute to academia and practitioners. Lastly, relationship of TOCO with other variables like organisational capability, market orientation etc. can also be explored to strengthen TOC theory.

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If you must play, decide on three things at the start: the rules of the game, the stakes, and the quitting time.

Chinese proverb



The woods are lovely, dark and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

Robert Frost

PREVALENCE OF SMALL-SIZE PREMIA IN THE STOCK MARKET

The Curious Case of India

Savita Aggarwal* and Ramesh Chander**

Abstract

Purpose: *The study seeks to capture the small-cap value-premia and to examine the risk- return trade-off in the small cap space in the Indian stock market.*

Research Design/Methodology: *Based on the monthly-adjusted closing prices of 26 small-cap stocks, constituting the NSE Nifty Small Cap 50, alpha stock return and underlying volatilities were captured in this study using the simple linear regression analysis. Returns variability and volatilities were further used to examine the underlying ex-post risk-reward trade-off in terms of the Sharpe, Treynor and Jensen measures during the period of April 2005 - March 2018.*

Findings: *The present study was unable to document pervasiveness of much-talked-about small-size value premia in the Indian market. The study has revealed that the risk-reward trade-off drift in the small cap market indices as the small-cap value was noticed in the bottom of the small-cap universe. This drift was explained by 'big money chasing smaller universe of quality small-cap stocks' phenomenon.*

Originality/value: *This study adds value to the personal finance and investment literature by proposing that the investors should focus on the good quality micro cap stock selection over allocating the resources to the chased portfolios of small-cap stocks in their quest for wealth maximisation.*

Policy Implications: *The findings of the study show that the risk-bearing is rewarded more by micro-stock selection, instead of the market forecasting in the emerging markets. This is what makes this study curious!*

Limitations: *Study outcomes reported in this paper are based on a smaller universe (sample) for the April 2005 - March 2018 period. This universe missed the new investible opportunities from digital space as such stocks still are not listed on the bourses thus far in India.*

Key words: *Small-size premia, Stock-market efficiency, Small-cap risk-return trade-off, Small-cap value persistence, India*

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INTRODUCTION

After globalisation and liberalisation of economic policies of the early 1990s, the Indian capital market has come to a stage to have offered tremendous opportunities to the investors. Over a period of time, it has attracted large equity flows and still is a sought-after destination to foreign institutional investors with attractive investment opportunities. It has also been contributing significantly to the financial intermediation and the capital growth of the domestic enterprise. During this course of time, traded volume on the stock exchanges have increased manifold and the market has experienced technological advancement in trading mechanism and market micro structure. As a result, it has now emerged prominent instrument of economic growth and wealth-creation in new India.

A significant impact of said developments has seen increased sophistication in value capturing and risk-hedging. These changes have significantly affected the investment decision in the Indian market as the under-valuation and the liquidity issues are considerably addressed with the increased flow of foreign capital and a larger allocation by the domestic investors. Still, risk and return play a major role in investment decisions. A positive risk and return relationship is well-defined, and documented, by academicians and researcher in the investment literature. As a logical corollary to this, small firms' stocks are expected to yield higher returns in comparison to large firm stocks over time. Even in efficient markets, the researchers have documented extensively this anomaly in small cap stock returns for a varied period of time. In other words, smaller firm stocks yield higher returns in comparison to the larger firms and, at times, even after controlling for market risk. This fact is widely known as the size-effect in the investment jargons and the financial literature.

Banz (1981) was the first researcher who demonstrated that small firms earn significantly higher risk-adjusted returns in comparison to larger firms. Fama and French (1992) also confirmed the subsistence of the size-effect. These studies have

induced the investors to believe and invest in small-cap stocks in quest for return magnification and risk-mitigation. But recent empirical research in mature capital markets has suggested that the said size effect now has diminished and/or disappeared from the 1980s. On the contrary, similar studies in the emerging markets have noticed and documented a strong-size effect. This paradox is keeping this debate alive that continues to engage academicians and investors alike, with growing internationalization of financial instruments, institutions and investments. The present study was an attempt to investigate this phenomenon in a large-size emerging market having a deeper and active participation of the global investors. The findings of the study will have wider ramifications for risk-diversification and return magnification.

REVIEW OF LITERATURE

Small-size effect has been documented in earlier studies as an important source of wealth creation globally. A study by Banz (1981) has documented an inverse association between the total market worth of the common stocks and the average returns. Reinganum (1981) supported the results of Banz (1981) and also noticed it (small-size effect) as an important source to reckon with for value opportunities even after adjusting the earnings price effect. Cook and Rozeff (1984) discovered a wider and universal presence of size effect. However, Brown, Kleidon and Marsh (1983) concluded that the magnitude of the size effect was not constant over time.

Dimson and Marsh (1984) documented a strong size effect and also reported an annual return differential of 23 per cent between the smallest and the largest portfolios. Fama and French (1992) noted the positive relation between the common-stock returns and the firms' market value of firm and found two important variables that explained cross-sectional variations in average stock returns, i.e., the size and the book-to-market value of equity. Similarly, the strong size effect has also been recognized in the subsequent researches, by Fama and French (1993, 1995, and 1996).

Berk (1996) concluded that the market value of the

firm and the average stocks return were not significantly related with each other. Patel (2000) observed that the strong size effect existed in 9 out of the 22 developing markets, including India, for the study from 1988 to 1998. Timmermann and Quiros (2000) observed that conditional distribution of returns on small firms' stock and large firms' stocks were very different in different business cycle conditions.

Xu (2002) also noted a strong size-effect in the Chinese market. Roll (1981) documented that returns in small-firm stocks were the result of the incorrect assessment of risk and infrequent trading in the stocks of small firms, as the powerful cause of bias in the risk assessment.

Chan, Chen and Hsieh (1985) observed that smaller firms contained higher risk premium in comparison to the larger firms which vary more with business conditions. Similarly, Amihud and Mendelson (1986) concluded that a fraction of the size-effect emerge due to the liquidity premium accrue to the small firm stocks. Chan and Chen (1991) further studied the source of size-premia, and noticed that smaller firms were the entities having lower production efficiency and financial leverage destined to have this (size) value differential compared to large firms.

On the other hand, the new researches in developed stock markets have questioned the perseverance of the size effect and suggested that either it has diminished or disappeared over time. Eleswarapu and Reinganum (1993); Dichev (1998); Chan *et al.* 2000; Horowitz *et al.* 2000a; Amihud 2002; Schwert (2003); Roll 2003; Van Dijk (2011); Israel and Moskowitz (2013); Mclean and Pontiff (2016) have not found any size premium in the respective studies. On the contrary, Dimson and Marsh (1999) found that the small stocks earn 2.4 per cent lower than the large stocks, between the year 1983 and 1997. In another study Dimson *et al.* (2002) showed reverse size effect in 18 out of the 19 countries in the sample. On the whole, Dimson *et al.* (2011) reiterated that the size-effect did not persevere for longer point of time.

Recent studies in the Indian market still documented the persistence of strong size-effect as

Mohanty (2001) and Kumar and Sehgal (2004) have noticed a strong size-effect. Early studies have revealed the existence of the size-effect in mature stock markets that has decelerated over time as evidenced by subsequent studies. However, studies in the Indian market points to strong presence of size premia and more value in the small stocks.

OBJECTIVE OF THE STUDY

The present study was conceptualised to investigate the prevalence of small-size value premia, measure its magnitude and consistency in market swings with a view to developing investment strategies in a more recent time-frame (April, 2005–March, 2018), in the Indian stock market.

Hypotheses

For a deeper and scientific investigation, the following hypotheses were formulated:

H_{a1}: A positive and significant size-effect envisaged in the literature holds for small cap stock in a large-size emerging market, namely, India.

H_{a2}: The quantum and magnitude of small size effect sustain and persist over time Indian stock market thus for profitable return-generating strategies.

THE DATA AND RESEARCH METHODOLOGY

In order to examine the validity of the above-stated hypotheses, the present study is based mainly on the secondary data set for actively-traded 26 small cap stocks forming a part of the NSE Small cap 50 Index, for which the data was consistently available, during the study period, (April 2005–March 2018) and the same were taken from the Yahoo finance (<https://in.finance.yahoo.com>). This data set at monthly nodes for the closing-stock price was adjusted for any stock splits, dividend and/or bonus as explained below in return measurement framework and were annualized subsequently. The required data for the benchmark

indices were collected from the National Stock Exchange (NSE) website and that for the Bombay Stock Exchange (BSE) from the www.bseindia.com. The risk free rate of return is taken as the yield on 91 days treasury obtained from the Reserve Bank of India website (www.rbi.org). The additional information in support of theoretical

construct of the study was derived from the extensive review of the relevant literature. This data set was put in the rigour of log-return-generation frame as explained below:

$$R_i = \ln\left(\frac{P_t}{P_{t-1}}\right) * 100, \quad R_m = \ln\left(\frac{I_t}{I_{t-1}}\right) * 100$$

wherein,

R_i = Stock Returns,

R_m = Market Returns

P_t = Stocks' closing price,

P_{t-1} = Stocks' Opening price

I_t = Closing value of the index,

I_{t-1} = Opening value of the index

Beta measures the systematic risk of individual security and is derived in the CAPM model, as given below:

$$r_i - r_f = \alpha_j + \beta_{im}(r_m - r_f)$$

wherein,

r_i = the return on stock i

r_m = the market return

r_f = the risk-free rate of return

β_{im} = the Beta coefficient

The risk-reward relationship in terms of the Sharpe ratio measures the extra return generated per unit of total risk exposure of investing in stocks is obtained as:

$$S = \frac{r_i - r_f}{\sigma_i}$$

Similarly, this relationship in terms of Treynor ratio measures the extra return generated per unit of systematic risk is obtained as explained below:

$$T = \frac{r_i - r_f}{\beta_i}$$

Jensen's Alpha (α) is the amount of abnormal returns on stock investment relative to benchmark indices is obtained as under:

$$\alpha_j = r_i - (r_f + \beta_{im}(r_m - r_f))$$

have mean returns ranging between (-) 0.51 to 3.82 per cent monthly during the April 2005- March 2018 period. It was noticed that the return on CanFin Homes Ltd. stock was the highest (3.82), while that on the Oriental Bank of Commerce stock was the lowest (-0.51) during this period. The corresponding investment risk varied between 0.78 - 1.88, being the lowest (0.78) in case of Phillips India Ltd. stock and the highest for the NCC Ltd. scrip. The systematic risk in terms of beta coefficient was noticed above 1.0 for 22 sample stocks and was statistically significant at 5 per cent for 14 small cap stocks and for 9 stocks at 1 per cent level of significance indicating higher price volatility compared to the benchmark index (Nifty fifty) during the study period. This demonstrates that Nifty Small Cap 50 stocks were more volatile in comparison to market index (Nifty fifty) during the study period.

RESULTS AND DISCUSSION

The study results on the risk-return analysis reported in **Table 1** revealed that small cap stocks

Table 1: Risk and Return of Sample Small-Cap Stocks

April 2005- March 2018

S.No.	Sample Stocks	Alpha (α)	Volatility (β)	Mean Returns
1	Allahabad Bank	-0.0127	1.2889*	-0.0004
2	Andhra Bank	-0.0135	1.1188	-0.0021
3	BEML Ltd.	-0.0088	1.4692**	0.0043
4	Bombay Burmah Trading Corporation Ltd.	0.0128	1.5730**	0.0264
5	Bombay Dyeing & Manufacturing Co. Ltd.	-0.0037	1.7746**	0.0109
6	Can Fin Homes Ltd.	0.0245	1.5975	0.0382
7	Chambal Fertilizers & Chemicals Ltd.	0.0034	1.9288	0.0138
8	Chennai Petroleum Corporation Ltd.	-0.0070	1.2789*	0.0052
9	Escorts Ltd.	0.0021	1.6126**	0.0159
10	Godfrey Phillips India Ltd.	0.0066	0.7839	0.0163
11	Graphite India Ltd.	0.0132	0.9097	0.0236
12	Gujarat Narmada Valley Fertilizers and Chemicals Ltd.	0.0012	1.1674	0.0129
13	Gujarat State Fertilizers & Chemicals Ltd.	0.0062	1.0506	0.0172
14	IFCI Ltd.	-0.0103	1.8463**	0.0047
15	India Cements Ltd.	-0.0064	1.3473**	0.0061
16	Jain Irrigation Systems Ltd.	-0.0115	1.0967*	-0.0003
17	Karnataka Bank Ltd.	-0.0027	1.2041	0.0091
18	NCC Ltd.	-0.0070	1.8828**	0.0082
19	Oriental Bank of Commerce	-0.0172	1.2535	-0.0051
20	Rashtriya Chemicals & Fertilizers Ltd.	-0.0056	1.4148**	0.0073
21	Raymond Ltd.	-0.0046	1.2526*	0.0074
22	Shipping Corporation of India Ltd.	-0.0046	1.5556**	0.0089
23	South Indian Bank Ltd.	-0.0120	1.2285	-0.0001
24	SREI Infrastructure Finance Ltd.	0.0141	1.0187	0.0250
25	Syndicate Bank	-0.0087	1.3125*	0.0037
26	Tata Elxsi Ltd.	-0.0095	1.9885	0.0202
	Average	-0.0016	1.3060	0.0107

Note: *significant at 5% level, **significant at 1% level

The alpha returns were found positive for 10 small stocks but none of these as significantly different from zero at 5 per cent as well as 1 per cent level of significance implying thereby that none of sample stocks have beaten the market for the sampled period of time. This has shown that Nifty Small Cap 50 stocks were unable to yield superior returns during the study period. These results were in contrasts to earlier research findings that have noticed extra normal returns on the small cap stocks. The returns in small cap stocks may have

weakened due to the phenomena that as investors became aware of the small cap premium, small firm stock prices have increased for renewed investors' interest and thus value premia had disappeared.

Risk-Return Optimisation:

Risk reward ratio of sample stocks presented in **Table 2** in terms of three summary measures of risk adjusted performance offers some interesting readings. As per Sharpe ratio, all small cap stocks

have risk-adjusted returns ranging between -7.70 to 14.78 per cent per month for the study period. Among the 26 stocks, 17 stocks have registered positive risk-adjusted returns while 9 have incurred negative risk adjusted returns. Graphite India Limited outperformed all small capitalization

stocks. However, Oriental Bank of Commerce has been the lowest performer in this regards during the study period.

Table 2: Risk-adjusted Performance of Sample Small-Cap Stocks

(April 2005-March 2018)

S.No	Sample Small Cap Stocks	Mean Returns	Volatility (β)	Standard deviation	Sharpe ratio	Treynor ratio	Jensen (α)
1	Allahabad Bank	-0.0004	1.2889	0.1371	-0.0457	-0.0049	-0.0127
2	Andhra Bank	-0.0021	1.1188	0.1273	-0.0622	-0.0071	-0.0135
3	BEML Ltd.	0.0043	1.4692	0.1546	-0.0095	-0.0010	-0.0088
4	Bombay Burmah Trading Corp. Ltd.	0.0264	1.5730	0.1790	0.1151	0.0131	0.0128
5	Bombay Dyeing & Manufacturing Co. Ltd.	0.0109	1.7746	0.1797	0.0283	0.0029	-0.0037
6	Can Fin Homes Ltd.	0.0382	1.5975	0.8366	0.0387	0.0203	0.0245
7	Chambal Fertilizers & Chemicals Ltd.	0.0138	0.9288	0.1270	0.0630	0.0086	0.0034
8	Chennai Petroleum Corporation Ltd.	0.0052	1.2789	0.1387	-0.0047	-0.0005	-0.0070
9	Escorts Ltd.	0.0159	1.6126	0.1613	0.0625	0.0062	0.0021
10	Godfrey Phillips India Ltd.	0.0163	0.7839	0.1333	0.0785	0.0134	0.0066
11	Graphite India Ltd.	0.0236	0.9097	0.1201	0.1478	0.0195	0.0132
12	Gujarat Narmada Fertilizers and Chemicals Ltd.	0.0129	1.1674	0.1262	0.0558	0.0060	0.0012
13	Gujarat State Fertilizers and Chemicals Ltd.	0.0172	1.0506	0.1359	0.0837	0.0108	0.0062
14	IFCI Ltd.	0.0047	1.8463	0.1814	-0.0061	-0.0006	-0.0103
15	India Cements Ltd.	0.0061	1.3473	0.1384	0.0018	0.0002	-0.0064
16	Jain Irrigation Systems Ltd.	-0.0003	1.0967	0.1801	-0.0339	-0.0056	-0.0115
17	Karnataka Bank Ltd.	0.0091	1.2041	0.1404	0.0234	0.0027	-0.0027
18	NCC Ltd.	0.0082	1.8828	0.1833	0.0130	0.0013	-0.0070
19	Oriental bank of Commerce	-0.0051	1.2535	0.1423	-0.0770	-0.0087	-0.0172
20	Rashtriya Chemicals & Fertilizers Ltd.	0.0073	1.4148	0.1577	0.0092	0.0010	-0.0056
21	Raymond Ltd.	0.0074	1.2526	0.1316	0.0124	0.0013	-0.0046
22	Shipping Corp. of India Ltd	0.0089	1.5556	0.1704	0.0182	0.0020	-0.0046
23	South Indian Bank Ltd.	-0.0001	1.2285	0.1307	-0.0449	-0.0048	-0.0120

Contd...

24	SREI Infra Finance Ltd.	0.0250	1.0187	0.1344	0.1425	0.0188	0.0141
25	Syndicate Bank	0.0037	1.3125	0.1374	-0.0156	-0.0016	-0.0087
26	Tata Elxsi Ltd.	0.0202	0.9885	0.1892	0.07605	0.01456	0.00948
	Average	0.0107	1.3060	0.1759	0.0258	0.0042	-0.0016
	Nifty 50 (Market Index)	0.0108	1.0000	0.0663	0.0748	0.0050	0.0000

When the risk adjusted returns for the sample small-cap stocks was compared with a larger benchmark Nifty 50, only 5 small-cap stocks have outperformed peer and generated excess risk adjusted returns. As per Treynor ratio, sample stocks have risk adjusted monthly returns ranged between -0.87 - 2.03 per cent for the study period. Among the 26 stocks, 17 stocks have registered positive risk-adjusted returns while 9 have registered negative risk adjusted returns during this time frame. Stocks of Can Fin Homes Ltd. outperformed all small capitalization stocks in the sample and the Oriental Bank of Commerce has been the least performer during the study period. If risk adjusted returns for all small cap stocks was compared with benchmark, only 10 small cap stocks revealed excess risk adjusted returns. In terms of Jensen alpha measure, all small cap stocks have risk adjusted excess (alpha) returns ranging between -1.72 to 2.45 per cent during the study period. Among the 26 stocks, 10 stocks have registered positive risk-adjusted returns while 16 have registered negative risk adjusted returns.

Therefore, sample small cap stocks unable to document superior risk-adjusted returns during the study period (April 2005-March 2018).

Risk-return Optimisation: A Deeper Insight

In order to have a deeper insight to examine consistency of risk-return optimization amidst market swings in case small cap stocks, the present study envisage to sub divided study time into alternative sub-periods; i) April 2005 - December 2007 representing bull phase. During this period the results show that beta coefficients were above 1.0 for 8 stocks out of 26 stocks which has indicated identical price volatility with the underlying market benchmark (Nifty Small Cap 50) during the study period. The alpha returns were positive for 14 stocks but its magnitude indicated none of sample stocks have beaten the market for the selected period of time.

Table 3: Risk-Return Analysis of Sample Small-Cap Stocks in the Sub-periods (April 2005-March 2018)

	Small cap stocks	April 2005-Dec 2007 (Bull Phase)		Jan 2008-Nov 2008 (Bear Phase)		Dec 2008-Dec 2010 (Recover Phase)		Jan 2011-Dec 2011 (Trend reversal decline)		Jan 2012-March 2018 (Structural Bull Phase)	
		α Returns	B	α Returns	B	α Returns	B	α Returns	B	α Returns	B
1	Allahabad Bank	-0.0053	0.5284	-0.0068	1.0294	0.0211	1.4653	-0.0371	0.7746	-0.0254	2.4018**
2	Andhra Bank	-0.0157	0.5605	0.0255	1.0864	0.0009	1.3793	-0.0366	0.6476	-0.0202	1.9079**
3	BEML Ltd.	-0.0066	1.0927	-0.0561	1.3598	0.0161	1.1034	-0.0355	1.2415	-0.0030	2.0443*
4	Bombay Burmah Trading Corporation Ltd.	0.0312	0.6514	0.0013	2.0041	0.0091	1.5386	-0.0031	1.2643	0.0254	1.8532*
5	Bombay Dyeing & Manufacturing Co. Ltd.	-0.0272	1.6869	0.0083	2.0545	0.0038	1.6461	0.0160	1.7614	0.0042	1.8293*
6	Can Fin Homes Ltd.	-0.0081	1.4556	0.5021	5.0907	-0.1175	3.5216	-0.0519	-5.7322	0.0188	1.1082
7	Chambal Fertilizers & Chemicals Ltd.	0.0285	0.1188	0.0427	1.6439	0.0147	0.8032	-0.0026	0.5671	0.0024	1.0049
8	Chennai Petroleum Corporation Ltd.	-0.0031	0.7621	0.0088	1.7447*	-0.0198	1.8407**	0.0024	0.9453	-0.0008	0.7912

Contd...

9	Escorts Ltd.	-0.0181	1.1551	0.0100	2.0721*	0.0158	1.7189*	-0.0205	2.1423	0.0238	1.0638
10	Godfrey Phillips India Ltd.	-0.0003	0.8103	0.0199	0.9269	0.0139	0.7979	0.0559	0.7350	-0.0018	0.7867
11	Graphite India Ltd.	0.0095	0.6947	-0.0154	0.9571	0.0079	1.2686	-0.0192	0.4970*	0.0253	0.6002
12	Gujarat Narmada Valley Fertilizers and Chemicals Ltd.	0.0066	0.7780	-0.0300	1.2904	0.0086	0.8876	-0.0283	0.5686	0.0104	1.6018
13	Gujarat State Fertilizers & Chemicals Ltd.	0.0235	0.5192	-0.0445	1.1330	0.0476	0.8278	0.0146	0.7809	-0.0009	1.2445
14	IFCI Ltd.	0.0452	0.4476	0.0406	2.5834**	0.0048	1.7525*	-0.0504	1.5812	-0.0147	2.2410**
15	India Cements Ltd.	0.0007	1.3214	-0.0453	0.9646*	-0.0278*	1.2460	-0.0184	0.9125	-0.0029	2.0720**
16	Jain Irrigation Systems Ltd.	0.0196	0.8392	-0.0099	0.8375	-0.0558	1.3593	-0.0783*	-0.0746	-0.0105	1.8671*
17	Karnataka Bank Ltd.	0.0193	0.5373	-0.0293	0.9037	0.0014	1.1400	-0.0360	1.2847	-0.0013	2.0609**
18	NCC Ltd.	0.0042	1.4421	-0.0650*	1.2780	-0.0283	2.1250**	-0.0844*	1.3339	0.0066	2.7566**
19	Oriental Bank of Commerce	-0.0252	0.6953	0.0319	1.1979	0.0084	1.1161	-0.0300	1.1439	-0.0248	2.4596**
20	Rashtriya Chemicals & Fertilizers Ltd.	0.0101	0.8688	0.0066	1.8736	0.0277	0.8620	-0.0411	1.0074	-0.0051	1.7812**
21	Raymond Ltd.	-0.0275	1.1058	-0.0877*	0.8995	0.0160	1.4703	0.0200	1.4113	0.0032	1.2439
22	SREI Infrastructure Finance Ltd.	0.0194	1.0299	-0.0742	1.2368	-0.0107	1.7481	-0.0218	1.9627	0.0033	1.6153
23	Shipping Corporation of India Ltd.	0.0006	0.8077	-0.0162	1.0765	-0.0110	1.2373	-0.0528	1.0719	-0.0098	1.7873*
24	South Indian Bank Ltd.	0.0594	0.1735	-0.0044	0.8964	0.0416	1.4207	0.0132	1.0996	-0.0056	1.1491
25	Syndicate Bank	-0.0025	0.8812	0.0148	1.0917	-0.0018	1.2659	-0.0206	1.1813	-0.0164	2.3669**
26	Tata Elxsi Ltd.	-0.0033	0.5811	-0.0370	0.8415	0.0176	1.2957	-0.0043	1.5289*	0.0255*	0.7930
	Average	0.0052	0.8286	0.0073	1.4644	0.0002	1.4168	-0.0212	0.8322	0.0002	1.6320

Note: *significant at 5% level, **significant at 1% level

The period from January 2008 to November 2008 represented the bear phase. During this Phase, the results reported in the table 3 have revealed that stock returns were more volatile for 18 sample stocks and further that the risk exposure of small stocks was a bit higher both 5 per cent and 1 per cent significance levels during the study period. Further risk-return compatibility has been documented in this declining phase as the sample returns have also moved northwards. It implies that small premia behaved in contrast to the market benchmark indices for small cap stocks during the declining market swing.

Again, Phase III from December 2008 to December 2010, represented bullish swing in the market. During this time, the results reported in this study have offered a curious narrative as the mean stock return have declined while the inherent risk of small cap investing has lagged the pace of return decline thus documents small cap risk-reward drift in the declining markets. This drift has further been accentuated in the Phase IV of the sample time

frame wherein negative small cap returns indicated inefficient investment diversification for small cap investing. Recovering from negative mean returns, sample stocks experienced steep rise in the underlying volatilities in the Phase V, in recovery swings of market.

Therefore, it is inferred from the results reported in table 3 that small cap investing yield better returns in the market declines at a relatively larger risk exposure. While recovering from the slumber, small cap investing has documented sub optimal returns while experiencing a steep risk exposure. Thus, the instances of small cap value premia have sustained in the bearish decline while the same lagged in the market recovery. Further, it (small value premia) has disappeared in the subsequent trend reversal declines. Therefore, small cap investing can be considered a potent investment vehicle in the declining markets and also when valuation for large cap stocks is stretched in the up cycle markets.

Risk-return Optimization across Asset Classes

Risk-return optimization in relation to the asset classes has also offered useful readings. Table 4 presents the risk, return and performance statistics of six asset classes as defined in terms of market indices. In terms of Nifty 50 and BSE Sensex, the study results have reported similar pattern in terms of risk pricing as outlined earlier as it has further validated risk-return outcomes. Risk –reward ratio

was favorably priced in case Nifty Small Cap 250 in comparison to other indices and other asset classes in this regard, but at a substantially higher risk exposure. It even validate the proposition that small cap space offer poor diversification and value discovery at the bottom of the pyramid. It may be due liquidity concerns or to large money chasing fewer opportunities in small cap space.

Table 4: Small Cap Risk-Return and Performance Evaluation across Asset Classes
(April 2005-March 2018)

Asset Classes	Volatility (β)	Mean returns	Sharpe ratio	Treynor ratio	Jenson alpha
Nifty CNX 50	1.0000	0.0108	0.0748	0.0050	0.0000
Nifty Small Cap 50	1.2847	0.0092	0.0343	0.0026	-0.0030
Nifty Small Cap 250	1.1609	0.0119	0.0682	0.0052	0.0003
Individual Small Stocks (Sampled)	1.3060	0.0107	0.0258	0.0042	-0.0016
BSE Sensex	1.0000	0.0108	0.0771	0.0050	0.0000
S&P BSE Small Cap Index	1.2200	0.0096	0.0401	0.0031	-0.0023

Further, it can also be inferred that in a larger small cap space offers more opportunities for positive alpha returns. Also, that return volatility in small cap space, at times, causes risk-reward drift as noticed earlier. Similar findings also hold on the BSE, another trading platform in India.

CONCLUSION AND POLICY IMPLICATIONS

The study has revealed small cap value premia at the bottom of the pyramid (small cap space). The value premia disappeared in term of broader market benchmark as a testament to “hot hand” phenomenon since the stocks constituting Nifty Small Cap 50 index were unable to deliver superior performance during the study period, April 2005 – March 2018. Moreover, the risk is not rightly priced in the small cap stocks in India either due to

liquidity concerns or to fewer opportunities in the space. Barring the Nifty Small Cap 250, this phenomenon holds valid to benchmark indices in the small cap space. However, opportunities in the individual stocks continue to attract investors' attention (which, at times, turned into delight) in recent times that explain valuation hype (drift) as the big money has chased fewer opportunities in the small space. It has also caused small cap stock investment performance more volatile and/or the valuation hype in the small cap market investing (stocks and indices) by pushing the underlying value premia attributed to the bottom of the pyramid.

Findings of this study are valuable for portfolio manager, investors and the market regulators and have wider ramification for strategizing investment decisions for value generation. It offer inputs to the

market regulator to identify and moderate the hot money chasing fewer opportunities thus to help arrest possibilities of bubble in asset prices. Based on the results reported in this study, investors are advised to focus more on micro stock selection for superior return generation and wealth magnification with a rider for quality and liquid opportunities in the small cap investing.

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I alone cannot change the world, but I can cast a stone across the waters to create money and ripples.

Mother Teresa



I would rather walk with a friend in the dark, than alone in the light.

Helen Keller

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The book-reviewers are requested to follow the guidelines given below:

1. The reviewer should begin with a listing of the bibliographical details of the book, comprising the name(s) of the author(s), full title and sub-title of the book (as they appear on the cover), details of the place and name of the publisher, year of publication, number of pages in the book, whether hardbound or paperback, and the price, if mentioned.
2. The review can range from 1000 to 3000 words, depending on the topic and the importance of the book.
3. The review should engage with the theme of the book and the issues and problems raised, and should make a rigorous attempt to identify and assess the main arguments put forth by the author.
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MEASURING THE INFLUENCE OF GREEN-MARKETING PRACTICES ON FIRMS' COMPETITIVE ADVANTAGE

A Study of Selected Food and Beverage Companies

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Abstract

Purpose: *The study seeks to measure the influence of green-marketing practices on a firm's competitive advantage in the fast-moving consumer goods (FMCG) sector, with special reference to food and beverage companies.*

Research Methodology: *The study is based on the use of both, qualitative and quantitative data. The qualitative design incorporates an in-depth discussion with the subject experts, the human resources and operations managers of the companies surveyed. The data was collected from 105 food and beverage companies out of a total of 290 certified and registered companies selected for the sample from the National Capital Region.*

Findings: *The study reveals that food and beverage companies have got the desired benefits by implementing green marketing practices, as three components, that is, price, promotion, and place, have been found to have a significant and positive effect on the companies' competitive advantage. Thus, their activities encompassing 'green products', 'green promotion' and 'green place' (distribution) enable them to gain a competitive advantage in their business.*

Limitations/Future Research: *The study was limited to a single segment of the FMCG sector, namely, food and beverages. Therefore, it may not be possible to necessarily generalise them for the other segments of the FMCG sector or even for other industries alike. Future research should thus be based on a wider study incorporating comparisons among the same sectors of different segments or among other industries.*

Policy Implications: *Green marketing has become a popular term in the modern business scenario. Most companies are trying to gain an advantage over their competitors by strategically focussing on the 4P's of the green marketing mix, viz., price, product, promotion, and place, for improving their performance and concomitant profits. The use of this strategy is being particularly witnessed in the food and beverage sector.*

Originality/Value: *The value of this study lies in its concerted attempt to determine the impact of green-marketing practices on the competitive advantage of food and beverage companies.*

Key words: *Green-marketing practices, Firms' competitive advantage, Food and beverage companies, Green-marketing-mix, Structural equation modelling*

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INTRODUCTION

In the present market scenario, most business enterprises and organisations are showing increasing dedication to environmental issues due to the advent of strict environment legislations, which significantly impact the pattern of economic development by influencing a humongous population base. In accordance with these marketing trends, this study is intended to understand the relationship between green marketing and the resultant competitive advantage gained by food and beverage companies in the FMCG sector. Apart from 'green marketing' (Peattie, 1995; Ottman, 1992), several other terms coined by pioneering researchers have been used to describe the relationship between green marketing and competitiveness, such as 'environmental marketing' (Coddington, 1993), 'ecological marketing' (Fisk, 1974; Henion and Kinnear, 1976), 'sustainable marketing' (Fuller, 1999), and 'greener marketing' (Charter and Polonsky, 1999).

While the term 'marketing' is much wider, this study delineates the concept of green-marketing to refer to the competitive advantage that companies are likely to gain in promoting their products by resorting to environmental claims about either their attributes or their marketing strategies, policies and manufacturing processes. The concept of green marketing has thus become a part and parcel of the overall corporate strategy of firms (Menon and Menon, 1997). Kotler and Keller (2015) too used the four components of the marketing mix described earlier to examine the competitive advantage that a particular company may gain over rival companies. Green marketing is also closely related to the issues of industrial ecology and environmental sustainability such as extended producers' liability, life cycle analysis, material use and resource flows, and eco-efficiency. This concept incorporates a wide range of activities constituting product upgradation as well as a dynamic change in the process of production, through better packaging, advertising and presentation (Vinayagamorthy and Somasundaram, 2012).

In fact, all competitive companies across the world need to inculcate a concern for the environment into their production operations. Most global players in the market have become aware of their responsibilities towards the environment, and have started implementing green marketing practices in the process of diversification of their businesses. Consequently, they are producing eco-friendly products by incorporating the 'Go Green' concept in their production processes to protect the environment while also augmenting their profits.

Studies have revealed a global rise in the awareness of environmental issues, leading to more environmentally-sensitive behaviour and consumption patterns among consumers. Albert Bandura (1977) propounded the Social Learning Theory to explain human behaviour in terms of a continuous reciprocal interaction between the cognitive, behavioural, and environmental influences in an individual's life. On the other hand, many companies whose business activities have caused environmental problems have also started realising the need to move towards 'green-oriented businesses' to build an environmentally-sustainable society. Companies, especially multinationals, play an important role in the global economy. They also have access to both resources and facilities for implementing green practices to arrive at ecological business solutions. Thus, the subject of green marketing is vast and has important implications for business strategy and sustainability. In this context, companies need to continually create a market for eco-friendly products and services, while also influencing customers to change their mindsets and adopt 'green' behaviour and attitudes (Kaur, 2017). This trend of green behaviour is especially evident among marketers in the consumer goods sector as compared to other sectors.

In view of the above-mentioned market scenario, this study considers green marketing practices as an independent variable with the sub-construct of the four P's of the marketing mix, that is, product, price, place, and promotion, as the intervening variables,

whereas competitive advantage gained by using similar components of the green marketing mix is taken as the dependent variable. The main aim of the study is to measure the cause and effect relationship between green marketing practices and the resultant competitive advantage based on the components of the marketing mix.

REVIEW OF LITERATURE

The term 'green marketing' was initially used around the Earth Day in 1970, but the idea did not catch on until the 1980s. According to the American Marketing Association (AMA), the first workshop on 'Ecological Marketing' was held in 1975. The proceedings of this workshop resulted in publication of one of the first books on green marketing, entitled 'Ecological Marketing' by Henion and Kinnear, in 1976. During the late 1990s, the concept of 'green marketing' received a huge boost when the US President Bill Clinton issued executive orders directing federal offices to purchase recycled and environment-friendly products. This was accompanied by continuous efforts made by researchers to spread awareness about the concept.

In 2001, Peattie explored the three phases of green marketing, which later evolved into "Ecological Green Marketing", "Environmental Green Marketing", and "Sustainable Green Marketing". Thus, these green marketing concepts gained prominence during the period 1990 to 2000. Thereafter they found a place in research by various authors, including Kotler (2006) and Shrikanth and Raju (2012). Yu-Shan-Chen (2008) highlighted the positive relationship between intellectual capital pertaining to green innovation and the competitive advantage enjoyed by information and electronics companies in Taiwan. Further, Yu-Lin and Hui Ho (2008) also discussed the use of green innovation for logistics services and manufacturing companies. The result was a significantly positive influence on companies' intentions to adopt green practices in their businesses.

Taking the work of Bandura (1977) further,

Dangelico and Pujari (2010), and Michael Jay Polonsky (2011) examined the concept of 'go green marketing and its beneficial environmental impact. Since then, the concept has incorporated a broad range of activities, including product modification, changes in the production cognitive process and in packaging, and modifications in advertising strategies. Vinayagamorthy and Somasundaram (2012), and Conding, Habidin, Mohdzubir, Hashim, Seri and Jevya (2012) investigated the relationship between green innovation and the performance of the automotive industry in Malaysia. Kenneth, Pamela, Jeremy and Vikram (2012), on the other hand, investigated the impact of green supply chain management practices (GSCM) on company performance.

Ko, Hwang and Kim (2013) expounded the relationship among green marketing, corporate image and purchase intention in retail departmental stores in Korea. Manjunath and Gundupagi (2013) concluded that most firms need to change their mindset to transform their traditional businesses into green enterprises by adopting green marketing strategies. Jen Lin, Lunghwa, Chen, Minh Ho and Hua (2013) analysed the intervening impact of green advancement and environmental performance in connection with the market demand and firm performance in the Taiwanese hybrid vehicle industry. Hasan and Ali (2014) examined the impact of a green marketing strategy on a firm's performance through an analysis of the concepts of green innovation and green promotion. Their results showed the positive effect of these concepts on the performance of firms, which would, in turn, encourage other companies and their managers to refine their marketing strategies.

Ing Wu and Ru Lin (2014) and Kharde (2016) concluded that in India, the concept of green marketing is still in the developing stage. However, with the emergence of increasing environmental problems day by day, it is important that green marketing should become the norm rather than an exception or just a fad (Moravcikova, Krizanova, Kliestikova and Rypakova, 2017). Kaur (2017) pointed out that a majority of the companies have

been using green marketing as a tool to inform consumers about their foray into the production of eco-friendly and green products, and to encourage these consumers to try such products. Ferenc, Varmus and Vodak (2017) examined the use of green marketing as an opportunity for the company to fulfill its social and environmental responsibility, while also effecting cost reductions, and tackling both competition and pressure from the government to adopt environmentally sustainable production processes.

Not with standing the fact that most companies have been facing challenges due to the changing environment and nature of the business, Chen, Bao Lai and Tung Wen (2006) argue that advent of green innovations by companies has had a positive effect on competitive advantage. This is because investments in green product innovation and green process innovation have proved helpful to businesses and have also fomented statistically significant relationships between companies and their market performance. Others like Pujari (2006), Eiadat, Kelly, Roche and Edayat (2008), and Yu-Lin and Hui Ho (2008) have also delineated the positive influence of companies' intentions to adopt green practices on their corporate social responsibility (CSR). Chen and Yi Lin (2008) too show how businesses have succeeded in gaining a competitive advantage and promoting social change by integrating this ethic into their corporate culture, Chen & Yi Lin (2008).

Vaccaro (2009) examined innovative theory and ways in which it can be used to create effective marketing designs and strategies. These theories have become proactive in the B2B space of green marketing strategies, fostering the birth of the triangle of economic, social and ecological sustainability. While underscoring the importance of competitive advantage for business firms, Arseculeratre and Yazdanifard (2014) averred that green marketing can create a sustainable competitive advantage for a business, Endang Chumaidiyah (2014) too stressed the importance of the relationship between the marketing mix and the contributions made by each of its elements.

Sitnikov, Vasilescu, Ogarca and Tudor (2015) found that green marketing plays a symbiotic role in marketing for ensuring the sustainability of businesses and is simultaneously also an environmental tool for influencing the strategic decisions of companies. While exploring the relationship between environmental orientation and the green marketing mix strategy, Rahmawati, Haiwidjojo and Solimum (2014) examined the competitive advantage of going green for real estate developer companies in East Java Indonesia. Their study was intended to assess the effect of environmental orientation and use of green marketing strategies on enhancement of competitive advantage for firms. They concluded that while environmental orientation has no positive influence on enhancing a firm's competitive advantage, it positively and significantly affects the implementation of the green marketing-mix strategy by that firm.

Menck and Filho (2014) showed how an organisation's CSR strategy can also focus on the action sit has taken for environmental protection. Thus, most literature on the subject indicates that any activity related to environmental protection contributes towards creating a competitive advantage for the company through its corporate engagement with green marketing, in particular, and environmentally and socially conscious behavior, in general. Similarly, a study undertaken by Gupta and Shukla (2014) revealed that consumers or companies also need to pressurise industrial buyers and suppliers to exhibit environmentally friendly behaviour by minimizing the negative environmental effects of their manufacturing processes.

Hasan and Ali (2014) and Ing Wu and Ru Lin (2014) examined the influence of green marketing strategies on business performance by surveying 288 organic farms certified and registered in Taiwan. Their study revealed that organic farms were able to develop their corporate images through green marketing strategies, which help in improving their business performance. Endang

Chumaidiyah (2014) also asserted the importance of the relationship between the marketing mix and the contribution of its elements.

The review of literature shows that a number of variables can be used to analyse the business performance of firms, the quality of their products and services, their corporate image, and environmental behaviour.

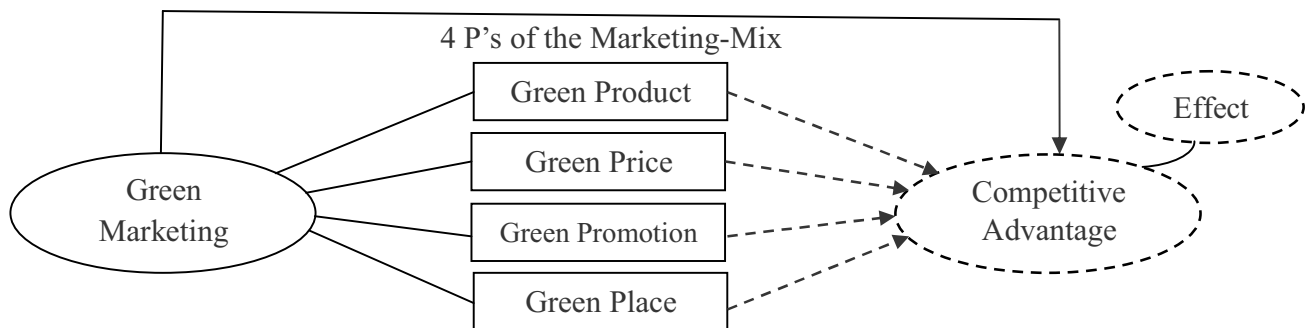
Research Gap

An evaluation of the existing literature on the topic leads to the inference that many studies have so far been conducted on the concept of green marketing, adoption of green marketing practices, and the benefits of using environment-friendly products (Sitnikov, Vasilescu, Ogarca and Tudor, 2015; Rahmawati, Haiwidjojo and Solimum, 2014). This study highlights that green marketing will continuously grow in terms of both practice and the demand to gain sustainability through technology, which will enhance the competitive pressure on businesses to improve their performance and create a positive market image. Thus, these orientations will lead the way in green product innovation and through it, in the sustainability and growth of businesses (Chen, Baolai and Tungwen, 2006; Yu-Lin and Hui Ho, 2008).

Concept Development

The concept of green marketing was introduced in the late 1980s (Peattie and Crane, 2005). Since then, universal developments in this sphere have resulted in an integration of ecological concerns in all spheres of business operations ranging from raw materials to finished products and sourcing to manufacturing, supply chain development, exchange logistics and innovation (Zhu and Dou, 2010; Pujaria, Wrightband Peattie, 2003). Currently, it has emerged as a business philosophy aimed at meeting the needs of ecologically-conscious consumers and fulfilling the companies' economic objectives with minimal environmental damage (Ko, Hwanga, and, 2013; Andre's, Salinas, and Ma, 2009). Since green marketing entails a basically dissimilar way of seeing the world and the place of marketing in it, it is imperative to decompress the boundary of marketing examination. A marketing strategy incorporating the multi-faceted responsibilities of the organisation can be created with the help of theoretical frameworks. This segment thus presents various green marketing strategy framework models (Ginsberg and Bloom, 2004).

Figure 1: Conceptual Framework



OBJECTIVE OF THE STUDY

This study seeks to assess the influence of green marketing-mix practices adopted by selected food and beverage companies on their competitive advantage.

Hypothesis

H₀₁: Firms' green marketing practices have a positive influence on its competitive advantage, with all the marketing-mix components.

RESEARCH METHODOLOGY

This is an exploratory-cum-conclusive research which has been used to provide information for the evaluation of alternative courses of action. It is generally used for the development and formulation of hypotheses. Exploratory Factor Analysis (EFA) method was used for the purpose of data reduction and extraction of each item pertaining to green marketing practices to assess the resultant competitive advantage for companies. Thereafter, these practices were used for improving the individual construct and confirming the model through Confirmatory Factor Analysis (CFA). Further, an attempt was made to determine the relationship between the construct with the help of Structural Equation Modelling (SEM) analysis. The study covers green marketing practices on the basis of the components of the marketing-mix, viz., product, price, place and promotion, as an independent variable and explores the influence of the dependent variable, that is, competitive advantage on the same components of the marketing-mix.

The questionnaire based on the review of literature was divided into three sections. The first section gave the profiles of the companies being studied and general information from the company's operational department. The second section (B) consists of 25 statements of green marketing practices based on the following studies: Jill Meredith Ginsberg and Paul N. Bloom (2004); Shwu-Ing Wu and Syuan-Ru Lin (2014), and Kartik Mehta (2015). The third section (C) relates to the competitive advantages enjoyed by the companies being studied, which comprises 28 statements based on the following studies: Michael. E. Porters (1985); Mubeyyen Tepe Kucukoglu and R. Ibrahim Pinar (2015); Cassiano Moro Piekarski, Leila Mendes da Luz, Liadina Zocche and Antonia Carlos de Francisco (2013). All the items in the questionnaire are in the form of five-point Likert scales.

The questionnaire was designed after completion of the pilot study conducted among food and beverage companies in Delhi and NCR. The statements were subsequently modified as per the managers' responses. Therefore, Cronbach's Alpha

method was used to measure the reliability and validity of each individual statement, which was presented in terms of greater than 0.7 with Eigen values and cumulative explained values exceeding 0.5. The study samples were surveyed at the levels of the operational managers and senior managers of 105 verified food and beverage companies in Delhi and NCR region over a period of two months. The sample size was also supported by other studies, including Pujari (2006), and Sitnikov, Vasilescu, Ogarca and Tudor (2015).

Sampling Technique

The judgmental sampling method has been used to cover the population that best describes the characteristics of the population and can be further classified based on the results as seen in S.L. Gupta, 2012, and R. Kumar, 2013. The area of the study was confined to Delhi and NCR, which was selected due to the presence of a substantial number of FMCG companies in the region, including dairy products, health beverages, soft drinks, cereals, bakery products (biscuits, bread, cakes), snack food, chocolates, ice cream, tea and coffee, mineral water, branded flour, branded rice, branded sugar and juices). The sampled companies have been selected from the list of FMCG companies obtained from various websites, including Fundoodata.com, companiesindia.com, and moneycontrol.com, as also a directory of Indian industries. According to Bentler and Chou (1987), the samples collected should be at least five times of the estimated measurement variables. Therefore, the sample size for this study was based on this principle, and supported by (Malhotra and Dash, 2015).

DATA ANALYSIS AND RESULTS

A reliability analysis is required to find out and measure the strength of the scale before examining the relationship between the variables, which is supported by Bhatt, Jayswal and Patel, 2013. Subsequently, the instrument is subjected to the composition of coefficient alpha (Cronbach, 1951). The purpose of the reliability analysis is to find out the internal consistency of scale is shown in **Table 1.**

Table 1: Reliability of Constructs

Constructs	Cronbach's Alpha
Green Marketing Practices	
Green Product	0.927
Green Price	0.785
Green Promotion	0.738
Green Place	0.725
Competitive Advantage	
Green Product	0.735
Green Price	0.797
Green Promotion	0.761
Green Place	0.850

As shown in the table, the result of Cronbach's Alpha shows that the value of the individual constructs between 0.927 and 0.725 of all the variables to the total coefficient correlations is greater than 0.4 of each item. Thus, the overall good result shows the consistency of the constructs. However, the exploratory factor analysis identified the four latent constructs of the statements associated with green marketing practices and four latent constructs extracted with a competitive advantage. The Eigen value of each factor was more than 1.0, and the factor loading of each individual item was more than 0.4. Moreover, the result shows that the relationship of any two perspectives was lower than the Cronbach's Alpha estimation of any single viewpoint, showing that the discriminant validity was accomplished (Gaski and Nevin, 1985, Shwu-Ing-Wu and Syuan-Ru Lin, 2014).

Exploratory Factor Analysis

The exploratory factor analysis (EFA) was used on eighteen items pertaining to green marketing practices and the factors which were loaded showed the Kaiser-Meyer-Olkin measure of sampling adequacy with a value of 0.702 (approximately), and Chi-square= 762.914, DF = 153 and Sig. .000 (that is, $p < 0.05$), as shown in **Table 2**. This indicates that the group variances are the same and that the off-diagonal elements are approximately zero. In the same way, EFA on competitive advantage was conducted in order to measure the various items. This shows a Kaiser-Meyer-Olkin measure of sampling adequacy of 0.742 (approximately), and Chi-square= 468.449, DF = 120 and Sig. .000 (that is, $p < 0.05$), as shown in **Table 3**.

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.702
Approx. Chi-Square	762.914
Bartlett's Test of Sphericity Df	153
Sig.	0.000

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.742
Approx. Chi-Square	468.449
Bartlett's Test of Sphericity Df	120
Sig.	0.000

Confirmatory Factor Analysis

This study utilized AMOS 20 programming for conducting confirmatory factor analysis (CFA) with the specific end-goal of deciding the

effectiveness and constructing the validity of the estimation for food and beverage companies. The Fitness Analysis of the CFA Full Model is summarised in **Table 4**.

Table 4: Fitness Analysis of the CFA Full Model

	χ^2	df	p-value	χ/df	GFI	NFI	CFI	RMSEA
GMP	170.146	96	0.000	1.772	0.845	0.809	0.904	0.086
CA	116.931	84	0.010	1.392	0.872	0.804	0.933	0.061

As shown in the table, there is a relatively good fit model, wherein the CMIN/Df is 1.772, Df is 96, Goodness of Fit Indices (GFI) are 0.845, Normal Fit Indices (NFI) are 0.809, the Comparative Fit Indices (CFI) are 0.904, and the root mean square approximation (RMSEA) is 0.086 for the latent constructs of all the green marketing practices. Similarly, the competitive advantage models reveal that the CMIN/Df is 1.392, Df is 84, GFI is 0.872, NFI is 0.804, CFI is 0.933, and RMSEA is 0.061, respectively. Hence, all the model indicators come close to the antecedents' standards (Shwu-Ing-Wu and Syuan-Ru Lin, 2014; Nie and Purvis, 2000; Bentler, 1990; and Joreskog and Sorbom, 1989). In addition, all the factor loading, which is related to the major constructs of the study variables that are measured to be greater than 0.40, shows a significant effect, exhibiting the effectiveness and construct validity of each deliberate statement. The discriminant validity was likewise shown by the deliberate measurements and variables (Shwu-Ing-

Wu and Syuan-Ru Lin, 2014).

Structural Equation Modelling

In the structural equation modelling measure, the goodness of fit indices was recognised for the overall effect and provides a more dynamic and rigorous analysis for model fitting (Animesh, 2011). Moreover, the structural model of green marketing practices and the firm's competitive advantage ensures consistency with the following criteria of the good model (Hu and Bentler, 1999):, the CMIN/Df should be less than 3 (Carmines and Maciver, 1981); the RMSEA value should be equal to or more than 0.05; and the GFI, AGFI, RFI, NFI, and CFI indicator should be equal to or more than 0.8 (Bagozzi and Yi, 1988; Joreskog and Sorbom, 1989a; Chahal, Dangwal and Raina, 2016). The fitness relationship model analysis is summarised in **Table 5**.

Table 5: Fitness Relationship Model Analyses

χ^2	df	p-value	χ/df	GFI	NFI	CFI	RMSEA
649.412	431	0.000	1.010	0.849	0.801	0.889	0.053

As shown in the table, the CMIN/Df is 1.010, Df 431, GFI is 0.849, NFI is 0.801, CFI is 0.889, and RMSEA is 0.053. The importance of the general model was near, or met the near to perfect standard,

subsequently exhibiting that the model used is satisfactory and significant.

Figure 2: Influence Effect of Relationship Model between Green-Marketing Practices and Competitive Advantage

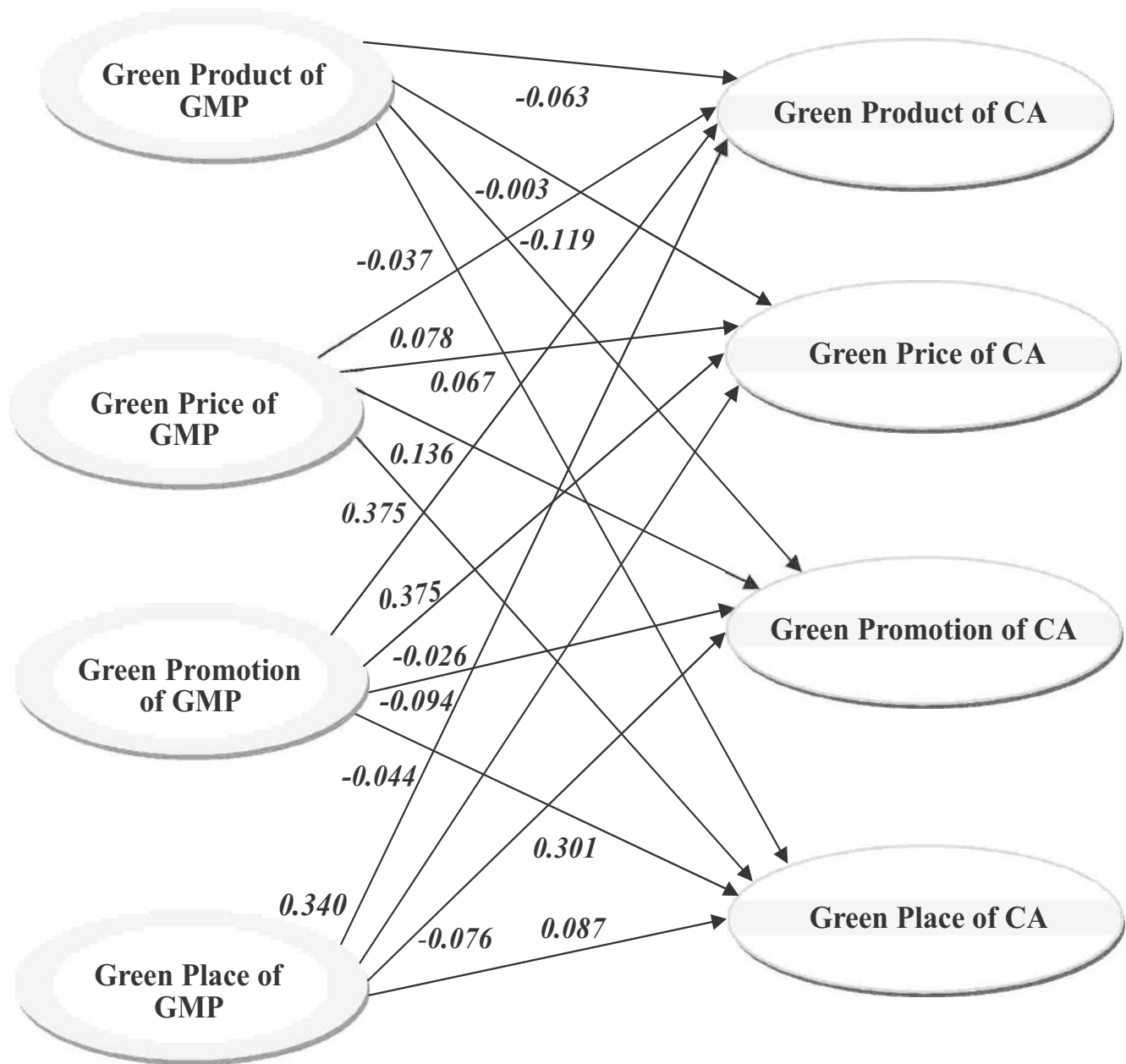


Figure 2 shows the relationship between the dependent and independent factors, and the influence of green marketing practices on competitive advantage with the help of structure equation modelling.

The results, as revealed in **Table 3**, show the partial

significant effect of green marketing practices on competitive advantage. However, the four variables used, that is, green price, green product, green place, and green promotion, indicated significant effect of green marketing practices on competitive advantage.

Table 6: Impact of Green Marketing Practices on Competitive Advantage

Path Direction			Standardised Regression Weights	S.E.	C.R.	P-value	Hypotheses Decision
G.Product_CA	<--	GMP_G.Product	-0.063	0.104	-0.541	0.589	Not Supported
G.Price_CA	<--	GMP_G.Product	-0.003	0.135	-0.024	0.981	Not Supported
G.Promotion_CA	<--	GMP_G.Product	-0.119	0.129	-1.059	0.289	Not Supported
G.Place_CA	<--	GMP_G.Product	-0.037	0.111	-0.334	0.738	Not Supported
G.Product_CA	<--	GMP_G.Price	0.078	0.172	0.579	0.563	Not Supported
G.Price_CA	<--	GMP_G.Price	0.067	0.220	0.545	0.586	Not Supported
G.Promotion_CA	<--	GMP_G.Price	0.136	0.217	1.029	0.304	Not Supported
G.Place_CA	<--	GMP_G.Price	0.375	0.203	2.657	0.008	Supported
G.Product_CA	<--	GMP_G.Promotion	0.375	0.190	2.313	0.021	Supported
G.Price_CA	<--	GMP_G.Promotion	-0.026	0.225	-0.191	0.848	Not Supported
G.Promotion_CA	<--	GMP_G.Promotion	-0.094	0.231	-0.607	0.544	Not Supported
G.Place_CA	<--	GMP_G.Promotion	-0.044	0.186	-0.311	0.756	Not Supported
G.Product_CA	<--	GMP_G.Place	0.340	0.198	2.427	0.015	Supported
G.Price_CA	<--	GMP_G.Place	-0.076	0.253	-0.588	0.556	Not Supported
G.Promotion_CA	<--	GMP_G.Place	0.301	0.246	2.203	0.028	Supported
G.Place_CA	<--	GMP_G.Place	0.087	0.203	0.683	0.495	Not Supported

The impact of green marketing practices and competitive advantage, as shown in the path analysis diagram is revealed through the following factors, indicating that the green product component and the firm's competitive advantage of green product are not positively related ($p = 0.589$), and thus H_{1a} is not supported. Similarly, the green product component and the competitive advantage of green price, green promotion, and green place are not positively related ($p = 0.981$, $p = 0.289$, $p = 0.738$), and hence the hypotheses H_{1b} , H_{1c} , and H_{1d} are not supported. Therefore, the green price component and the competitive advantage of green place are positively supported (0.008) by the green marketing practices, thereby supporting the hypothesis H_{1h} . However, the remaining hypotheses related to green price and the competitive advantage of the components of green product, green price, and green promotion are not positively related ($p = 0.563$, $p = 0.586$, $p = 0.304$), as a result of which the hypotheses H_{1e} , H_{1f} , and H_{1g} are not supported.

Since, the green promotion component and the competitive advantage of green product are positively related ($p = 0.021$), this supports H_{1i} . In

addition, the green promotion component and the competitive advantage of green price, green promotion and green place are not positively related ($p = 0.848$, $p = 0.544$, $p = 0.756$), as a result of which H_{1j} , H_{1k} , and H_{1l} are not supported. Moreover, the green place component and the competitive advantage of green product and green promotion are positively related (0.015 and 0.028), and hence the hypotheses H_{1m} and H_{1o} are supported. However, the green price and green place components are not positively related (0.556 and 0.495) as a result of which the hypotheses H_{1n} and H_{1p} are not supported, as shown in **Table 6**. Therefore, the overall result reveals that the adoption of green marketing practices has a partially positive influence on competitive advantage. The major contributions of green marketing practices are green product, green promotion, and green place, which help companies gain competitive advantage over their competitors.

CONCLUSION

This study develops a relationship model between green marketing practices and competitive advantage to demonstrate the effectiveness and impact of FMCGs companies (Shwu-Ing-Wu and

Syuan-Ru Lin, 2014; Chen, 2006; Dangelico and Pujari, 2010). The findings reveal that individually the major constructs of the study have a significant effect on attempts by FMCG companies to enhance their businesses. Therefore, the green price component of green marketing practices positively influences the green place (distribution) component to result in a competitive advantage for the companies. Similarly, the green promotion component of green marketing practices positively influences the green product component, again resulting in a competitive advantage for the companies. Additionally, the green place component of green marketing practices significantly influences both the green product and green promotion components to again result in a competitive advantage. This shows that when companies take initiatives relating to their promotional and distribution activities, it proves to be more beneficial for the growth and development of the business performance of the concerned companies (Shwu-Ing-Wu and Syuan-Ru Lin, 2014; Rahmawati, Hadiwidjojo, Noermijati, and Solimun, 2014). Therefore, a majority of the companies used green marketing as a tool to create a favourable image in the eyes of the consumers that their products are eco-friendly (Kaur, 2017). Hitherto, the rest of the factors do not have a significant effect in terms of the companies gaining a competitive advantage over their rivals.

Policy Implications

The findings suggest that food and beverage companies need to adopt and develop more green marketing practices in order to keep improving the performance of their respective businesses, which can be correlated with the findings of Shwu-Ing-Wu and Syuan-Ru Lin (2014), Chen (2006), Dangelico and Pujari (2010), and Chen 2010. Further, the quality control and the CSR practices being adopted by the food and beverage companies will enhance both their productivity as well as performance, (Courtright and Smudde, 2009; Nai-Jen Chang and Cher-Min Fong, 2010).

Limitations and Future Research

This study examined only a single segment of the FMCG sector, that is, food and beverage companies. Its findings cannot, therefore, be necessarily generalised to the other segments of the FMCG sector or to other industries. Further, the financial performances of the sampled companies have been assessed on the basis of their profitability and working capital management, which can be cross-checked through the available financial reports. Further, the study contains only the company's perspective, whereas there is a need to study the consumers' perspective.

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Appendix

List of Sample Companies

1	A Roller Flour Mill Pvt Ltd	16	Cadbury
2	Ab-Mauri India Pvt Ltd (Mnc)	17	Candico (I) Ltd
3	Adf Food Ltd	18	Coca-Cola Company
4	Agro Food Ltd	19	Cyanamid Agro Ltd
5	Ajanta Soya Ltd	20	D.S. Spico Pvt Ltd
6	Ajinomoto India Pvt Ltd	21	Dabur
7	Amira Foods India Ltd	22	Dfm Food Ltd (Crax)
8	Anik Industries Ltd	23	Dhunseri Tea India Ltd
9	Anmol Biscuits	24	Diana Tea Company
10	Bambino Agro Food India Ltd	25	Dominos
11	Ben and Jerry's	26	Everest Food
12	Bhojwani Foods Ltd	27	Fieldfresh Foods Pvt Ltd
13	Bikano Namkeens	28	Footpath Eateries
14	Bisleri Beverages Ltd	29	Freshtroop Fruits Ltd
15	Briatannia	30	Frisco Foods Pvt Ltd

Contd...

31	Frito - Lay India	68	Mccain Foods India Pvt Ltd
32	Fun Foods Pvt Ltd (Oetker Group)	69	Mcdonalds INDIA
33	Fun Top Food	70	Methoni Tea Company Ltd
34	G.D.Foods Manufacturing India Pvt Ltd Tops Food	71	Milkfood Ltd
		72	Modern Dairies Ltd
35	Glaxosmithkline	73	Modi Enterprises
36	Gopaljee Dairy Foods Pvt Ltd	74	Mohan Meakin Ltd
37	Haldiram Namkeen's	75	Mother Dairy
38	Hamdard	76	Mount Everest Mineral Water Ltd
39	Harvest Gold Foods India Pvt Ltd	77	MTR
40	Havmor Ice Cream Ltd	78	Nestle
41	Heinz India Pvt Ltd	79	Nimbus Industries Ltd
42	Heritage Food India Ltd	80	Parle Products Ltd
43	Hindustan Coca-Cola Beverages Pvt Ltd	81	Parle-Argo
44	Hindustan Unilever	82	Parry Agro Indias Ltd
45	Ite (Indian Tobacco Company)	83	Parry Confectionery
46	Jubilant Food (Dominos Pizza)	84	Pearl Drinks Ltd
47	Kamala Tea Company Ltd	85	Pepsi Foods
48	Kellog's	86	Perfetti India Ltd
49	KFC	87	Pizza Hut
50	Kic Food Products Pvt Ltd (Kwality)	88	Priya Gold Biscuit
51	Kohinoor Foods Ltd(Satnam Overseas Ltd)	89	Rajdhani Flour Mills Ltd (Rajdhani Group)
52	Kothari Products Ltd	90	Rani Juice
53	Krbl Ltd	91	Ravalgoan Sugar Farm Ltd
54	Krishna Food & Beverages	92	Rei Agro Ltd
55	Kwality Dairy (India) Ltd	93	Ruchi Soya
56	L.T Foods Ltd	94	Sai Beverage Ltd
57	Lehar	95	Shakti Bhog Foods Ltd
58	Lotte India Corporation Ltd	96	Shree Food Products Ltd
59	Lotus Chocolate Company Ltd	97	Starbucks
60	Macafee	98	Tata Global Beverage
61	Madhur Industries Ltd	99	The Delhi Flour Mills Co Ltd
62	Madhusudan Industries Ltd	100	Today Tea Ltd
63	Mahaan Foods Ltd	101	Umang Dairies Ltd
64	Mapro Industries Ltd	102	Vadilal India
65	Marico (Saffola Lite)	103	Vimal Oil & Foods Ltd
66	Marvel Tea Estate India Pvt Ltd	104	Wrigley India Pvt Ltd
67	Mayur Foods Product	105	Yakult Danone India Pvt Ltd

Better than a thousand days of diligent study is one day with a great teacher.

A Japanese Proverb



A person who won't read has no advantage over the one who can't read.

Mark Twain

MANAGERIAL HIERARCHY AND ETHICAL BEHAVIOURAL PRACTICES

A Study in BHEL

T. S. Tomar*

Abstract

Purpose: *This study seeks to examine the extent of ethical behaviour of employees working in a large public-sector manufacturing company and to measure the attitude of the employees working at different levels of managerial hierarchy.*

Research Methodology: *The study is based on a sample of 422 employees working in BHEL, Haridwar. The data was collected through convenience sampling, using a questionnaire, and was analysed through factor analysis and structural equation modelling. SPSS version 22 and AMOS version 20 were also used to compute the results.*

Findings: *The study has revealed that the ethical practices and managerial hierarchy are inter-related. The results support the proposition that the employees having comparatively less work experience tend to adopt more ethical practices.*

Limitations / Future Research: *The study is limited to the practices of employees working in public-sector heavy electricals firm, with a sample of 422 employees. There is an ample scope for further research on employees' ethical practices in other undertakings as well as inter-firm comparative study on ethical practices of employees.*

Policy Implications: *The study broadens the scope of previous investigations and suggests improving ethical practices of employees working at higher managerial levels in PSUs for improved financial performance.*

Contribution / Value: *The study extends the existing literature by examining the ethical attitude of employees working at different levels of managerial hierarchy of Indian PSUs.*

Key words: *Managerial hierarchy, Ethical practices, Organisational justice, Ethical leadership, BHEL*

INTRODUCTION

In an era of globalisation, corporations face the dilemma of how to assess, and what constitutes the ethical behaviour. Different countries and firms attach varying meanings of what merits ethical concern and different forms of institutionalising ethics. It is important to understand these differences as companies conduct business in multiple markets.

The question of how to elicit ethical conduct in corporations has become a major concern as the media bombards us with reports of unethical and illegal behaviour by employees as well as executives. The prevalence of unethical conduct in the ethics and management literature, as well as the action taken by companies in recent years, has not resulted in the desired level of ethical behaviour.

Rationale of the Study

Business ethics is based on the principle of integrity and fairness and concentrates on the benefits to the stakeholders, both internal and external. Stakeholders include those individuals and groups without which the organisations do not have an existence. It includes shareholders, creditors, employees, customers, dealers, vendors, government and the society. Ethical values are honesty, responsibility, fairness, respect, openness, and citizenship.

Ethical behaviour is a complex phenomenon. Therefore, the employees often look to role models, influential people, and their managers, for guidance in how to behave. People in positions of authority are influential in driving others to ethical or unethical behaviour. The extent of ethical practices is related to job satisfaction, dedication to the leader, and a willingness to report job-related problems. It is also important to realise that within organisations numerous individuals and groups have some modicum of behaviour, if not quite ethical (Shuck Brad *et al.*, 2016). Formal codes of conduct, ethics committees, ethics communication

system, ethical training programmes, and a disciplinary system are the six components of a sound ethics programme for enforcing ethical practices in an organisation.

Concept of Ethical Behaviour

Even if an issue has moral intensity, some employees might not recognise its ethical importance because they have low ethical sensitivity. Ethical sensitivity is a personal characteristic that enables people to recognize the presence of an ethical issue and to determine its relative importance. Rather, they are more likely to sense whether an issue requires ethical consideration; that is, they can more accurately estimate the moral intensity of the issue. Ethically sensitive people tend to have higher empathy. They also have more information about the specific situation. For example, accountants would be more ethically sensitive regarding the appropriateness of specific accounting procedures than someone who has not received training in this profession.

An important first step toward reaping any benefits of ethical implementation is the infusion of an ethical orientation into the culture of organisations. Thus, across business disciplines, there is an increasing interest in examining the effect of codes of ethics on a firm's climate, culture, activities, and behaviour (Andras *et al.*, 2016). This interest has been heightened by the fact that legislators across the globe in recent years have advised or required companies to develop and apply codes of ethics (Pradhan and Pradhan, 2014).

Jerald Greenberg (2016) observes that positive organisational behaviour is an approach to organisational behaviour based on positive psychology and emphasizing strengths rather than weaknesses. Stanwick and Stanwick (2016) observed that descriptive ethics is the presentation of facts related to the specific ethical actions of an individual or organisation.

Ethics also involves the evaluation and application of certain moral values that a society or culture has

come to accept as its norms. It is generally described as a set of principles or moral conduct (Fernando, 2016). Priyanka Yadav and B.K. Punia (2016) observed that the outstanding performance is not only the outcome of common efforts but also due to the fact that organisations need employees with a desire to move beyond the formal job expectations. Amongst the most popular instruments used when attempting to inject ethics into organisational life is the code of ethics. In fact, such codes are often the first formal structure to be established when the attempt is made to raise the ethical profile of an organisation. The popularity of codes stems from the fact that they are very adaptable; they are used in all types of regulatory environments, from external regulatory regimes to self-regulatory and enforced self-regulatory regimes (Andrew Brien 2013).

REVIEW OF LITERATURE

The studies reviewed here are classified into following three categories:

1. Studies on Ethical System and Codes;
2. Studies on Ethical Orientation; and
3. Studies on Ethical Leadership and Decision-making.

Studies on Ethical System and Codes

Louis and Long (2000) found that the ethical system infrastructure is composed of three major factors- means, motivation, and opportunity. Means are defined as organisational rules, policies, and procedures. Motivation focuses upon the values and the interests being pursued by the position occupant and the organisational value system, while the opportunity is discussed in terms of the environment in which the dilemma occurs, proposing that position in the hierarchy presents its own unique set of an ethical dilemma.

Sean and Tim (2002) suggested that ethics codes could contribute to ethical behaviour by influencing the perceptions that employees have about the ethical values of organisations. Most large companies and many smaller ones have

adopted ethics codes, but the evidence is mixed as to whether they have a positive impact on the behaviour of employees.

Avshalom and Dalia (2004) found that in the process of implementing an ethical code of conduct, a business organisation uses formal methods. Of these, training, courses and means of enforcement are common and also suitable for self-regulation. Their study indicates that the informal methods are likely to yield greater commitment with respect to both employee attitudes and the formal method.

The moral ideology of banking and insurance employees in Spain has examined along with supervisor role modelling and ethics-related policies and procedures for their association with ethical behavioural intent (Pablo and Ricardo, 2011). In addition to main effects, they found evidence supporting that the person-situation interactionist perspective in supervisor role modelling had a stronger positive relationship with ethical intention among employees with relativists' moral ideology.

Studies on Ethical Orientation

Bahman *et al.* (2005) examined the relationship between the psychological construct or hierarchic managerial role motivation and the moral construct of role-related ethical orientation. As hypothesized, the respondents with higher levels of managerial role motivation demonstrated greater managerial role related ethical orientation as compared with their less-managerially motivated counterpart.

Weihui Fu *et al.* (2011) found that ethical behaviour of peers and ethical behaviour of successful managers had a significant impact on organisational commitment. The four facets of job satisfaction (pay, coworker, supervision, and work itself) had a significant impact on organisational commitment. Age of employees also significantly impacted organisational commitment. Perceptions of ethical behaviour of successful managers, satisfaction with work, and gender were

significantly correlated with social desirability bias. Weihui Fu and Satish P. Deshpande (2012) examined the factors impacting the ethical behaviour of employees of a Chinese state-owned steel company. Only rules climate had a significant impact on the ethical behaviour of respondents. Other ethical climate types such as professional, caring, instrumental, independence, and efficiency did not impact the ethical behaviour of respondents. Ethical behaviour of peers, ethical behaviour of successful managers and over claiming had a significant impact on the ethical behaviour of subjects.

Shane and R. Wayne (1993) investigate current linkages between ethical theory and management behaviour. The vignettes used in this investigation represent ethical dilemmas in the areas of coercion and control, conflict of interest, physical environment, and personal integrity. The results indicate that even with the heightened state of ethical awareness that has evolved in recent years the link between ethical philosophy and management behaviour remains basically the same as it was in the mid-1980s. Specifically, practitioners still rely almost totally on the utilitarian ethical philosophy when making business decisions.

David *et al.* (2008) explore the impact of ethical managerial behaviour on the development of social capital. They argue that a managerial behaviour based on the true concern for the well-being of employees, as well as their motivational and ethical development, can be particularly important for the generation of social capital in the organisation.

Studies on Ethical Leadership and Decision-Making

It is found that ethical leadership is positively and significantly associated with transformational leadership, the transformational culture of the organisation, contingent reward dimension of transactional leadership, leader effectiveness, employee willingness to put in extra effort, and employee satisfaction with the leader. However, it

is also found that ethical leadership bears no correlations with transactional leadership. Also, it is negatively correlated with laissez-faire leadership and transactional culture of the organisation (Toor and Ofori, 2009).

Stephan and Robert (1992) examined selected behavioural aspects of ethical decision making within a business context. Vitell *et al.*, (1993) address a significant gap in the conceptualization of business ethics within different cultural influences. Deshpande (1996) examines the ethical climate and ethical practices of successful managers of the large non-profit organisation. Zgheib (2005) investigated the extent of use of the three principles of ethics- utility, morality, and justice, in managerial ethical decision making, in addition to the personal attitude towards them. Oumlil and Balloun (2009) investigate ethical perceptions, religiosity, personal moral philosophies, corporate ethical values, gender and ethical intentions of U.S. and Moroccan business managers.

Ralph *et al.* (2013) explored the major factors that lead to ethical dissolution in an organisation. They found that employees working in the public sector in educational institutions take more ethical aspects into account than employees working in the private sector. Mustafa Fedai and Mehmet (2016) examined the relationship between organisational ethical climate and innovative behaviours of middle-level managers in companies. According to them, Employees with high spirit and positive work behaviours are key assets to a corporation, and attracting and retaining such employees builds a strong image of an organisation.

Erik and Jack Simmons (2018) examined the link between the Islamic work ethics (IWE) and organisations citizenship behaviours (OCBs) and the mediation role of employee engagement among the female academic staff of Pakistani universities. Nidhi Yadav and Shikha Dixit (2017) attempted to examine the relationship between learning agility and authentic leadership development.

This study was motivated by the fact that no

research has been conducted to test ethical behaviour in terms of managerial hierarchy in organisation. We tested behavioural practices of employees in Bharat Heavy Electricals Limited (BHEL), Haridwar, and compared it with managerial hierarchy. Managerial hierarchy is an organisational and reasonable process that signals sectoral performance. Managers may face difficult economic circumstances that make them cross the line and manipulate financial statements to reflect good future performance that is not tenable.

OBJECTIVES OF THE STUDY

The study was conceived with the following objectives:

1. To examine the extent to which employees at BHEL conform to ethical norms;
2. To explore the extent to which the employees apply their personal and moral standards to the activities and goals of his commercial enterprise; and
3. To evaluate the ethical perceptions of the employees with respect to the hierarchy of employees.

Hypotheses

In order to achieve the above objectives, the following hypotheses were formulated for testing with empirical data.

- Ha₁: The ethical behaviour and hierarchy of employees are associated significantly.
- Ha₂: The employees at higher managerial hierarchy in the BHEL tend to be more ethical.
- Ha₃: There is a significant difference among the employees in different categories on the basis of their socio-economic characteristics.

RESEARCH METHODOLOGY

The universe of the study includes all the employees of BHEL, Haridwar, who were either working in the Central Foundry Forge Plant (CFFP) or in the Heavy Electricals Equipment

Plant (HEEP). From a practical point of view, all the employees from both the plants cannot be accessed as there is no related database available or accessible. This has led to the decision to consider employees of these plants, residing in the BHEL Township of both the plants.

Efforts were made to maintain an approximately same number of respondents from all the three categories for the purpose of exploring the difference in the dynamics of behaviour. Managers, Senior Managers and all General Managers were included in Category 1. This category consisted of all the grade holders of E-4, E-5, E-6, E-6A, E-7, and E-8. Category 2 included Engineers, Senior Engineers, Senior Accounts Officers, Deputy Managers and Junior Executives having grades of E-1, E-2, E-3, E-T, and J.E. While Assistant Engineers, Senior Artisan II, Accounts Officer, Assistant Accounts Officer, Senior Technicians, Additional Engineers and Deputy Engineers working in grades of A-8 to A-12 and S-0 to S-8 at BHEL, Haridwar were placed into Category 3.

For analyzing the data, the statistical techniques used included the measures of central tendency, reliability analysis, chi-square (χ^2), independent sample *t*-test and one-way analysis of variance. In conjunction with the aforesaid simple statistical techniques, the computation of results in the study also included advanced tools, namely, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM). Further, SPSS version 22 and AMOS version 20 were used to compute the results.

DATA ANALYSIS AND INTERPRETATION

The primary data was gathered through a survey, using the questionnaire. A rating scale was used to indent the ethical behaviour rating in the universe through testing the hypotheses.

Validity and Reliability of Data

First, the 15-item inventory developed to assess the ethical behaviour of the employees in BHEL has been scrutinised against the normality norms. For this purpose, the criterion suggested by Hair *et al.* (2012) and Magotra *et al.* (2017) was used. The said criterion implies that for the data to be evenly distributed and static, the values of standard deviation, skewness and kurtosis should be reviewed. These values should be close to one in the case of standard deviation and between ± 3 in the case of skewness and kurtosis.

Internal Consistency of Measures

After ascertaining the normality of the data, the fourteen-item battery assessing ethical behaviour has been exposed to the Cronbach alpha (α) statistics as an attempt to scrutinise the internal consistency of the construct of ethical behaviour. The Cronbach α approach was considered as one of the common yet effective method of analysing the internal consistency of the constructs. Under the Cronbach α approach, the guidelines given by Hair *et al.* (2012) were considered, which state that the values of Cronbach α should be ≥ 0.50 and the probable item for deletion should be explored through 'if item deleted criterion'.

Exploring the Dimensionality of the Scale

Since the scale intended to assess ethical behaviour of the employees of BHEL comply with normality and reliability norms, the scale was exposed against the test of dimensionality. In order to serve the purpose, exploratory factor analysis (EFA) was employed. Within the framework of EFA, the criteria prescribed by Hair *et al.* (2012) and Lorenzo-Seva (2013) which states that primarily, the results of sampling-adequacy test, namely, Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) test, should be examined and if the data qualifies this test, values of communalities, factor loadings, percentage of variance extracted and latent root criterion should be checked for

establishing the dimensionality of the construct in consideration. For analysing these results, the principal component analysis with varimax rotation was used as this method is one of the most effective methods which summarise the data with minimal loss of information (Hair *et al.*, 2012).

In the present case, primarily, the values of Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) test were examined. The values of Bartlett's test of sphericity (symbolised through χ^2 value), equal to 1715.865 was found to be statistically significant ($p < 0.01$). Also, the value of the KMO test equals to 0.804 is found to above the minimum prescribed criterion value of 0.50 as recommended by Hair *et al.* These results validate the sampling adequacy of the data. Further, look at the values of communalities reveals that the values are below the prescribed minimum limit of 0.50, in case of three measures, namely, *e4*, *e11*, and *e12*, thereby indicating the need of drop these measures from the scale.

Consequently, *e4*, *e11* and *e12* have been dropped from the scale and again, EFA has been applied for the improved eleven measure inventory of ethical behaviour. For the revised eleven item inventory also, the data qualifies the sampling adequacy test. But the values of communalities are again found to be below the minimum prescribed limit of 0.50 in case of *e1* and *e2*. Thus again, *e1* and *e2* have been dropped from the scale and the results of EFA have been computed.

Substantiating the Structural Validity

Adding more to the statistical aptness of the aforesaid scale, structural validity of the scale was also ascertained through the confirmatory factor analysis (CFA) approach and on the basis of the recommendation made by Hair *et al.* (2012). The said criteria highlight four sub-components of construct validity, namely, face validity, homological validity, convergent validity and discriminant validity. The face validity is a subjective analysis towards the extent to which the measures correspond with the conceptualisation of

the construct. In the present case, the aforesaid scale was put forth to some experts in the related field which confirms the face validity of the construct. Further, homological validity states that the measures should be related to the corresponding construct depending upon the available instances from the literature. Accordingly, the homological validity of the construct of ethical behaviour has been analysed and established. Convergent validity has been defined as the extent to which the measures are found to be statistically related with

corresponding construct. The same can be checked through the values of factor loadings and average variance extracted. Both the values should be greater than 0.50.

Profiling of Respondents on the basis of Managerial Hierarchy

The demographic profile of the respondents is shown in **Table 1**.

Table 1: Profiling of Respondents on the basis of Managerial Hierarchy

Facets	Category	N	Mean	t-Value	Df
Age	High	218	39.97	1.316	420
	Low	204	38.64	1.317	419.11
Experience	High	218	13.24	2.475**	420
	Low	204	15.67	2.464**	417.71
Salary	High	218	75.00	-1.459	420
	Low	204	79.20	-1.461	419.71

Note: **Statistically significant at 5 percent level of significance.

Interpreting the results on the basis of the category of employees as shown in **Table 7** with a distinct level of ethical behaviour, it is found that the maximum of the respondents (94) with a higher level of ethical behaviour belong to lower level management (i.e., Category 3), while the maximum number of the respondents (75) possessing low ethical behaviour belong to the higher level of management (i.e., Category 1).

Exploratory Factor Analysis

In order to verify the structural validity, the maximum likelihood method has been employed under the CFA framework as it was considered as one of the effective methods. A look at the values of factor loadings has depicted that the values are 0.296, 0.725, 0.628, 0.744, 0.659, 0.582, 0.023, 0.223 and 0.790 for the measures e3, e5, e6, e7, e8, e9, e10, e13 and e15, respectively. Out of the nine values, three values were found below the threshold limit of 0.50, indicating the need to drop these measures for improving the structural validity of

the construct of ethical behaviour. Thus, these three measures have been withdrawn for the scale and for the modified, six item-inventory, the results of CFA were once computed. For the modified scale, all the values of factor loadings were found to meet the minimum prescribed limit of 0.50. The values of factor loadings were found to be 0.707, 0.644, 0.751, 0.670, 0.575 and 0.783 for e5, e6, e7, e8, e9, and e15, indicating the convergent validity. Moreover, in order to back the results of factor loadings, the values of average variance extracted was also computed and considered.

The value of the average variance extracted comes out to be 0.587, thereby, validating the structural validity of the constructs. In the present case, the discriminant validity could not be considered. Indeed, it cannot be computed since only one construct was included in the present case and discriminant validity shows the statistically-significant difference among the constructs which are distinct either theoretically or on the basis of past available research evidence.

Table 2: Results of Exploratory Factor Analysis

Measures	Extraction	Factor Loadings
e3	0.741	0.858
e5	0.614	0.665
e6	0.659	0.808
e7	0.685	0.815
e8	0.595	0.763
e9	0.544	0.585
e10	0.710	0.825
e13	0.734	0.834
e15	0.696	0.682
Latent Root Criterion (eigen value)		3.525
Percentage of Variance Explained		66.422
Bartlett's Test of Sphericity		1171.595*
KMO Test		0.790

Note: *Statistically significant at 1 per cent level of significance

Further, subsequent to the latent root criterion norm, the eigen value as given in **Table 2**, is 3.525 for single-factor solution which is above the norm suggested by Hair et al. (2012), i.e., > 1. The percentage of variance was found to be 66.422, which is adequate for the measures to assess the construct. To summarise, the results of the EFA have established the dimensionality of the scale measuring ethical behaviour of the employees.

Parameter Estimates and Critical Ratios

Also the results of model fit indices were analysed to re-confirm the statistical aptness of the construct as well as its measures. In this regards, initially, the values of parameter estimate and critical ratios were scrutinized. This is shown in **Table 3**.

Table 3: Results of Parameter Estimates and Critical Ratios

Path	Parameter Estimates	Critical Ratios
e5 <---	EB 1.12	12.334*
e6 <---	EB 0.916	11.395*
e7 <---	EB 1.041	12.932*
e8 <---	EB 1	-
e9 <---	EB 0.596	10.329*
e15 <---	EB 1.32	13.336*

Note: *Statistically significant at 1 percent level of significance

All the values of parameter estimates were found to be meet the prescribed criterion (i.e., ≥ 2) and all the values of critical ratios were found to be statistically significant ($p < 0.01$).

Model of Fit Indics

Furthermore, the model fit indices, namely, CMIN, RMSEA, GFI, AGFI, and CFI were also examined to ensure model fitness. This is shown in **Table 4**.

Table 4: Model Fit Indices

Model Fit Indices	Calculated Values	Referential Values
CMIN	4.902	< 5
RMSEA	0.058	< 0.06
GFI	0.968	≥ 0.850
AGFI	0.904	≥ 0.80
CFI	0.964	≥ 0.90

Note: In Table 4, CFI denotes the Comparative Fit Index, AGFI denotes the Adjusted Goodness Fit Index, GFI denotes Goodness of Fit Index, RMSEA denotes for Root Mean Square Error of the Approximation and CMIN represents the value calculated by dividing chi-square value by degree of freedom.

As depicted in **Table 4**, all the values are in compliance with the referential values suggested by Magotra et al. (2016) and Hair *et al.* (2012).

Managerial Hierarchy and Ethical Practices

Synthesising the results of normality, reliability, dimensionality, and validity, the aforesaid

discussion has substantiated the statistical appropriateness of the scale assessing the ethical behaviour of the employees, thereby, making the scale fit for any empirical examination. Thus, the said scale has been utilized to test the hypothesis of the study. This is shown in **Table 5**.

Table 5: Managerial Hierarchy of Employee and Ethical Practices

Category	N	Mean@	F- Value
1	130	14.62	28.43*
2	141	12.15	
3	151	11.15	

*Note: *Statistically significant at 1 percent level of significance; @ higher value indicates low ethical behaviour*

Hypothesis Testing

H_{a1}: The ethical behaviour and hierarchy of employees are associated significantly.

Since the scale assessing the ethical behaviour has shown statistical aptness, the aggregate score was been taken to accomplish the objective of the study as well as the related hypothesis. Further, the

sampled employees were categorized into three categories, namely, Category 1 (Top-Level Management); Category 2 (Middle-Level Management) and Category 3 (Lower-Level management). Furthermore, for testing H_{a1}, correlation technique was employed. The application of Pearson correlation resulted in coefficient value which equals to -0.336 ($p < 0.01$). Since this value is statistically significant at 1

percent level of significance, **H_{a1} is accepted.** Thus, the ethical behaviour and hierarchy of employees are associated significantly. Further, both the variables were found to be inversely related as reflected through the minus sign of the coefficient value. This indicates that enhancement in one variable would reduce the other variable and vice-versa.

H_{a2}: The employees at higher managerial hierarchy in the BHEL tend to be more ethical.

The F-Values computed are summarised in **Table 5.**

The F-value shown in **Table 5** was found to be statistically significant ($p < 0.01$). This implies that there is a statistically significant difference among the three categories. An insight into the means values depicts comparatively higher mean values in case of Category 1 (14.62) followed by Category 2 (12.15) than the third category (11.15). Since higher values on the scale reflect low ethical behaviour, the results indicate that the sampled employees in Category 1 (which includes the top-level management) are comparatively less ethical than employees in the remaining two categories since higher values in the scale depict lower ethical behaviour. Further, the employees in Category 2 (which includes middle level employees) are found

to be comparatively more ethical than employees in Category 1 but less ethical than employees in Category 3. While, the lower level sampled employees (included in Category 3) were found to be comparatively more ethical than the top level and middle level employees. Although the results of one-way a nova analysis depicts statistically significant difference in the ethical behaviour of employees serving the organisation at distinct level of management, yet the level of ethical behaviour is not found to be more in case of employees working at higher managerial hierarchy, Thus, H_{a2} has been rejected and it has been deduced that the employees at lower managerial hierarchy in the BHEL tend to be more ethical.

Managerial Hierarchy and Socio-economic Characteristics of Employees

An attempt was made to explore the existence of statistically significant difference among the sampled employees, categorized on the basis of their level in management, across socio-economic characteristics, namely, age, salary and work experience. Thus, one-way ANOVA analyses have been again employed and the results are compiled in **Table 6.**

Table 6: Managerial Hierarchy and Socio-economic Characteristics of Employees

Socio-Economic Facets	Category of Employee	N	Mean	F- Value
Age	1	130	45.35	37.25*
	2	141	37.20	
	3	151	36.13	
Work Experience	1	130	20.52	39.02*
	2	141	11.96	
	3	151	11.66	
Monthly Salary	1	130	110.25	584.17*
	2	141	77.66	
	3	151	47.84	

Note: 1. * statistically significant at 1 percent level of significance;
 2. 1= employees in top-level management, 2= employees in middle-level management, and
 3= employees in lower level management.

H_{a3}: There is a statistically significant difference among the employees in different categories on the basis of their socio-economic characteristics.

The age, work experience, and monthly salary have statistically significant difference among the respondents belonging to the distinct level of management (i.e., top level, middle level and lower level) since the f-values in all the three cases is noticed as per **Table 6** to be statistically significant ($p < 0.01$). Thus, H_{a3} has been accepted and it has been inferred that there exists statistically significant difference among the employees in

different categories on the basis of their socio-economic characteristics exists.

Ethical Behaviour and Socio-economic Characteristics

Moreover, an attempt was also made to ascertain the relationship between the level of ethical behaviour and the socio-economic characteristics of the sampled employees and the results are compiled in **Table 7**.

Table 7: Relationship between Ethical Behaviour and Socio-economic Characteristics

Construct		Category of Employees			Total	χ^2 Value
		1	2	3		
Ethical Behaviour	High	55	69	94	218	11.755*
	Low	75	72	57	204	
Total		130	141	151	422	

Note: *Statistically significant at 1 percent level of significance.

As is apparent from the t- values in the table, the results are found to be statistically significant ($p < 0.05$) in case of experience only. This signifies that the level of ethical behaviour is associated with the experience of the employees. The lower mean values (13.24), in case of employees falling in the high-ethical-behaviour category, depicts that employees, with comparatively less work experience possess better ethical behaviour, whereas the relatively higher mean value equals to 15.67, in case of respondents belonging to low ethical behaviour category, reflects that the employees with relatively more work experience tend to be comparatively more unethical than other employees. Besides, the results pertaining to the relation of ethical behaviour with age and salary are found to be statistically insignificant. It can be inferred that age and salary of the employees have no significant association with their ethical behaviour.

CONCLUSIONS

The following are the major inferences drawn from the study.

1. Social values are the most relevant to the ethical practices of the organisation. It is evident that institutional factors, personal factors and the organisational factors influence the ethical standards of the employees.
2. It is evident that meaningful work, organisational justice and privilege perceive fairness and positive synergy to improve ethical practices in the organisation, resulting full engagement and satisfaction of employees working at different managerial hierarchies.
3. Karl Pearson co-efficient of correlation (r) and p value indicate that ethical practices and managerial hierarchy of employees working at BHEL, Haridwar are associated significantly. The ethical practices and managerial hierarchy are found to inversely related as reflected by a

- negative sign of the co-efficient of correlation (r).
4. One-way ANOVA analysis makes it evident that the dependent variable (ethical practices) and independent variable (hierarchy of employees) are significantly differ. The higher value of average indicates unethical practices of employees, as all the statements in questionnaire are unethical. It proves that higher managerial hierarchy in the population tends to be more unethical practices.
 5. The ethical practices of employees and their socio-economic characteristics of age, work experience, and salary are significantly different. Employees working in higher age group are found to be of higher managerial hierarchy and greater experienced and salaried employees of the population are found working in higher managerial hierarchy.
 6. Interpreting the results on the basis of categories of employees with distinct level of ethical practices, it has been concluded that maximum number of respondents with higher level of ethical behaviour belongs to the lower level management. However, maximum number of the respondents adopting unethical practices belongs to the highest level of managerial hierarchy.
 7. On the basis of statistical results to explore the relationship between the level of ethical behaviour and socio-economic characteristics of the sampled employees. The results make it evident that the level of ethical practices is associated with the experience of the employees. However, the socio-economic characteristics of age and salary are not found to be statistical significant. The lower mean values in case of employees falling in high ethical behaviour category depicts that the employees with comparatively less work experience, tends to adopt more ethical practices and vice-versa. Whereas the relatively higher mean values in case of respondents belonging to low ethical behaviour category, reflects that the employees with relatively more work experience tend to be comparatively more unethical than other employees.

Policy Implications

Since more studies are concentrated on the negative aspects of deviance, the positive nature of deviance behaviour that is much effective in bringing change to the organisations and its employees are hindered. With the help of this framework, it would be useful for organisations to determine how the climate and culture of the organisation would play an important part in explaining its relationship with destructive and constructive behaviours of individuals. A significant relationship of climate with both deviances would suggest that when individuals feel the climate to be supportive, rewarding, warm, structured and risk-free, they would involve in constructive deviance in place of a destructive deviance. And the effect of culture would enhance these results with collectivist becoming less indulged in destructive deviance and more involved in constructive deviance.

Empirical and theoretical work on the domain of ethical practices has been mainly concentrated in the disciplines of management science, organisational behaviour, and industrial psychology. Because these fields themselves inform and support the theory and practice of HRD, ethical behaviour of employees have not been wholly ignored with the HRD field. Yet a further understanding of the behavioural phenomenon in connection with issues of interest to the HRD field could prove fruitful, formal workplace behaviour, for example, might be improved by individuals who exhibit organisational citizenship behaviour beyond knowledge sharing. It might be interesting to consider whether individuals who go above and beyond in their job tasks might also do the same in a workplace learning environment and help their fellow co-workers learn irrespective of the managerial hierarchy in the organisations. If this is so, and if these behaviours fall outside of a hierarchical role, these behaviours might be considered a type of learning citizenship such that these behaviours are discretionary, go formally unrewarded and contribute to organisational or individual learning.

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CORPORATE FRAUDS AND THE AUDITOR'S RESPONSIBILITY

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Abstract

Purpose: *The study is intended to examine the concept and types of fraud, as given in the new Companies Act and to identify the types and victims of corporate frauds, with reference to the infamous corporate frauds in India, and the existing legal provisions intended to prevent, curb and regulate corporate frauds in India.*

Design/methodology/approach: *The study is mainly based on the secondary data. Some data was also collected from the corporate executives' investors and government officers.*

Limitations: *The study is confined to the corporate sectors. However, similar type of frauds might be indulged in other sectors also.*

Findings: *The study has emphasised the need for strengthening of internal control system, auditing, timely reporting of fraud by auditors and companies, effective 'due diligence' by banks and financial institutions and more professionalism on the Board of Directors and strong internal control system.*

Policy Implications: *The prevention of corporate fraud reduces the anxiety and improves the stakeholders' confidence which affect resources and reputation of the company.*

Contribution/Value: *The findings of the study will be helpful to the policy-makers and regulatory bodies to curb corporate frauds.*

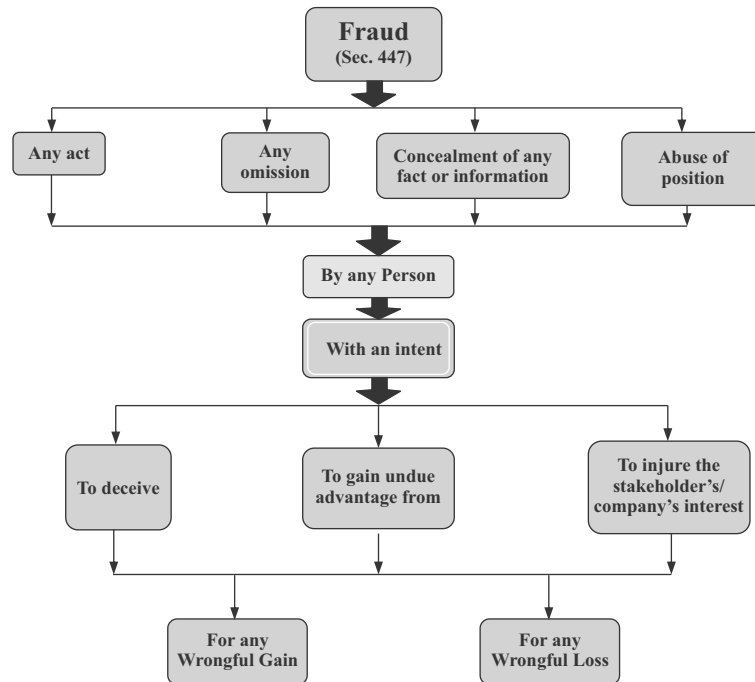
Key words: *Corporate frauds, Regulatory provisions, Auditor's responsibility, Punishments*

THE CONCEPT AND COMPONENTS OF FRAUD

A fraud committed by or against a company is often referred to as a corporate fraud. The corporate sector is mainly regulated by a comprehensive company law. Presently, the Companies Act, 2013

contains the legal measure for regulating the corporate sector in India. The said Act has, for the first time, introduced the concept of 'fraud', under section 447, which is depicted in the **Figure 1**.

Figure 1: Components of Fraud under the Companies Act, 2013



The concept of fraud, as given in the new Companies Act is inclusive, not comprehensive, and pertains only to the affairs of a company or body corporate. Certain terms used in the definition need elaboration.

Act/ Omission to Act: While an act of omission is the failure to perform an act expected to be done by a person, an act of commission is doing an act that causes harm.

There is *actus rea* (conduct of the accused), also called the act of the offender, which is related to doing or performing of a particular act. As far as the omission is concerned, it is omitting of an act which a person was bound to do or act.

Fraudulent Concealment: The word 'concealment', as per *Shorter Oxford English*

Dictionary (3rd Edition), means 'the intentional suppression of truth or fact known, to the injury or prejudice of another'.

The word 'fraudulently', appearing in section 206 of the Indian Penal Code, 1860 (IPC) cannot be interpreted as meaning nothing more than 'dishonestly'. The two words do not mean exactly the same thing. A dishonest act is not necessarily a fraudulent act. The elements which make an act fraudulent are, first deceit or an intention to deceive and in some cases mere secrecy. Where there is neither an intention to deceive, nor secrecy, the act, though dishonest, is not fraudulent [1937 *MWN* 462; 46 *LW* 139; AIR 1937 *Mad* 713(1937) 2 *MLJ* 802.].

'Fraudulent concealment' means the deliberate hiding or suppression, with an intention to deceive

or defraud other persons of a material fact or circumstances, by a person which he is legally bound to disclose. Any fraudulent failure to reveal the information which some one knows and is aware that he should, in good faith, communicate to another, such as the failure to disclose a defect in a product or omitting one's assets from a bankruptcy scheme to keep them from being available for distribution to creditors.

Fraud by Abuse of Position: Many cases of the most serious frauds and corruption are committed by the people at the top who have the power to conduct fraudulent transactions and cover them up. There are several things which suggest someone is abusing his position and could actually be committing fraud.

By any Person: While the Companies Act, 2013, does not define the concept of a 'person', its meaning is given under Section 11 of the IPC. Every person who has been charged for committing a crime in India is liable for punishment without distinction of caste, religion, creed, sex, or colour. However, the Criminal Courts are barred from initiating any proceeding against certain persons, which include:

1. Acting President and Governors;
2. Foreign Sovereigns; and
3. Ambassadors, companies and corporations.

Companies and corporations are excluded since these entities are artificial juridical persons and the acts of these are performed by an individual or a group of individuals. Therefore, the criminal courts are exempted to award any punishment of imprisonment to a company, but a fine can be imposed on a company or corporation. Further, under different enactments, like the Food Safety and Standards Act, 2006, and the Essential Commodities Act, 1955, a company can be prosecuted and convicted. But a company or corporation cannot be prosecuted for offence, which is committed by an individual alone, such as, murder and dacoity. These entities cannot be indicted for offences which are compulsorily punishable with imprisonment. Except this, they can be held liable for the criminal acts or omission of its directors, employees or authorized persons.

Intent: An act of fraud, omission or concealment must have been done with intent:

- (a) To deceive;
- (b) To gain undue advantage from someone; or
- (c) To injure the interest of (i) the company, (ii) a shareholder, (iii) a creditor, or (iv) any other person.

The emphasis of this definition is on intent. In fact, the legal system in India is replete with concepts, like 'intent', 'public interest' and 'principles of natural justice'. This is particularly true about the Indian Penal Code and certain other legislations. The term intent is of paramount importance. It is the 'intent' of a person which determines whether his action, omission, concealment of facts, or abuse of position amounts to a fraud or not.

The intent of a person must be to deceive, to gain undue advantage, or to injure the interest of the other party. The other party can be a company, or its shareholder, creditor or 'any other person' (associated with the company concerned). In a majority of criminal cases, the main element involved is *mens rea* (criminal intent), which is an intention to commit offence and pertains to the mind of the offender.

Injury: The word 'injury' denotes any harm whatever illegally caused to any person in body, mind, reputation or property. The word 'injury' has been given a wide meaning, which will include every tortuous act. An unlawful detention of a cart at a toll gate, caused due to demand for an illegal payment, amounts to injury. Threat of a decree which can never be executed is a threat of harm to an individual in his person, reputation or property. Threat to use the process of law for the purpose of enforcing payment of more than is due is illegal and such an object is a threat of injury.

Deceit: To deceive is to induce someone to believe that a false thing is true, and which the person indulging in the deceit knows or believe to be false. Deceit is the state that prompts intentional concealment or perversion of truth for the purpose of misleading. Deceit is the behaviour that is deliberately intended to make people believe

something which are not true.

As per section 415 of the IPC, a dishonest concealment of facts, or where there is a legal duty to disclose particular facts, a dishonest omission to disclose those facts, is a deception.

Wrongful Gain: The word 'wrongful' means prejudicially affecting a party in some legal right. Section 23 of the IPC defines 'wrongful gain' as a gain by unlawful means of property to which the person gaining is not legally entitled. A person is said to gain wrongfully when such person retains something wrongfully, as also when he acquires it wrongfully. Wrongful gain includes a short-lived gain.

Wrongful Loss: As defined in Section 23 of the IPC, 'wrongful loss' is the loss by unlawful means of property to which the person using it is legally entitled. A person is said to lost wrongfully, when such person is wrongfully kept out of any property as well as when such person is wrongfully deprived of the property. As in the case of a wrongful gain, wrongful loss also includes a short-lived loss.

Therefore, the fraud may be considered as funds generation, by an intentional act of person, through abusive of position and with rupture of regulations for unfair or unlawful gains through undisclosed sources by deliberately adopting the ways of deception.

Why is a Fraud Committed?

Motivation, opportunity and rationalisation are three important factors which are connected with the committing of a fraud. Motive comes from financial pressure; opportunity occurs through weakness in internal control and rationalisation is the fraudsters' internal justification for his or her act. Competitive and economic survival can be a motive to commit a fraud.

Who can Commit a Fraud?

Anyone can commit fraud and fraudsters cannot be distinguished from other people by their characteristics. From the ingredients, one may conclude that fraud is caused mainly by factors

external to the individual: economic, competitive, social and political issues, and poor control mechanism.

TYPES AND VICTIMS OF CORPORATE FRAUDS

Types

While an illegal act in service is corruption, an illegal act in business is bribery, manipulation of financial statements, mis-appropriation of assets, infringement of intellectual property rights of a person and procedure lapses in doing business. Bribery/ Corruption may be either in cash or in kind. Bribery refers to offering, giving, receiving or soliciting anything of value to influence an 'official act' while corruption is dishonest or illegal behaviour of powerful people; Misappropriation of Assets involves taking away cash and other assets in an organisation and it includes those frauds in which a perpetrator employs tricks to steal the assets of an organisation; Manipulation of Financial Statements is manipulation of balance sheet, profit & loss Account, cash flow statements to increase in financial health of a company ; procedure-related frauds are those frauds which are committed by over-ruling or bye-passing the procedures ; and corporate espionage refers to all the undercover activities that are performed by businessmen for acquiring information of intellectual property rights of their rivals.

Victims of Corporate Fraud

The most trusting people are also the most gullible and victims of fraud. The frauds are often committed by owners, employees and by even by outsiders. People, become the victim of corporate frauds outside or inside the company. The insiders, including the directors, managers, and the employees, would suffer a loss of position, reputation or standing. The outside victims would include the investors, creditors, partners, customers, suppliers, underwriters, attorneys, and the independent auditors. The list of fraud perpetrators, victims and their types are summarised in **Table 1**.

Table 1: Victims and Types of Corporate Fraud

S. No.	Victims	Type of Fraud	Fraud Perpetrator
1	Bankers	False applications for credit, false financial statements for working capital arrangements.	Companies and their Directors
2	Competitors	Predatory/ exploitative pricing, selling below cost to eliminate or prevent competition, Information piracy, Infringement of patents/ copyrights, Theft of trade secrets.	Companies and their Directors, and competitors
3	Customers	False advertising, false weights, false representations, Price fixing, Defective products, Short shipment, Overbilling, Double billing, Substitution of inferior goods, Corruption of employees.	Companies and their Directors, and vendors
4	Employers	Expense account padding, fake performance, overstating revenue and assets, overstating profits, understating expenses and liabilities, Theft of assets, embezzlement, commercial bribery, insider trading, related party transactions, manipulation/ destruction of records.	Vendors, suppliers and Contractors, Employees
5	Employees	False employment applications, false benefit claims, false expense claims, theft and pilferage, fake performance, embezzlement, corruption.	Employees and Employers
6	Government Agencies	False reports/returns, false claims, contract padding, willful failure to file reports/returns.	Companies and their Directors
7	Insurance Agencies	Fraudulent loss claims, arson for profit, false insurance claims.	Companies and their Directors
8	Stakeholders (Shareholder/ Creditors/ Investors)	False financial statements, false financial forecasts, false representations, false applications for credit.	Companies and their Directors

Infamous Corporate Frauds in India

Corporate frauds have shown an unprecedented increase in India in recent years and have posed serious questions before managers, regulators and professionals, on the effectiveness of corporate governance mechanism, regulatory mechanism, and the role of corporate and individual ethics.

Probably the first major corporate scam in the Independent India was what is commonly referred to as the Mundhra scam. Hari Das Mundhra, an industrialist and stock speculator, sold fictitious shares to the Life Insurance Corporation of India (LIC) and thereby defrauded the corporation by Rs. 1.25 crore, in 1957. He was found guilty and was

sentenced to imprisonment for 22 years. The then Union Finance Minister, T.T. Krishnamachary, had to resign from his prestigious post in the face of scathing criticism within and outside Parliament. After the Haridas Mundra case of 1957, another major scam in the mid-sixties and early-seventies, was associated with Jayanti Dharma Teja. He took loans from banks and financial institutions and

used this easy money to establish a shipping empire, in the name of Jayanti Shipping Company Limited. While he had set up this company with a paid-up capital of a mere Rs. 200/- and took government loans amounting to Rs. 22 crore. The infamous cases are summarised in **Table 2**.

Table 2: Infamous Corporate Frauds in India

S. No.	Name of Fraud/ Scam	Year/ Period	Nature of Industry	Fraud Perpetrators	Modus Operandi	Amount Involved (Rs. crore)
1.	Harshad Mehta	1992	Capital Market	Managing Director	Trading in shares at premium in stock market.	4000
2.	C.R Bhansali	1992-1996	Capital Market	Managing Director	Collecting money from public and transfer the same to non-existent companies.	1200
3.	Ketan Parekh	2001	Capital Market	Managing Director	Availing loan with the help of bankers, above the maximum banking limits.	1500
4.	Dinesh Dalmia	2001	Information Technology	Managing Director	Trading in shares which were not listed in Stock Exchange.	595
5.	Satyam	2009	Information Technology	Auditor, Director	Hugely inflated accounting entries	8000
6.	NSEL	2013	Exchange	Promoters, Auditors and Members	Fake certificates about availability of goods meant for sale	5600
7.	Saradha Group	2013	Chit Fund	Promoters	Fake Collective Investment Schemes	4000
8.	Bank of Baroda	2015	Money Laundering	General Manager, Foreign Exchange Officer	Created a fraudulent trade circuit, where exports claim duty drawback on inflated export bills and creation of shell Companies to make payment for non-existent imports.	6172

Contd..

9.	PACL	2015	CIS including Ponzi Scheme	Founder and KMP	Lure investors by raising money against bogus land allotment letters.	47000
10.	Vijay Mallya	2016	Airlines	Promoters	By criminal conspiracy cheated the consortium of banks by way of over invoicing, misrepresentation in diverting the outward remittances, layering and integration through a complex web of financial transaction.	9990
11	Rotomac	2018	Manufacturer of Pen	Promoters	Cheated consortium of 7 banks by siphoning of bank loan as diverted the sanctioned loan to another fake company from where the money was routed back to Rotomac.	3695
12.	Nirav Modi	2018	Diamond & Jewellery	Promoters & PNB executives	Core banking system of the bank was bypassed as the PNB employees issued fake LoUs to overseas branches of other Indian bank by using the International Financial Common System, SWIFT.	14356

Consequences of Corporate Frauds

Corporate frauds can have a devastating effect on the business firms where the fraud has occurred. The loss in the organisation can also have an impact on the local, state and national economic conditions based on the size of the business affected by the

fraud.

The consequences of frauds on company's stakeholders; for the organisation, and for the economy are summarised in **Table 3**.

Table 3: Consequences of Fraud

S. No.	For the Stakeholders	For the Organisation	For the Economy
1	Loss of confidence of investors in the organisation	Adverse effect on banker's attitude in respect of granting of loans and other credit facilities	Loss of confidence of foreign investors

Contd..

2	Loss of credibility of the organisation	Loss of Net worth	Adverse effect on overall growth
3	Loss of employees due to switching over	Loss of Reputation/Goodwill of the company	Higher cost of projects
4	Non-payment to creditors	Loss of dedicated and experienced employees	Imposition of more government controls
5	Non-payment to bankers against working capital facilities availed leads to NPA which damages bankers	More government regulations	Reduction in employment
6	Non-receiving of dividend for long period	Decrease in value of shares	Negative impact on the investment climate in the country
7	Loss of capital invested by investors (Indian and Foreign investors)	Loss of confidence of investors (Indian and Foreign)	Loss of Revenue due to stripping of large taxes
8	Decrease in value of investment	Bound to set unrealistic corporate targets	Negative plunge on national wealth
9	Employees losses their savings and pension	Lowering of employee's morale	Adverse effect on the Foreign Exchange
10		Loss of customers (existing and future) due to negative publicity by media	Inadequate or false returns affects policy decisions

REGULATION OF CORPORATE FRAUDS IN INDIA

The government, as provided in the Preamble to the Constitution in India, must secure to all its citizens social, economic, or political justice. The Directive Principles of State Policy are fundamental in the governance of the country and enjoin upon the state to apply these to direct its policy to sub serve the 'common good' and to see to it that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment. The main effects of the banking frauds are the loss of money by the government and huge embezzlement of funds out of the nation. Now, it is the duty of the government to make good the loss and recapitalise the bank out of tax payer's money. The government must perform its constitutional obligation to up hold the

law of the land and it is important that the faith of the public in the banks is restored through stringent punishment and confiscation of property of culprits who have or are looting the funds of the nation.

Major Legislations for Preventing and Control Corporate Frauds in India

A summary of the major enactments dealing with the prevention and regulation of corporate frauds in India is given in **Table 4**

Table 4: Major Legislations for preventing and control Corporate Frauds in India

S. No.	Name of the Act	Relevant Sections	Enforcement Authority	Appellate Authority/Court
1.	The Companies Act, 2013	Sections 7 (5), 7 (6),8 (11), 34,36, 38 (1), 46(5), 56 (7), 66 (10), 75 (1), 132, 139, 140 (5), 206, 207, 208, 209, 210, 211, 212, 213 , 216, 217, 219, 220, 221, 222, 223, 224, 229, 241, 244, 251 (1), 266 (1), 339 (3), 447, and 448	(i) National Company Law Tribunal (ii) Relevant department under the Ministry of Corporate Affairs (ii) Regional Director (iv) Registrar of Companies (v) Central Government	(i) National Company Law Appellate Tribunal (ii) High Courts
2. (i) (ii)	The Securities and Exchange Board of India Act, 1992 The SEBI (Prohibition of Fraudulent and Unfair Trade Practices relating to Securities Market) Regulations, 2003	Sections 11, 11C, 11D, 12, 12A, 15A, 15B, 15C, 15D, 15E, 15F, 15G, 15H, 15HA, 15HB, 15K, 15L, 15R, 15T, 15V, 15Y, 15Z, 20, 23, 24, 24A, and 27. Regulation - 2(1)(c)	The Securities and Exchange Board of India	Securities Appellate Tribunal followed by Supreme Court

3.	The Benami Transactions (Prohibition) Act, 1988	Sections 3,4, 5, 6, 7, and 8	Civil Courts	(i) High Courts (ii) Supreme Court
4.	The Money Laundering Act, 2002	Sections 4, 12, 13, 14, and 66	Adjudicating Authority set up under the Act	Appellate Tribunal, followed by High Court, and finally by the Supreme Court
5.	The Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974	Sections 3,4, 5, 5A, 7, 8, 9,10, 11, 12, and 12A	Central Government	High Courts
6.	The Indian Penal Code, 1860	Sections 11, 23, 25, 33, 53, 120A, 264, 403, 405, 408, 409, 410, 415, 416, 417, 418, 419, 420, 421, 463, 464, 465, 468, 470, 471,477, 477A, 481, 482, 486, 487, 489, and 511	District & Sessions Court	High Courts
7.	The Fugitive Economic Offenders Act,2018	Section 12	Adjudicating Authority set up under the Act	Appellate Tribunal, High Court, and finally by the Supreme Court

AUDITOR'S RESPONSIBILITY TOWARDS CURBING OF CORPORATE FRAUDS

The auditor plays an important role in any organisation in curbing corporate fraud. He has been given responsibilities with liabilities and duties under the Companies Act, 2013. On the basis of provisions related to auditors, the function of an auditor can be classified as follows:

Duties of an Auditor

The major duties of an auditor are:

1. To complete audit work papers;
2. To update professional and technical knowledge;
3. To ensure adequate disclosures;
4. To attend general meetings;
5. To communicate audit findings;
6. To give reasons for qualifications;
7. To sign the audit report; and
8. To ensure compliances of the audit report.

The auditor is bound to fulfil certain duties under the Companies Act, 2013. The followings are the

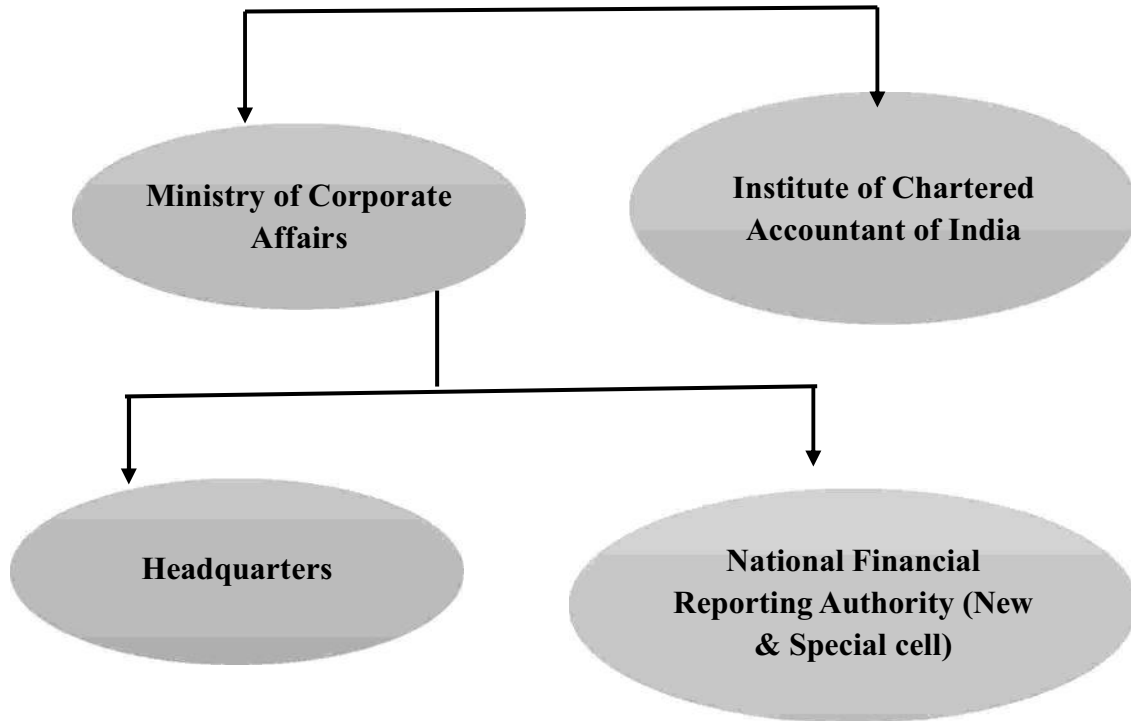
duties of an Auditor while auditing the Financial Statements of an organisation:

1. To ensure compliances with establish internal control procedure by examining records; reports, operating practices and documentation;
2. To verify assets and liabilities with documents;
3. To employ reasonable skills and care;
4. To complete audit work papers by documenting audit tests and findings;
5. To communicate audit findings by preparing a final report and discussing findings with the auditee;
6. To give reasons for qualifications or obligations;
7. To sign the audit report;
8. To attend the general meeting or meeting of audit committees of Directors etc;
9. To make adequate disclosures in the audit report; and
10. To update professional and technical knowledge by attending educational workshops, Seminars, lectures through reading of various publications

Auditor Liabilities, Responsibilities and Punishment (Relevant Statutory Provisions under the Companies Act, 2013)

S. No.	Prevailing Sections	Particulars
LIABILITIES		
1.	Section 35	Misleading contents in Prospectus
2.	Section 129	Financial Statements
3.	Section 209	Search and Seizure of Books and Papers of Auditor
4.	Section 245	Class Action Suit against Auditors
RESPONSIBILITY		
1.	Section 143(2)	Audit Report and Auditing Standards
2.	Section 143 (12)	Reporting of Frauds by Auditor
PUNISHMENT		
1.	Section 147	Imprisonment / Fine

**Authorities regulating the profession of Chartered Accountants
working as a company Auditor**



The National Financial Reporting Authority

In most of the cases during the last 5 years, it was noticed that inadequate disclosure and inadequate audits were the factors for committing a fraud. In order to regulate and penalise the auditors, a provision of setting-up of the NFRA was introduced in the Companies Act, 2013. Before the existence of the National Financial Reporting Authority (NFRA), the Institute of Chartered Accountants of India (ICAI) was empowered to punish partners of a Chartered Accountants firm while no action was taken by the Institute of Chartered Accountants of India against the firm for their wrong doings. But now, the Authority has been empowered to take action and penalise firm of Chartered Accountants also. The MCA and the ICAI are old authorities while the NFRA is a new one under the Companies Act, 2013, so the brief provisions of the same are discussed below:

Section 132 of the 2013 Companies Act lays down the provisions regarding setting up of a NFRA. Besides, the ICAI, the NFRA will also look after the

performance of those Chartered Accountants who are associated with ensuring compliance with accounting standards and policies.

The objectives of setting-up of the NFRA are:

- (i) To make recommendations to the Central Government on accounting policies and standards for adoption by certain companies or their auditors;
- (ii) To monitor and enforce the compliance of these policies and standards, to oversee the quality of the professionals associated with ensuring compliance; and
- (iii) To suggest measures for improvement in quality of professional services.

It has the power to investigate the matters of professional misconduct committed by any member of the Institute of Chartered Accountants of India. This investigation can be done either *suo motu* or on a reference by the Central Government. Once the investigation is started by the Authority, then no other institute or body can initiate any proceedings against such members. The Authority

has the power of a civil court under the Code of Civil Procedure. It has been empowered to pass an order to impose a penalty in the following manner:

- (a) In case of an individual: Rs. 1 lakh to 5 times of professional fees received.
- (b) In case of a firm: Rs. 10 lakhs to 10 times of the fees received.

Besides imposing a penalty, it can debar the member or firm from engaging in practice as the member of Institute of Chartered Accountants of India for a minimum period of six months. It can debar the member up to a maximum period of 10 years. The Central Government is also empowered to constitute an Appellate Authority consisting of Chairperson and not more than two members. Any person aggrieved by any order of the National Financial Reporting Authority can file an appeal before the Appellate Authority by depositing a prescribed fee.

Auditor's Advice and Disclosures in Case of Fraud

If the fraud relates to past years when an auditor did not represent the client, the new auditor has to advise its clients to make disclosures of fraud. An auditor, after examining the accounts, if found any fraud, should advise the client to make a complete disclosure. If client refuses, the auditor would make a report to the authorities that the accounts prepared and examined by him are unreliable on account of certain information obtained later.

CONCLUSION

In India, corporate sector corporate governance and regulatory mechanism are weak, and need amendment in the existing regulatory framework. There is a time lag between the actual occurrence of a fraud and the information reaching the public domain, and the public interest is adversely affected by such delay. Moreover, the appointment of qualified and independent directors in the audit committees might help in preventing and minimising frauds. Furthermore, the rotation of statutory auditors and compulsory appointment of qualified internal auditors would also tend to prevent frauds. The auditors also need to be trained

in order to equip them with the changed regulatory measures and technological advancements.

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RESEARCH ETHICS

Plagiarism has become a major problem in the way of research and publications, and is widespread and going unabated. We often receive articles for publication which are either partly or fully copied from others' works, despite the fact the author has given a declaration that the article is original and is an exclusive contribution to our journal, and has also submitted a certificate of cessation of copyright in our favour. The dare-devilry is shocking! This is outright deceit and cheating. Amusingly, the practice is not confined to Indian authors; foreign authors are no exception.

This time again, we came across two such cases, of plagiarism from Indian and foreign authors. The articles could have gone into print, but for the alacrity and the incisive eye of our referees and editorial team.

We have been facing another problem of somewhat similar nature, involving professional ethics. We spend a lot of efforts, time, and money in reviewing, short-listing, and editing of each article which passes the preliminary scrutiny. When asked to make further revision, or to supply the missing information, some of the authors stop responding to us and submit the paper, which has been improved through our efforts, to some other journal. They do so despite their having given a declaration that the paper is an exclusive contribution to our journal, and shall not be withdrawn at a subsequent stage unless rejected or permitted by the Editor, and having ceded the copyright in our favour.

It needs no emphasis that plagiarism is not only an unethical practice; particularly so for an academician, it is also a violation of the code of conduct governing the services of university teachers and research scholars. Moreover, it amounts to a criminal offence under the Copyright Act, 1957 (which certainly does not grant us a 'right to copy!'). Any infringement of the copyright under the Act is an offence, punishable with imprisonment for a minimum period of six months, extendable up to three years, and a fine, ranging from Rs. 50,000 to Rs. 2 lakhs.

It is worthwhile to caution such unscrupulous people. Many people have already faced disciplinary action, eventually leading to their dismissal from service. These include university teachers at all levels— lecturers, associate professors, professors (including one in a top Central university, one in a top IIM, and one in a State university), and one Vice-Chancellor of a State university. In a recent case, the Vice-Chancellor of a reputed Central University had to face imprisonment.

Writing a research article is a demanding as well as a rewarding task. A person looking for an unearned reward is surely inviting trouble for himself and a bad name for the entire academic community.

-Editor

CASE STUDY

ANKUR'S DILEMMA An Indian Expatriate in Denmark

Shreshtha Dabral* and Sameer Pingle**

Abstract

Emilio Technology is a software company, having headquarters in Copenhagen (Denmark). The company is planning to expand globally. The case, 'Ankur's Dilemma: An Indian Expatriate in Denmark', revolves around the dilemma faced by Ankur- a young engineer employed in the company. He faces challenges in adjusting with the new culture and company policies. His wife also plays a significant role in his career development.

Ankur faces problem while working with a cross-cultural team, dealing with the Danish boss. He is also not satisfied with the biased performance-appraisal rating received by him and his team. He is contemplating on either taking a lower position at Hyderabad, or becoming an expatriate in Bangladesh.

THE CASE

Ankur Misra ('Ankur') turned on his laptop and saw the date, it was his seventh work anniversary working with Emilio Technology and almost two years here in Denmark. Little did he imagine, he would receive a mail regarding the position of a junior Software Engineer at Hyderabad, India.

This evening in Denmark was more painful than the first time he had scored below nineties in Mathematics at the school. Ankur was a brilliant student. Being a topper throughout his educational career, it was no surprise that he was placed on the

zero day of placement with Emilio Technology.

His schooling was from one of the top schools in Varanasi followed by computer engineering from the prestigious B.H.U (Banaras Hindu University), Varanasi, (India).

Ankur belonged to a humble family. They belonged to a strong Brahmin family and believed that Varanasi was the right place for their son to grow up as the city could offer him a right mix of education, religious values and culture. His father worked with an electricity company, 'Purvanchal Vidyut Vitaran Nigam Limited'. His mother was a home-maker. Both of them had worked very hard towards his

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upbringing. Right from providing him the best education to the inculcation of the right set of values inculcated.

Seeing him as an accomplished engineer made them proud. There was nothing that Ankur did, which was disapproved by his parents. It was not that he didn't have a say, but his choices matched perfectly with his parents. He went for office parties and was known for his hilarious dance moves, but was a teetotaler. Even when it came to marriage, his parents asked him if he would like to get married to anyone of his choice, but his answer was as simple as himself, "I didn't realize time would fly by so quickly and earlier I was busy with my college and now with my work".

Gladly, his parents found him a well-educated Brahmin girl, Priya, who was a primary teacher in a government school. For everyone around, it seemed like a match made in heaven. Ankur had great respect for Priya as she was raised single-handedly by her father.

Five years in India before Ankur moved to Denmark were blissful for the married couple who were blessed with a baby girl during their third year of marriage. Both of them relished a simple and easy life style. They loved spending time with each other and took out time off from their daily life for religious duties.

As far as the work was concerned they displayed a high level of commitment sharpening their skills and working towards the organisational goal. Ankur worked with Emilio Technology, a top 500 fortune company, and it was a world-class organisation in the field of Information Technology.

The company was set up by two Danish friends in 1992, as partnership firm. From a partnership firm, it became a public-listed company in 2003. The company faced financial problems in the year 2007-08 during the global recession. Many young engineers were laid off during 2008-09, which affected the brand image of the company among

clients and potential employees. In 2018, the company had 7,000 employees globally. During the last 5 years, Emilio Technology rapidly expanded all over the globe, with its headquarters in Copenhagen (Denmark). The company operated on three pillars- transparency, equality, and excellence. It practised high ethical standards and was a sought-after brand globally as a dream organisation to work for young engineers. It worked four days a week, with emphasis on employees' work-life balance. It had a flat organisation structure with junior-most employees empowered to take strategic decisions. The company had a diverse workforce, its employees coming from various countries and religions. The Asian expatriates preferred to work with the company due to attractive salary and quality of work life.

Ankur had been working with Emilio Technology for the past five years and contributed in every possible way to the development of the organisation. He was one of the most competent employees coming from the southern belt of India. At several occasions, he was offered prominent projects at the headquarters also.

He knew that working at the headquarters would add credibly to his profile. He knew that being an engineer one has to opt for on-site projects, as global exposure contributes towards building networks, understanding the global markets and gaining expertise in the latest technology.

He had already declined offers seven times during the last five years. So, he himself felt that other colleagues who were less experienced than him were swiftly moving ahead in their career. He had spent all his life focussing on studies for a bright future and now when the time was right he was avoiding new possibilities of growth and development due to the sheer lack of interest in moving out of his city.

There was a lot of confusion that he was going through. He knew his parents would not agree to move with him, Priya had a government job which

was too secure to leave and to add to it they were planning for their second child. On the other hand, the on-site project offered to him was for a period of two years only. Somehow, he felt ready to take the risk which could propel his career. The family also supported his decision, as they knew he had worked really hard towards his career.

He was nervous while travelling to Denmark. This was his first trip outside India. But he had done his math and was positive about his decision.

Phase I: Exploring the Unexplored

Landing at 2.00 a.m. in a freezing temperature of -2° Celsius, was not the best start, but the beautiful, warm and cosy house made up for a comfortable stay.

The first fifteen days of work was a mixed experience for Ankur. Putting the family pictures on a desk, waiting for a common lunch hour and giving surprised looks at people having beers in the office changed quicker than the weather of London. The project he was working on was for a client based out of the United States of America (U.S.A.) for developing a B-2-B e-commerce website. The company was excited to work for the client as bagging this project would mark a strong presence of Emilio Technology in the U.S.A. In order to complete the project, Mr. Louis Abato (Manager) constituted two teams. Team 1 was assigned the development of the website, it comprised of expatriates from Japan and Malaysia namely, Akio and Iyaan, and Ankur from India. In Team 2, Keith and Gabriel from the U.S.A and Marco from Italy, were working on website testing. Both the teams were self-managed work teams as most of the members had an experience of around 5-6 years. Initial training was very critical for the functioning of the teams. It primarily discussed about the clients' needs and expectations.

Ankur was encouraged while experiencing the autonomy associated with the project along with the perks and allowances received. Having worked for many years, he thought that working on the

assigned task would not be a challenge but that was not the case. The task was similar to what he had been performing in India. But the lack of teamwork, co-ordination, owning of responsibility and acceptance of oneself was creating hurdles towards the project completion. During one of the meetings, it was evident that the Japanese expat was not in a position to receive the feedback from the manager in a constructive way because of the non-acceptance of being temperamental which added to the woes of the team.

Working as a part of a team required frequent interactions and brainstorming, but, somehow, the discussions failed to arrive at a conclusion. Ankur proposed having meeting once in every four days with their client in the U.S.A. Iyaan agreed to the idea but Akio suggested that a meeting on a daily basis or at least once in two days was very important to their project. Ankur was unsure with this high frequency of meetings but Iyaan agreed. Akio said “processes are as important as the result”. Finally, Ankur also agreed and all three of them decided to speak to Mr. Louis Abato ('Louis').

“As we have to complete the project on time, these meeting will delay the process and impact our work-life balance too. I don't think this is a good idea for this project right now,” said Louis.

The team found Louis's opinion very strong, direct and non-negotiable. But Ankur said there is no point further discussing the idea with his team. Iyaan agreed but Akio was still in shock as he had never been a part of such discussion. Team B was also struggling to meet up the expectations set by Louis and the client.

Even after the end of one year, Ankur could not adapt to the Danish culture. Everything was too methodical; there was a particular way for every process, interactions and meeting were seldom which was accompanied with extremely straight forward conversations, direct approach, which he found uncomfortable and impracticable. But he was trying to keep himself involved in work and motivated at the work place.

The weekends were extremely challenging for him, getting work home was not appreciated, he was not very fond of travelling and the weekend was rather long, which started right from Friday noon. Thankfully, technology was a friend which he best utilised to learn new vegetarian recipes from the Internet and talking to Priya and his parents.

Work took most of his time and the project had reached the last stage. But they were not in for good news as Emilio Technology lost the project. The head office was not expecting this as they believed that they had a pool of competent and experienced employees from across the globe.

Now, the expats were in dilemma about working at the headquarters and the benefits associated with being an expat. And to an utter shock, Ankur was disappointed over receiving relatively-lower appraisal rating for his team, which were accountable for website development, compared to thereafter team for website testing. Ankur felt that the manager, Louis, was biased and gave higher rating, as it consisted of expatriates from the U.S.A. and Denmark. He also felt that his team, despite working on the most difficult part of the project (development) received a lower rating. His team also felt that the current performance appraisal was not fool-proof and the difficulty level of the work was not taken into account in the process. Ankur raised this concern with the Human Resources department, but policies for the Parent Country National (PCN), Host Country National (HCN), and the Third Country National (TCN) were not transparent and structured. The company had experienced high turnover of employees who belonged to Europe and the USA.

The employee turnover for the Asians was relatively less. Hence, for the last few years Emilio Technology was trying to please and retain expatriates from the U.S.A. and Europe. This mandate left the manager concerned with no other option, but to give lower rating to others. As the company was following normal distribution, few employees were bound to get lower grades. Ankur

was demoralized and started considering this as an unfruitful move, both, financially and emotionally.

As he was feeling emotionally drained and demotivated at work, he decided to make a short trip to Varanasi which acted like the break he was looking for.

On returning back to Denmark, it became all the more difficult for time to pass by. He was just waiting for his tenure to end, which was just three months away.

Two months prior to the completion of the project, a meeting was called which surprised everyone. The meeting was intended to review the project progress and an announcement for a new project.

Louis asked Ankur to stay back after everyone left the meeting. Ankur thought that this would be a good opportunity to discuss the issue of his return to India. But he surprised, when Louis said that the new project would involve him in the developing team again. He had no words to say. In his polite manner, he said that it would be difficult as he was here for a single project. Louis however asked him to take time and reevaluate his decision. The same day, when he reached home, he wanted to share the information with Priya and his parents. He called her but a lot of people were talking in the background. Priya said they have come here to congratulate us, on our expecting a second child. He was ecstatic and jumped with joy. She said she would call him later. Ankur felt nothing could be better than this. Now, he was sure he wanted to go back.

He tried to reconnect with the office in Varanasi to find out new openings. But as the appraisal month had just gone by all the projects were running full capacity. He spoke to Louis again, telling him about his second child, Louis still said that the opportunity was not one to miss, plus the medical facility in Denmark would be an additional benefit.

Ankur was waiting for the weekend so that he could speak to his family and seek advice. His parents and

his wife were uncomfortable with the idea of taking up a new project in Denmark. Ankur was also unable to make up his mind.

Two months passed by, but the final decision was yet to be taken. The parents out-rightly rejected the idea of moving to a different country due to old age. Now Priya had to take a call. Finally, she made up her mind considering the medical facilities and the career advancement opportunities at Denmark and moved to Copenhagen. He came to pick his daughter and pregnant wife but was disappointed over leaving his old parents behind.

Phase II: Family Adjustment

The cold weather, lifestyle, and food were strange for Priya, but she knew she had taken a decision and had to stick to it. Ankur had taken a three-day break so that he could make his wife comfortable with the daily chores. She was amazed to see the automation even at the supermarket, the discipline on the roads where the best cars in the world are driven and thanks to the advancement of technology, now entertainment and communication back home wasn't even an issue. He re-joined his office and Priya got busy in the domesticated life. Not knowing the language acted as a major barrier. Even shopping groceries at the super market was a challenge not only due to the language constrain but also due to the abundant availability of pork meat which made her uncomfortable.

But Ankur always made sure to make Priya feel at ease and happy. The scenic beauty was astounding and never failed to mesmerize them during their short getaways during the week-ends. He also introduced her to the other Indian couple who were of their age. Priya was in a look out for a gynaecologist as she was in her second trimester and wanted to have a good rapport with the doctor which could help her in the delivery. But her appointments would normally be very small due to cultural differences among the patient and the doctor and the next appointment would be after a long interval. This was a cause of anxiety for her.

Denmark had its own share of struggles and Priya felt that she was unable to comply with everything. They could hardly go out for dinners as taking out children after 8:00 p.m. was not appreciated. It was looked down upon and the parents were judged as irresponsible.

Hiring nanny was extremely expensive so that directly ruled out the option of go out in the evenings. All of these things along with her condition, inability to work added to the stress and which led to conflicts and negativity at home too.

Phase III: Work Productivity at a Toss

The negativity didn't stay at home. Ankur who was known as the most calm and patient employee now often got into arguments and started missing deadlines. He was unable to concentrate, and gradually started feeling that he had taken a wrong decision on the new project.

One night when he was at the dining table for dinner with his wife and daughter, the only noise was of the video game played by the daughter which was interrupted by a mail pop up sound. He read the subject which mentioned a support engineer vacancy in Hyderabad, India. He felt dejected as this was a major step down for him compared to his last role at Varanasi.

Ankur immediately called Louis and discussed his concern. Louis always counted on Ankur's strengths and wanted him to be associated with Emilio Technology. Louis gave him another option of being an expatriate again, but in Bangladesh. It was for the position of a project head for their first project which Emilio Technology was planning to initiate from sometime.

Ankur closed his eyes and took a deep breath evaluating his options of continuing with the role at the headquarter, to move to a new set up in Bangladesh, with a better position but challenging situation both for him and the family on personal front or accepting a step down in his career, and going back to Hyderabad. "Your food is getting cold", said Priya. Daddy I have to go to the next level or the game will get over, please pass me the

laptop, said the daughter. Ankur smiled at his daughter and told Priya he was not hungry and would go for a walk.

Learning Objectives

- a) To identify the elements of the expatriation process;
- b) To describe the challenges faced by expatriates; and
- c) To identify the role of organisation in managing expatriates.

Time Allotment of the Case

- 1) Opening- 10 minutes
- 2) Protagonist characteristics- 10 minutes
- 3) Challenges- 10 minutes
- 4) Culture dimensions- 5 minutes
- 5) Expat performance – 10 minutes
- 6) Characteristics of team 1 & 2 and Mr. Louis Abato- 10 minutes
- 7) Theories/ Framework- 10 minutes
- 8) Learnings- 10 minutes

Position in the Course

This case is designed for use in a course on cross-cultural management or International HRM for M.B.A. or executive management education programme.

Board plan

Culture	Factors Affecting Expatriate Performance	Emilio Technology
<ul style="list-style-type: none"> ● Indian ● Danish ● Japanese ● Malaysian 	<ul style="list-style-type: none"> ● Ankur’s individual characteristics ● Job ● Organisation ● Now work ● Family ● General adjustments 	<ul style="list-style-type: none"> ● History ● Current practices ● Head quarter location ● Global presence ● Global expansion
<p>Decision Dilemma</p> <ul style="list-style-type: none"> ● Continuing in Denmark ● Moving to as a project head to Bangladesh ● Lower position at Hyderabad 		<p>Characteristics of Team 1& 2 and Manager Louis</p> <ul style="list-style-type: none"> ● Individual characteristics of Ankur, Akio, and Iyaan ● Individual characteristics of Louis
<p>Role of Mr. Louis Abato</p> <ul style="list-style-type: none"> ● Expatriate management ● Expatriate strategy ● Expatriate compensation ● Expatriate career management 		<p>Concepts/ Framework</p> <ul style="list-style-type: none"> ● Hofstede Model

Questions

- a) Discuss the role of Mr. Louis in managing Team 1 and Team 2. What could he do to improve the effectiveness of the teams?
- b) Compare Team 1 and Team 2 on the basis of Hofstede's framework. How is the difference affecting the organisation?
- c) Why is Ankur contemplating a job offer in Bangladesh? What are the factors affecting his decision?
- d) What are the challenges faced by Ankur as an expatriate? Discuss the role of the spouse/family in successful expatriation.

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What is to give light must endure burning.

Viktor Frankl

Author, neurologist, psychologist,
and psychiatrist (1905-1997)



The mob rushes in where individuals fear to tread.

B.F. Skinner



I alone cannot change the world, but I can cast a stone across the waters to create moves and ripples.

Mother Teresa

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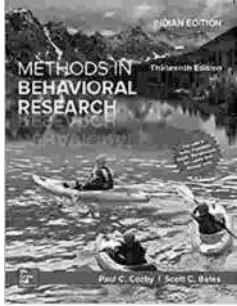
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BOOK REVIEWS



Paul C. Cozby and Scott C. Bates, *Methods in Behavioural Research*, 13th ed., McGraw-Hill Education, 2018
Pages: 438,
Price: not mentioned

Understanding human behaviour has been the focus of researchers and experts in behavioural sciences as well as among other professionals and political leaders. Over the years, research tools, techniques and methodologies have improved a lot. Computer has facilitated the analysis of large amounts of data. Internet-based social media has further facilitated the collection of data, conducting of surveys, and the analysis of large data scattered over a wide geographical area.

The purpose of designing, conducting and evaluating human behaviour has also changed over the years. Human behaviour tends to change with the change in the environment and the context. Social, economic, and political environment is changing fast due to the disruption taking place in an individual's life, work culture and the economic life of a country on account of new technologies, such as industry 4.0, artificial intelligence, robots, and digitalization, and the geo-political happenings with the emergence of China on the world scene. This has significantly impacted the personal interaction, firm's operations and the governance system with implication of impacting human behaviour. There is a lot of dynamics, complexity, uncertainty and ambiguity in the environment. This has made it important for researchers and managers to examine the changing human behaviour on account of new social, economic and political development. How do social media platforms impact relationships? How new technologies affect the work place relationships and job satisfaction? Why do some people express anxiety which disrupts their life while others facing the same situation seem to be unaffected? How do employers nurture employees' well-being in a high-

stress work place? The importance of the book lies in helping how to answer these questions by conducting scientific research.

The book will be useful in designing, conducting, and evaluating the research issues pertaining to the human behaviour. The present edition includes numerous updates and new references. It contains 14 chapters and three appendices.

In Chapter 1, the authors explain the four general goals for conducting research on behaviour: to describe behaviour, to predict behaviour, to determine the cause of behaviour, and to understand and explain behaviour. There are different ways of knowing human behaviour, such as intuition and anecdote, authority, and empiricism. The scientific approach provides objectives and a set of rules for gathering, evaluating and reporting information. The professionals use various methods to understand human behaviour. Chapter 2 describes the starting process of research with the formulation of research questions, hypotheses, and predictions. They further describe the different sources of ideas for research and three different types of reports.

Chapter 3 is very important, since it deals with ethics in behavioural research, which is an important area of research. Researchers need to understand the ethical implications of their project in terms of the risk of harming individuals, communities, and behavioural sciences. The chapter also gives a historical overview of ethics in behavioural sciences', reviews core ethical principles for researchers, describes relevant institutional structures that protect research participants, and concludes with a discussion of what it means to be an ethical researcher.

Chapters 4 and 5 explore the basic issues, concepts and measurement problems pertaining to the subject matter of the book. Chapter 4 focuses on the nature of variables, the relationships between variables, general methods for studying these relationships, and the concept of validity in

research. In Chapter 5, reliability, validity and reactivity of measures and the scale of measurement are dealt with.

Chapters 6 and 7 define the different observation methods and survey methods. First, variety of observational methods, including naturalistic observation, systematic observation, case studies, and archival research are explored. It is followed by a discussion on survey research, employing questionnaires and interviews.

Chapters 8 to 11 are related to experimental methodology, starting with a discussion on experimental design methodology, conducting of experiments, complex experimental designs, and 'single case, quasi-experimental, and development research'. In the experimental method, the researcher attempts to control all extraneous variables, select research participants, manipulate the independent variables, and measure the dependent variable. Further, the complex experimental design is explained through the idea of increasing the number of levels of independent variables in an experiment. Then, experiments are expanded with the number and types of independent variables. In Chapter 11, three different research designs for special research problems are discussed. First, the effect of an independent variable is inferred from an experiment with only one participant, called single-case experimental designs. Second, pre-experimental and quasi-experimental design is discussed. Third, research design is considered for studying changes that occur with age.

Chapters 12 and 13 focus on how to understand the research results. The last chapter is on generalisation of results to some other population. Chapter 12 explains the statistics used to describe the data: comparing group percentages, correlating scores and comparing group means. Further, it describes frequency distribution, measures of central tendency and variability, correlation coefficient, and regression. Chapter 13 describes the statistical methods used to make inferences and draw conclusions about a population on the basis of

the sample data. The last chapter considers the issue of generalisation of research findings, meta-analysis and the importance of replications.

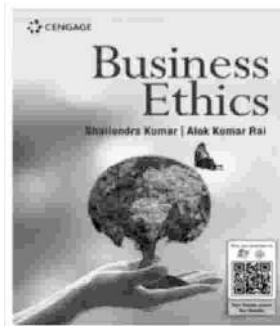
The book is quite useful for the researcher undertaking a project for understanding human behaviour. The concepts are explained through examples and illustrative articles. There are three appendices on reporting research, ethical principles and statistical tests. Anyone interested in looking at other books to add their knowledge and understanding can refer to the references given at the end of the book. There is an exhaustive list of references related to the research methodology and empirical research in the discipline of behavioural sciences.

The book also speaks about the importance and relevance of behavioural research for researchers. However, the book lacks practical questions and their solutions for researchers to understand the techniques. The major strength of the book is in providing a comprehensive picture with concepts and techniques to undertake scientific research in behavioural sciences. The researchers interested in pursuing more sophisticated statistical techniques need to refer to other books. The paper used in this Indian edition is of average quality. It may be to keep the price of the book low.

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Shailendra Kumar and
Alok Kumar Rai
Business Ethics
2019
Cengage Learning
Delhi
Pages: 400
Price: Rs. 425/-

Ethics in business is the new dimension that has gained prominence in the modern corporate world. Transparency, responsibility, and accountability not just boost the confidence of the customers, but also bolster the morale of the employees. The book titled '*Business Ethics*' is a significant contribution jointly made by Professor Shailendra Kumar of Sikkim University and Professor Alok Kumar Rai of Benaras Hindu University. They have raised and sensitize the different issues of stakeholders of contemporary organisations pertaining to corporate governance, corporate social responsibility, and business ethics at large. The textbook is a new and refreshing contribution by the authors to the field of management literature. The authors have succeeded in maintaining high standards in their writing. Unnecessary jargons have been avoided and proper referencing has been given to assist the readers in making analysis and research on ethics. The book lucidly explains the intricacies of ethics in business, and covers the syllabus of different universities. The major topics, like corporate social responsibility and corporate governance, are fully covered in the book. The book is thoroughly researched with proper referencing and could be useful not only for the students but also for research scholars.

The book is divided into ten chapters and classified under five broad sections. Chapters 1–4, in Section I, introduce the concept of business ethics, corporate social responsibility, and corporate governance. Section II of the book, consisting of Chapters 5 and 6, classify various ethical issues in business management and the institutionalization of business ethics in India, US, and the UK. In Section III, Chapters 7 and 8 explain in about the traditional and contemporary moral philosophies of business ethics. Section IV consisting Chapter 9

and 10, deals with ethical decision-making and implementation in the global economy. Section V of this book deals with nine contemporary and significant real-life industrial cases, addressing different issues of business ethics.

Every chapter of the book has opening and closing real-time cases as well as issues which may be debatable. The introduction of these debate topics in every chapter is the special feature of the book, intending to encourage critical and analytical thinking among the readers. There are examples and boxed inserts spread over the book for better understanding of concepts. The less-explored topics, like feminist care ethics, cognitive moral development, global ethics management, individual and organisation ethics management, quick and secret ethical decision-making techniques, etc., make this book a special one. The compilation of eight comprehensive cases at the book end illustrates the ethical issues confronted by business organisations. The comprehensive cases at the book end include the in-famous Bhopal gas tragedy, Punjab National Bank Scam, Satyam scam, Enron scam, Downfall of the Kingfisher airlines, and the Galleon Group insider-trading fraud makes this book a unique in its class. There are also cases on some less-explored and new topics like 'ethics of net neutrality', and 'ethical dimension of artificial intelligence' helps in developing new insight among the readers about emerging issues. On the whole, the book has more than 50 long and short cases, along with apt examples on ethical dimensions.

On the flip side, the authors have not given adequate coverage to ethical issues in management at the global level. The topic of global ethics management has been covered in Chapter 10, which deals with organisational ethics management. It would have been better if the authors had devoted a separate chapter on the topic. The paper quality and the type-setting of the book should have been better. Moreover, there is much to tell the world about the Indian ethos and culture. Ethical issues and dimensions in the Indian scriptures have been the guiding sources for thousands of years. The *Vedas*, *Puranas*, *Upanishads* and the *Bhagvad Geeta*, are the

guiding sources to the society at large. I feel that some of the 'Sutras/Shlokas' could have been discussed in detail, so that readers could be benefitted for developing sustainable values among the new generation.

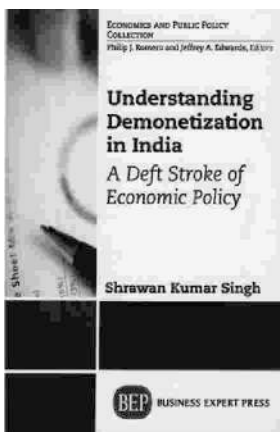
However, the book is a good effort by the authors. In a short time, it has managed to garner positive reviews and ratings on various online platforms from the teachers and students across the globe. The text is quite contemporary with a wide coverage of recent cases and at a time when the business ethics has gained prominence in the management education, the book is a welcome and refreshing contribution to the management literature.

The book has been endorsed by the various well-known academicians and scholars from India and abroad.

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Shrawan Kumar Singh,
*Understanding
Demonetization in India:
A Deft Stroke of Economic
Policy*
Business Expert Press
New York,
Edition 2019
Pages: 179
Price: e-Book \$19.95,
Print Price: \$34.95

per cent of the country's currency in circulation was withdrawn.

One may identify eight big goals of demonetization: flushing out black money; rooting out corruption; fighting terrorism by rendering counterfeit notes useless; moving to a digital and cash-less nation; expanding the tax base; integrating the informal economy into the formal sector and creating a 'larger and cleaner' GDP; lowering interest rates (by forcing the 'idle' savings into the banking system); and bringing down the real estate prices.

The demonetization story has been told many times over — to the point where one may wonder if there is anything new to be said. Two-and-a-half years on, demonetization continues to elicit the attention of almost every Indian. It was a monetary shock that still lingers over India's economy, politics, and society.

On 8 November, 2016, in a dramatic nationally-televised speech, the Prime Minister Narendra Modi announced that the top two high-denomination currency notes of Rs. 500 and Rs. 1,000 would cease to be legal tender; that is, they would no longer be accepted as a government-certified means of payment. In one fell swoop, 86

This initiative was unique. It pre-supposed an extraordinary amount of resilience in the economy, especially among the vulnerable. It affected those in the cash-intensive, informal sector of the economy. The economic impact was felt most acutely in relatively unbanked and cash-dependent areas. The fact remains that the welfare costs, especially on the informal sector, were substantial. No one would dispute that the demonetization of November 2016 slowed growth. Rather, the debate has been about the size of the effect on growth, whether it was only 2 per cent, or less. After all, many other factors affected growth in this period, especially the higher real interest rates, GST

implementation, and rising oil prices. According to a study by the US-based National Bureau of Economic Research, demonetization hit India's economic activity, but the impact had dissipated by the summer of 2017. The study used a new household survey of employment and satellite data on human-generated night-light activity to measure the effect of demonetization at the district level. The study suggested that demonetization might have long-term advantages. There may be long-term advantages from demonetization that arise from improvement in tax collection and in a shift to savings in financial instruments and non-cash payment mechanism. Evaluating the long-term consequences requires waiting for more data and an empirical strategy suited to the study of long-term effects.

Today, the political perception of demonetization is confounded by a slew of economic and political developments that have occurred after November 2016. Clearly, many factors influence the voters' perceptions and, hence affect outcomes, rendering any attempt to tease out cause and effect as unreliable. It is important, however, not to forget history as it happened. In early 2017, the election in Uttar Pradesh, India's most populous state, was widely seen as a verdict on the demonetization. This shows that a substantial share of the voters supported the demonetization despite its negative economic effects.

It is important to note that the demonetization that is supposed to have adversely affected the scores of millions dependent on the cash economy, have so resoundingly supported the policy. Hardship was imposed on many and possibly to a large extent, and yet they appear to have been its greatest cheerleaders. One reason may be that the poor were willing to overlook their own hardship, knowing that the rich and their ill-begotten wealth were experiencing even greater hardship. Demonetization could have been a device to signal regime change against the black money in particular, and the corrupt rich, more broadly. Different components, like the Income Declaration Scheme, the *Pradhan Mantri Garib Kalyan*

Yojana, demonetization, the Benami Transaction (Prohibition) Act, the Black Money, and the Imposition of Tax Act form the lump sum of efforts to tackle the menace of black money.

While the withdrawal of notes caused a shift in the payment habit away from cash, this has proven to be short-lived and became evident in 2017-18 itself. Simultaneously, in 2017-18, there was a marked shift, with currency holdings becoming the preferred avenue for household savings. It suggests that the households still prefer cash for transactional needs in spite of the after-effects of demonetization. The economy has seen an uptrend in the currency in circulation. The RBI data for the week ending March 15, 2019, show that the outstanding "currency in circulation" aggregated Rs. 21.42 lakh crore, recording an increase of 17.5 per cent on a Y-o-Y basis. However, the uptrend noticed in the recent months remains a conundrum. The authorities, particularly the RBI, need to delve into this and as a public institution ought to clarify the position.

Cash, as usual, seems to be the winner in the 2019 Lok Sabha elections as well. Despite the government's backing of electoral bonds — a poll-funding scheme that has been criticised on different occasions by both the Election Commission of India and the Opposition — it is currency that appears to fuel the campaign machine. With electoral bonds, it may be possible for the authorities to get to know the actual donor from the bank, which issues the bond. That is why cash is preferred for election spending.

In India, the demonetization experiment has accelerated the use of electronic payment technologies. The banks have witnessed a huge migration of customers to other channels. Digital transactions have grown exponentially. While digital payments saw a spike post-demonetization, the pace of adoption has been much slower than anticipated.

It seems that the policy-makers did not consider how money interacts. Demonetization directly hit

the normal lives. These woes range from the panic and anxiety in the initial few weeks from the many announcements that followed, to acute psychotic episodes. The Government's demonetization decision and its impact on the economy would not stand in the way that the government and its advisers might have envisaged. The proximate shock has been compounded by a more prolonged investment slowdown. The picture is rather bleak in respect of the jobs lost, ostensibly owing to the demonetization.

The author appears to have considered all the above-noted aspects, which have been compressed into 15 chapters, running into 179 pages, including the Index. These chapters pertain to examining the concept, history, objectives, critiques, impact on overall economy and black money, move towards less-cash economy and digitalization, the government-RBI relations, along with an assessment of two years of demonetization. Chapters from 1 to 5 are a bit theoretical in nature, as they discuss the concept of demonetization (Chapter 1), functions and importance of money (Chapter 2), demand for money (Chapter 3), supply of money (Chapter 4), and Chapter 5 (relationships between money and prices). Chapters 6 to 8 discuss demonetization in other countries (Chapter 6), history of demonetization (Chapter 7), and the current demonetization (Chapter 8). Chapter 9 looks into the critique to demonetization. The next two chapters describe the impact of demonetization on the Indian economy (Chapter 10) and demonetization and black economy (Chapter 11). These two chapters have provided a broad impact of demonetization on various sectors of the economy, like the GDP and economic growth, agriculture and allied sectors, informal sector and micro, small, and medium enterprises (MSMEs), real estate, labour and employment, financial sector, government revenues, political parties, and other economic entities.

The impact will have a lasting effect on the economy in the long run. The aspects of corruption and black money are so important that they are discussed in the next chapter. Chapter 12 is also in

the nature of discussing the impact of demonetization leading to less-cash economy. The author has argued the need to be cautious in moving to a less-cash economy, because the economy lacks the necessary financial infrastructure. Gradualism helps avoid excessive disruption and gives institutions' and individuals' time to adapt. It puts authorities in a position to make adjustments as issues arise. It would be prudent for the government to focus more on proper institutional reforms to address the issue.

The relation between the Union Government and the RBI is covered in Chapter 13. The next chapter analyses the on going debate and political economy. Finally, Chapter 15 contains an Epilogue: two years later. The last chapter is in the nature of a pedagogic appeal on future policies. The book has provided comprehensive references which run into 8 pages.

Demonetization has created a severe macroeconomic shock. The measure was humungous in scale and led to a sharp contraction in the money supply for a short period. Although demonetization's proponents have contended that it would cleanse the economy of the black money and make transactions more formal and digital, its implementation certainly could have been better. The effects of demonetization on the Indian economy are debatable and will vary by sectors. Its effectiveness will be talked about and studied by economists and policy-makers for decades to come. The demonetization has made only a minor dent in India's GDP. However, it has helped to bring more people into the tax net and has reduced the size of the informal economy. With the increased use of digital payments, financial transactions become recordable.

This book is written in a simple language which can be understood easily by readers. It does not contain technical aspects of economics. It makes a breezy read and gives a glimpse of India's currency demonetization. It does toss several perceptive ideas which can keep researchers busy in the years to come. The book, however, appears to be text-

bookish at places. But these are mere minor glitches; if one is interested in the world of monetary policy and its curiosities, this is a good read.

This book is particularly pertinent, which urge for need to think, debate, and act on the kinds of issues raised on demonetization. It is a primer on demonetization, where the author provides various nuances to suit the real-world needs. It is a book that should be read by students and teachers and researchers of commerce, economics and management, business executives, policy-makers, and general public.

However, the price of the book is in dollars (\$) and seems to be beyond the reach of many individual buyers in India. It would be better if it cheaper edition is brought out. The book deserves a place in the shelves of libraries of all institutions of higher learning, public libraries, government departments and ministries, and various companies.

Prof. D. P. S. Verma
Advisor
Shobhit University
Meerut

In a library, we are surrounded by many hundreds of dear friends imprisoned by an enchanter in paper and leathern boxes.

Ralph Waldo Emerson
writer and philosopher (1803-1882)



A superior man is modest in his speech, but exceeds in his actions.

Confucius
Chinese philosopher and teacher (c. 551-478 BC)



In a completely rational society, the best of us would be teachers and the rest of us would have to settle for something less, because passing civilization along one generation to the next ought to be the highest honour and the highest responsibility anyone could have.

Lee lacocca
automobile executive (b. 1924)

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